

APPENDIX D

ANALYTICAL DATA REPORTS FROM ACZ

FOURTH QUARTER 2006 ANALYTICAL DATA REPORTS FROM ACZ

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

March 12, 2007

Project ID: OJ00XN
ACZ Project ID: L59977

Bill Dorris:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 16, 2006 and re-reported on February 12, 2007. This project was assigned to ACZ's project number, L59977. Please reference this number in all future inquiries.

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

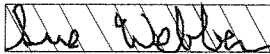
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59977. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Mar/07

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

March 12, 2007

Project ID: OJ00XN

ACZ Project ID: L59977

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 8 ground water samples from Phelps Dodge Sierrita on November 16, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59977. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes, per client request.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures.

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: PZ-8

ACZ Sample ID: **L59977-02**
 Date Sampled: 11/14/06 13:10
 Date Received: 11/16/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1059			mS/cm			11/14/06 13:10	bd
pH (Field)	Field Measurement	7.3			units			11/14/06 13:10	bd
Temperature (Field)	Field Measurement	25.1			C			11/14/06 13:10	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	126			mg/L	0.2	1	11/25/06 18:34	gme
Magnesium, dissolved	M200.7 ICP	39.0			mg/L	0.2	1	11/25/06 18:34	gme
Potassium, dissolved	M200.7 ICP	7.6			mg/L	0.3	1	11/25/06 18:34	gme
Sodium, dissolved	M200.7 ICP	97.5			mg/L	0.3	1	11/25/06 18:34	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		157			mg/L	2	20	11/27/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/27/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/27/06 0:00	ct
Total Alkalinity		157			mg/L	2	20	11/27/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-2.1			%			02/01/07 0:00	calc
Sum of Anions		14.6			meq/L	0.1	0.5	02/01/07 0:00	calc
Sum of Cations		14.0			meq/L	0.1	0.5	02/01/07 0:00	calc
Chloride	M325.2 - Colorimetric	55			mg/L	1	5	11/20/06 17:44	jif
Fluoride	SM4500F-C	0.9			mg/L	0.1	0.5	11/28/06 21:54	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.71		*	mg/L	0.02	0.1	11/25/06 19:16	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	920			mg/L	10	20	11/20/06 12:29	lcp
Sulfate	SM4500 SO4-D	470			mg/L	10	50	12/05/06 12:48	lcp
TDS (calculated)	Calculation	890			mg/L	10	50	02/01/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.03						02/01/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: MH-28

ACZ Sample ID: **L59977-03**
 Date Sampled: 11/14/06 12:35
 Date Received: 11/16/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	2683			mS/cm			11/14/06 12:35	bd
pH (Field)	Field Measurement	7.2			units			11/14/06 12:35	bd
Temperature (Field)	Field Measurement	25.8			C			11/14/06 12:35	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	611			mg/L	0.4	2	11/25/06 18:38	gme
Magnesium, dissolved	M200.7 ICP	86.7			mg/L	0.4	2	11/25/06 18:38	gme
Potassium, dissolved	M200.7 ICP	6.6			mg/L	0.6	2	11/25/06 18:38	gme
Sodium, dissolved	M200.7 ICP	156			mg/L	0.6	2	11/25/06 18:38	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		118			mg/L	2	20	11/27/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/27/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/27/06 0:00	ct
Total Alkalinity		118			mg/L	2	20	11/27/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.0			%			02/01/07 0:00	calc
Sum of Anions		44.7			meq/L	0.1	0.5	02/01/07 0:00	calc
Sum of Cations		44.7			meq/L	0.1	0.5	02/01/07 0:00	calc
Chloride	M325.2 - Colorimetric	116			mg/L	2	10	11/20/06 18:37	jlf
Fluoride	SM4500F-C	0.3	B		mg/L	0.1	0.5	11/28/06 21:57	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.57		*	mg/L	0.02	0.1	11/25/06 19:19	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	3220			mg/L	10	20	11/20/06 12:31	lcp
Sulfate	SM4500 SO4-D	1860			mg/L	10	50	12/05/06 12:51	lcp
TDS (calculated)	Calculation	2910			mg/L	10	50	02/01/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.11						02/01/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: MH-29

ACZ Sample ID: **L59977-04**
Date Sampled: 11/14/06 11:55
Date Received: 11/16/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	2710			mS/cm			11/14/06 11:55	bd
pH (Field)	Field Measurement	7.2			units			11/14/06 11:55	bd
Temperature (Field)	Field Measurement	24.9			C			11/14/06 11:55	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	525			mg/L	0.4	2	11/25/06 18:42	gme
Magnesium, dissolved	M200.7 ICP	92.6			mg/L	0.4	2	11/25/06 18:42	gme
Potassium, dissolved	M200.7 ICP	10.3			mg/L	0.6	2	11/25/06 18:42	gme
Sodium, dissolved	M200.7 ICP	155			mg/L	0.6	2	11/25/06 18:42	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		142			mg/L	2	20	11/27/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/27/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/27/06 0:00	ct
Total Alkalinity		142			mg/L	2	20	11/27/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-0.5			%			02/01/07 0:00	calc
Sum of Anions		41.3			meq/L	0.1	0.5	02/01/07 0:00	calc
Sum of Cations		40.9			meq/L	0.1	0.5	02/01/07 0:00	calc
Chloride	M325.2 - Colorimetric	143			mg/L	2	10	11/20/06 18:38	jlf
Fluoride	SM4500F-C	0.2	B		mg/L	0.1	0.5	11/28/06 22:11	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.66		*	mg/L	0.02	0.1	11/25/06 19:20	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2880			mg/L	10	20	11/20/06 12:33	lcp
Sulfate	SM4500 SO4-D	1640			mg/L	10	50	12/05/06 12:54	lcp
TDS (calculated)	Calculation	2650			mg/L	10	50	02/01/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.09						02/01/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: DUP111406A

ACZ Sample ID: **L59977-06**
 Date Sampled: 11/14/06 00:00
 Date Received: 11/16/06
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	494			mg/L	0.4	2	11/25/06 18:50	gme
Magnesium, dissolved	M200.7 ICP	99.8			mg/L	0.4	2	11/25/06 18:50	gme
Potassium, dissolved	M200.7 ICP	13.6			mg/L	0.6	2	11/25/06 18:50	gme
Sodium, dissolved	M200.7 ICP	124			mg/L	0.6	2	11/25/06 18:50	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		94			mg/L	2	20	11/27/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/27/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/27/06 0:00	ct
Total Alkalinity		94			mg/L	2	20	11/27/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-2.5			%			03/12/07 0:00	calc
Sum of Anions		40.7			meq/L	0.1	0.5	03/12/07 0:00	calc
Sum of Cations		38.7			meq/L	0.1	0.5	03/12/07 0:00	calc
Chloride	M325.2 - Colorimetric	127			mg/L	2	10	11/20/06 18:41	jif
Fluoride	SM4500F-C	0.2	B		mg/L	0.1	0.5	11/28/06 22:21	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.20		*	mg/L	0.02	0.1	11/25/06 19:26	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2780			mg/L	10	20	11/20/06 12:37	lcp
Sulfate	SM4500 SO4-D	1680		*	mg/L	10	50	11/30/06 10:18	lcp
TDS (calculated)	Calculation	2590			mg/L	10	50	03/12/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.07						03/12/07 0:00	calc

Arizona license number: AZ0102



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita

ACZ Project ID: **L59977**

Project ID: OJ00XN

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217111													
WG217111LCSW2	LCSW	11/27/06 11:07	WC061113-1	820		746.5	mg/L	91	80	120			
L59977-01DUP	DUP	11/27/06 14:50			168	167.1	mg/L				0.5	20	
WG217111LCSW5	LCSW	11/27/06 15:03	WC061113-1	820		737.6	mg/L	90	80	120			
L59978-05DUP	DUP	11/27/06 16:50			891	894.7	mg/L				0.4	20	
WG217111LCSW8	LCSW	11/27/06 18:19	WC061113-1	820		744.1	mg/L	90.7	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217123													
WG217123ICV	ICV	11/27/06 21:57	II061113-6	2		1.941	mg/L	97.1	95	105			
WG217123ICB	ICB	11/27/06 22:00				U	mg/L		-0.09	0.09			
WG217123LFB	LFB	11/27/06 22:13	II061116-2	1		1.022	mg/L	102.2	85	115			
L59935-03AS	AS	11/27/06 23:09	II061116-2	1	.18	1.292	mg/L	111.2	85	115			
L59935-03ASD	ASD	11/27/06 23:13	II061116-2	1	.18	1.306	mg/L	112.6	85	115	1.08	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.02008		.01928	mg/L	96	90	110			
WG216836ICB	ICB	11/20/06 13:33				.00044	mg/L		-0.0012	0.0012			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.00625		.00606	mg/L	97	85	115			
L59948-02AS	AS	11/20/06 15:16	MS061023-3	.00625	U	.00611	mg/L	97.8	70	130			
L59948-02ASD	ASD	11/20/06 15:22	MS061023-3	.00625	U	.00627	mg/L	100.3	70	130	2.58	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.05		.05063	mg/L	101.3	90	110			
WG216836ICB	ICB	11/20/06 13:33				U	mg/L		-0.0015	0.0015			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.04855	mg/L	97.1	85	115			
L59948-02AS	AS	11/20/06 15:16	MS061023-3	.05	U	.05495	mg/L	109.9	70	130			
L59948-02ASD	ASD	11/20/06 15:22	MS061023-3	.05	U	.05597	mg/L	111.9	70	130	1.84	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		2.0851	mg/L	104.3	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.009	0.009			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.5222	mg/L	104.4	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	.086	1.1293	mg/L	104.3	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	.086	1.1315	mg/L	104.6	85	115	0.19	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59977**

Project ID: OJ00XN

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.05		.0451	mg/L	90.2	90	110			
WG216836ICB	ICB	11/20/06 13:33				U	mg/L		-0.0003	0.0003			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.0433	mg/L	86.6	85	115			
L59948-02AS	AS	11/20/06 15:16	MS061023-3	.05	.0026	.0546	mg/L	104	70	130			
L59948-02ASD	ASD	11/20/06 15:22	MS061023-3	.05	.0026	.05483	mg/L	104.5	70	130	0.42	20	
WG216970													
WG216970ICV	ICV	11/21/06 21:23	MS061106-2	.05		.05147	mg/L	102.9	90	110			
WG216970ICB	ICB	11/21/06 21:29				U	mg/L		-0.0003	0.0003			
WG216970LFB	LFB	11/21/06 21:35	MS061023-3	.05		.04971	mg/L	99.4	85	115			
L59972-01AS	AS	11/21/06 23:10	MS061023-3	.05	U	.04897	mg/L	97.9	70	130			
L59972-01ASD	ASD	11/21/06 23:16	MS061023-3	.05	U	.04992	mg/L	99.8	70	130	1.92	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216725													
WG216725ICV	ICV	11/18/06 0:43	MS061106-2	.05		.05083	mg/L	101.7	90	110			
WG216725ICB	ICB	11/18/06 0:49				U	mg/L		-0.0003	0.0003			
WG216725LFB	LFB	11/18/06 0:55	MS061023-3	.05		.05411	mg/L	108.2	85	115			
L59935-04AS	AS	11/18/06 2:25	MS061023-3	.05	.0002	.0473	mg/L	94.2	70	130			
L59935-04ASD	ASD	11/18/06 2:31	MS061023-3	.05	.0002	.0478	mg/L	95.2	70	130	1.05	20	
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.05		.04838	mg/L	96.8	90	110			
WG216836ICB	ICB	11/20/06 13:33				U	mg/L		-0.0003	0.0003			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.04721	mg/L	94.4	85	115			
L59948-02AS	AS	11/20/06 15:16	MS061023-3	.05	.0029	.05186	mg/L	97.9	70	130			
L59948-02ASD	ASD	11/20/06 15:22	MS061023-3	.05	.0029	.05208	mg/L	98.4	70	130	0.42	20	
WG216970													
WG216970ICV	ICV	11/21/06 21:23	MS061106-2	.05		.05144	mg/L	102.9	90	110			
WG216970ICB	ICB	11/21/06 21:29				U	mg/L		-0.0003	0.0003			
WG216970LFB	LFB	11/21/06 21:35	MS061023-3	.05		.05101	mg/L	102	85	115			
L59972-01AS	AS	11/21/06 23:10	MS061023-3	.05	U	.05455	mg/L	109.1	70	130			
L59972-01ASD	ASD	11/21/06 23:16	MS061023-3	.05	U	.05513	mg/L	110.3	70	130	1.06	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	100		99.96	mg/L	100	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.6	0.6			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	67.93192		70.76	mg/L	104.2	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	135.86384	388	503.73	mg/L	85.2	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	135.86384	388	506.43	mg/L	87.2	85	115	0.53	20	

Phelps Dodge Sierrita

ACZ Project ID: L59977

Project ID: OJ00XN

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216903													
WG216903ICV	ICV	11/20/06 13:52	WI061113-3	55		56.5	mg/L	102.7	90	110			
WG216903ICB	ICB	11/20/06 13:53				1.2	mg/L		-3	3			
WG216916													
WG216916ICV	ICV	11/20/06 17:22	WI061113-3	55		54.7	mg/L	99.5	90	110			
WG216916ICB	ICB	11/20/06 17:23				1.2	mg/L		-3	3			
WG216916LFB1	LFB	11/20/06 17:24	WI060623-1	30		27.9	mg/L	93	90	110			
L59952-07DUP	DUP	11/20/06 17:41			68	68	mg/L				0	20	
WG216916LFB2	LFB	11/20/06 17:52	WI060623-1	30		27.3	mg/L	91	90	110			
L59952-06AS	AS	11/20/06 18:35	WI060623-1	60	76	139.1	mg/L	105.2	90	110			

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217123													
WG217123ICV	ICV	11/27/06 21:57	II061113-6	2		1.974	mg/L	98.7	95	105			
WG217123ICB	ICB	11/27/06 22:00				U	mg/L		-0.03	0.03			
WG217123LFB	LFB	11/27/06 22:13	II061116-2	.5		.53	mg/L	106	85	115			
L59935-03AS	AS	11/27/06 23:09	II061116-2	.5	U	.561	mg/L	112.2	85	115			
L59935-03ASD	ASD	11/27/06 23:13	II061116-2	.5	U	.573	mg/L	114.6	85	115	2.12	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.896	mg/L	94.8	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.5	mg/L	100	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	U	.988	mg/L	98.8	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	U	.99	mg/L	99	85	115	0.2	20	

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217111													
WG217111PBW1	PBW	11/27/06 10:54				U	µmhos/cm		-10	10			
WG217111LCSW1	LCSW	11/27/06 10:56	PCN25329	1408.8		1492	µmhos/cm	105.9	80	120			
L59977-01DUP	DUP	11/27/06 14:50			4750	4720	µmhos/cm				0.6	20	
WG217111PBW2	PBW	11/27/06 14:51				U	µmhos/cm		-10	10			
WG217111LCSW4	LCSW	11/27/06 14:53	PCN25329	1408.8		1499	µmhos/cm	106.4	80	120			
L59978-05DUP	DUP	11/27/06 16:50			3480	3450	µmhos/cm				0.9	20	
WG217111LCSW7	LCSW	11/27/06 18:08	PCN25329	1408.8		1511	µmhos/cm	107.3	80	120			

Phelps Dodge Sierrita

ACZ Project ID: **L59977**

Project ID: OJ00XN

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.932	mg/L	96.6	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.51	mg/L	102	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	U	1.015	mg/L	101.5	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	U	1.02	mg/L	102	85	115	0.49	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217053													
WG217053ICV	ICV	11/22/06 16:30	WI061122-3	.3		.283	mg/L	94.3	90	110			
WG217053ICB	ICB	11/22/06 16:31				U	mg/L		-0.03	0.03			
WG217057													
WG217057ICV	ICV	11/22/06 16:57	WI061122-3	.3		.3034	mg/L	101.1	90	110			
WG217057ICB	ICB	11/22/06 16:58				U	mg/L		-0.015	0.015			
WG216985LRB	LRB	11/22/06 16:59				U	mg/L		-0.015	0.015			
WG216985LFB	LFB	11/22/06 17:00	WI061107-7	.2		.2146	mg/L	107.3	90	110			
L59931-01DUP	DUP	11/22/06 17:01			.008	.0071	mg/L				11.9	20	RA
L59935-05LFM	LFM	11/22/06 17:03	WI061107-7	.2	.021	.2403	mg/L	109.7	90	110			
WG217275													
WG217275ICV	ICV	11/28/06 19:11	WI061122-3	.3		.292	mg/L	97.3	90	110			
WG217275ICB	ICB	11/28/06 19:12				U	mg/L		-0.015	0.015			
WG217109LRB	LRB	11/28/06 19:12				U	mg/L		-0.015	0.015			
WG217109LFB	LFB	11/28/06 19:13	WI061122-7	.2		.1861	mg/L	93.1	90	110			
L59950-01DUP	DUP	11/28/06 19:15			8.5	8.29	mg/L				2.5	20	
L59977-04LFM	LFM	11/28/06 19:17	WI061122-7	.2	.007	.2254	mg/L	109.2	90	110			
L60006-04DUP	DUP	11/28/06 19:27			U	U	mg/L				0	20	RA
L60006-05LFM	LFM	11/28/06 19:28	WI061122-7	.2	.212	.381	mg/L	84.5	90	110			M2

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217252													
WG217252ICV	ICV	11/28/06 17:33	WC061117-1	1.996		2	mg/L	100.2	95	105			
WG217252ICB	ICB	11/28/06 17:38				U	mg/L		-0.3	0.3			
WG217252LFB1	LFB	11/28/06 17:44	WC061021-1	4.99902		5.26	mg/L	105.2	90	110			
WG217252LFB2	LFB	11/28/06 20:04	WC061021-1	4.99902		5.28	mg/L	105.6	90	110			
L59935-03AS	AS	11/28/06 21:32	WC061021-1	4.99902	1.5	6.76	mg/L	105.2	85	115			
L59935-03DUP	DUP	11/28/06 21:34			1.5	1.57	mg/L				4.6	20	

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217123													
WG217123ICV	ICV	11/27/06 21:57	II061113-6	2		1.943	mg/L	97.2	95	105			
WG217123ICB	ICB	11/27/06 22:00				.021	mg/L		-0.06	0.06			
WG217123LFB	LFB	11/27/06 22:13	II061116-2	1		1.093	mg/L	109.3	85	115			
L59935-03AS	AS	11/27/06 23:09	II061116-2	1	.11	1.245	mg/L	113.5	85	115			
L59935-03ASD	ASD	11/27/06 23:13	II061116-2	1	.11	1.267	mg/L	115.7	85	115	1.75	20	MA

Phelps Dodge Sierrita

ACZ Project ID: L59977

Project ID: OJ00XN

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216725													
WG216725ICV	ICV	11/18/06 0:43	MS061106-2	.05		.05191	mg/L	103.8	90	110			
WG216725ICB	ICB	11/18/06 0:49				U	mg/L		-0.0003	0.0003			
WG216725LFB	LFB	11/18/06 0:55	MS061023-3	.05		.05355	mg/L	107.1	85	115			
L59935-04AS	AS	11/18/06 2:25	MS061023-3	.05	.0012	.04605	mg/L	89.7	70	130			
L59935-04ASD	ASD	11/18/06 2:31	MS061023-3	.05	.0012	.04841	mg/L	94.4	70	130	5	20	
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.05		.05131	mg/L	102.6	90	110			
WG216836ICB	ICB	11/20/06 13:33				U	mg/L		-0.0003	0.0003			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.04828	mg/L	96.6	85	115			
L59948-02AS	AS	11/20/06 15:16	MS061023-3	.05	.0131	.05685	mg/L	87.5	70	130			
L59948-02ASD	ASD	11/20/06 15:22	MS061023-3	.05	.0131	.05789	mg/L	89.6	70	130	1.81	20	
WG216970													
WG216970ICV	ICV	11/21/06 21:23	MS061106-2	.05		.0538	mg/L	107.6	90	110			
WG216970ICB	ICB	11/21/06 21:29				U	mg/L		-0.0003	0.0003			
WG216970LFB	LFB	11/21/06 21:35	MS061023-3	.05		.05068	mg/L	101.4	85	115			
L59972-01AS	AS	11/21/06 23:10	MS061023-3	.05	.0002	.05274	mg/L	105.1	70	130			
L59972-01ASD	ASD	11/21/06 23:16	MS061023-3	.05	.0002	.05341	mg/L	106.4	70	130	1.26	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	100		96.97	mg/L	97	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.6	0.6			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	54.94443		56.25	mg/L	102.4	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	109.88886	55.1	164.44	mg/L	99.5	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	109.88886	55.1	164.92	mg/L	99.9	85	115	0.29	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.9413	mg/L	97.1	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.015	0.015			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.5516	mg/L	110.3	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	.05	1.079	mg/L	102.9	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	.05	1.104	mg/L	105.4	85	115	2.29	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216843													
WG216843ICV	ICV	11/20/06 16:24	II061110-4	.00498		.005	mg/L	100.4	95	105			
WG216843ICB	ICB	11/20/06 16:26				U	mg/L		-0.0002	0.0002			
WG216843LRB	LRB	11/20/06 16:40				U	mg/L		-0.00044	0.00044			
WG216843LFB	LFB	11/20/06 16:42	II061121-2	.002		.00216	mg/L	108	85	115			
L59977-01LFM	LFM	11/20/06 17:20	II061121-2	.002	U	.00189	mg/L	94.5	85	115			
L59977-01LFMD	LFMD	11/20/06 17:22	II061121-2	.002	U	.00191	mg/L	95.5	85	115	1.05	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59977**

Project ID: OJ00XN

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		2.01	mg/L	100.5	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.506	mg/L	101.2	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	U	1.022	mg/L	102.2	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	U	1.016	mg/L	101.6	85	115	0.59	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.922	mg/L	96.1	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.501	mg/L	100.2	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	U	1.025	mg/L	102.5	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	U	1.095	mg/L	109.5	85	115	6.6	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217087													
WG217087ICV	ICV	11/25/06 17:26	WI060906-3	2.416		2.343	mg/L	97	90	110			
WG217087ICB	ICB	11/25/06 17:27				U	mg/L		-0.06	0.06			
WG217091													
WG217091ICV	ICV	11/25/06 18:52	WI060906-3	2.416		2.42	mg/L	100.2	90	110			
WG217091ICB	ICB	11/25/06 18:53				U	mg/L		-0.06	0.06			
WG217091LFB1	LFB	11/25/06 18:54	WI060906-4	2		2.116	mg/L	105.8	90	110			
L59977-01AS	AS	11/25/06 19:15	WI060906-4	2	.09	1.602	mg/L	75.6	90	110			M2
L59977-02DUP	DUP	11/25/06 19:18			2.71	2.707	mg/L				0.1	20	
WG217091LFB2	LFB	11/25/06 19:32	WI060906-4	2		2.062	mg/L	103.1	90	110			

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217111													
WG217111LCSW3	LCSW	11/27/06 11:10	PCN25442	6		5.98	units	99.7	90	110			
L59977-01DUP	DUP	11/27/06 14:50			7.5	7.48	units				0.3	20	
WG217111LCSW6	LCSW	11/27/06 15:06	PCN25442	6		6.01	units	100.2	90	110			
L59978-05DUP	DUP	11/27/06 16:50			8.4	8.4	units				0	20	
WG217111LCSW9	LCSW	11/27/06 18:23	PCN25442	6		6.04	units	100.7	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	20		20.62	mg/L	103.1	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.9	0.9			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	99.46819		105.39	mg/L	106	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	198.93638	11.3	227.42	mg/L	108.6	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	198.93638	11.3	228.51	mg/L	109.2	85	115	0.48	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59977**

Project ID: OJ00XN

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216894													
WG216894PBW	PBW	11/20/06 12:00				U	mg/L		-20	20			
WG216894LCSW	LCSW	11/20/06 12:01	PCN25978	260		274	mg/L	105.4	80	120			
L59978-03DUP	DUP	11/20/06 12:44			4200	4224	mg/L				0.6	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.05		.05438	mg/L	108.8	90	110			
WG216836ICB	ICB	11/20/06 13:33				.00012	mg/L		-0.0003	0.0003			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.05208	mg/L	104.2	85	115			
L59948-02AS	AS	11/20/06 15:16	MS061023-3	.05	.0002	.05127	mg/L	102.1	70	130			
L59948-02ASD	ASD	11/20/06 15:22	MS061023-3	.05	.0002	.05018	mg/L	100	70	130	2.15	20	
WG217096													
WG217096ICV	ICV	11/27/06 16:18	MS061106-2	.05		.05404	mg/L	108.1	90	110			
WG217096ICB	ICB	11/27/06 16:24				.00018	mg/L		-0.0003	0.0003			
WG217096LFB	LFB	11/27/06 16:30	MS061023-3	.05		.05032	mg/L	100.6	85	115			
L59932-03AS	AS	11/27/06 16:47	MS061023-3	.25	U	.25885	mg/L	103.5	70	130			
L59932-03ASD	ASD	11/27/06 16:53	MS061023-3	.25	U	.25315	mg/L	101.3	70	130	2.23	20	
L59977-01AS	AS	11/27/06 18:02	MS061023-3	.25	U	.25945	mg/L	103.8	70	130			
L59977-01ASD	ASD	11/27/06 18:07	MS061023-3	.25	U	.2565	mg/L	102.6	70	130	1.14	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	100		101.68	mg/L	101.7	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.9	0.9			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	99.78197		104.72	mg/L	104.9	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	199.56394	127	329.61	mg/L	101.5	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	199.56394	127	331.33	mg/L	102.4	85	115	0.52	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217368													
WG217368PBW	PBW	11/30/06 10:00				U	mg/L		-30	30			
WG217368LCSW	LCSW	11/30/06 10:02	WC060911-2	100		106	mg/L	106	80	120			
L59979-04DUP	DUP	11/30/06 10:31			10	18	mg/L				57.1	20	RA
WG217611													
WG217611PBW	PBW	12/05/06 12:40				U	mg/L		-30	30			
WG217611LCSW	LCSW	12/05/06 12:42	WC060911-2	100		96	mg/L	96	80	120			
L59978-05DUP	DUP	12/05/06 13:15			770	789	mg/L				2.4	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59977**

Project ID: OJ00XN

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.056		.05394	mg/L	96.3	90	110			
WG216836ICB	ICB	11/20/06 13:33				U	mg/L		-0.0003	0.0003			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.04756	mg/L	95.1	85	115			
L59948-02AS	AS	11/20/06 15:16	MS061023-3	.05	U	.04341	mg/L	86.8	70	130			
L59948-02ASD	ASD	11/20/06 15:22	MS061023-3	.05	U	.0441	mg/L	88.2	70	130	1.58	20	
WG216970													
WG216970ICV	ICV	11/21/06 21:23	MS061106-2	.056		.05645	mg/L	100.8	90	110			
WG216970ICB	ICB	11/21/06 21:29				U	mg/L		-0.0003	0.0003			
WG216970LFB	LFB	11/21/06 21:35	MS061023-3	.05		.04965	mg/L	99.3	85	115			
L59972-01AS	AS	11/21/06 23:10	MS061023-3	.05	U	.05181	mg/L	103.6	70	130			
L59972-01ASD	ASD	11/21/06 23:16	MS061023-3	.05	U	.05224	mg/L	104.5	70	130	0.83	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.94	mg/L	97	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.531	mg/L	106.2	85	115			
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	1.17	2.11	mg/L	94	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	1.17	2.125	mg/L	95.5	85	115	0.71	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59977**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59977-01	WG217123	Iron, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217096	Selenium, dissolved	M200.8 ICP-MS	BE	Target analyte in continuing calibration blank (CCB) at or above the acceptance criteria. Data is useable because analyte concentration in client sample is less than the MDL.
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG216894	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	ZO	TDS concentration is based on a final residue greater than 200 mg.
L59977-02	WG217123	Iron, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
L59977-03	WG217123	Iron, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
L59977-04	WG217123	Iron, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
L59977-05	WG217123	Iron, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
L59977-06	WG217123	Iron, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217368	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: L59977

No certification qualifiers associated with this analysis

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L59977
Date Received: 11/16/2006
Received By:
Date Printed: 12/5/2006

Receipt Verification

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

YES	NO	NA
		X
X		
		X
X		
X		
X		
X		
X		
		X
X		
	X	
		X

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

The trip blank has head space.

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

The client was not contacted.

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
652	2.8	17

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

Notes

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L59977
Date Received: 11/16/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L59977-01	PZ-3		Y		Y							<input type="checkbox"/>
L59977-02	PZ-8		Y		Y							<input type="checkbox"/>
L59977-03	MH-28		Y		Y							<input type="checkbox"/>
L59977-04	MH-29		Y		Y							<input type="checkbox"/>
L59977-05	MH-16W		Y		Y							<input type="checkbox"/>
L59977-06	DUP111406A		Y		Y							<input type="checkbox"/>
L59977-07	CNTB011806-02									X		<input type="checkbox"/>
L59977-08	TB083106-03									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



P.O. Box 527, Green Valley, AZ 85622

ANALYTICAL REQUEST SHEET

Chain of Custody PO# - OJ00XN

COC Number:

Page 4 of 4

L59977

Lab Use Only	Location	Date	Time	# of Cont.	Preservatives					Field Data				Analysis Requested		
					HNO ₃	H ₂ SO ₄	NaOH	HCL	Unpres.	pH	Cond	Temp				
					8	1	1	1	2							5
	PZ-3	11/14/2006	14:19	8	1	1	1	1	2	5	6.98	2950	21.6			Ambient Suite
	PZ-8	11/14/2006	13:10	8	1	1	1	1	2	5	7.30	1059	25.1			Ambient Suite
	MH-28	11/14/2006	12:35	8	1	1	1	1	2	5	7.24	2683	25.8			Ambient Suite
	MH-29	11/14/2006	11:55	8	1	1	1	1	2	5	7.20	2710	24.9			Ambient Suite
	MH-16W	11/14/2006	10:51	8	1	1	1	1	2	5	7.46	1661	26.6			Ambient Suite
	DUP111406A	11/14/2006		8	1	1	1	1	2	5						Ambient Suite

Sample Submitted By: Billy Dorris Telephone No. 520-648-8873 Fax No.

Report Results To: Billy Dorris Telephone No. 520-648-8873 Fax No. 520-648-8608

Samples Submitted on Ice: Yes / No

Surrendered By: *Billy F. Dorris* Date: 11/14/06 Time: 11:09 Laboratory Name and Address:
ACZ Laboratory
30400 Downhill Drive
Steamboat Springs, CO 80487
Phone: 8003345493

Surrendered By: _____ Date: _____ Time: _____

Comments/Special Instructions: _____

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

March 12, 2007

Project ID: OJ00XN
ACZ Project ID: L60019

Bill Dorris:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 17, 2006 and re-reported on February 12, 2007. This project was assigned to ACZ's project number, L60019. Please reference this number in all future inquiries.

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

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60019. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Mar/07

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

March 12, 2007

Project ID: OJ00XN

ACZ Project ID: L60019

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 7 ground water samples from Phelps Dodge Sierrita on November 17, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L60019. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes, per client request.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures.

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: DUP111506A

ACZ Sample ID: **L60019-01**
 Date Sampled: 11/15/06 00:00
 Date Received: 11/17/06
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	540			mg/L	0.4	2	12/01/06 21:57	msh
Magnesium, dissolved	M200.7 ICP	98.0			mg/L	0.4	2	12/04/06 18:32	gme
Potassium, dissolved	M200.7 ICP	11.6			mg/L	0.6	2	12/04/06 18:32	gme
Sodium, dissolved	M200.7 ICP	168			mg/L	0.6	2	12/06/06 21:59	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		158	H		mg/L	2	20	11/30/06 0:00	ct
Carbonate as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Hydroxide as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Total Alkalinity		158	H	*	mg/L	2	20	11/30/06 0:00	ct
Cation-Anion Balance Calculation									
Cation-Anion Balance		0.8			%			03/12/07 0:00	calc
Sum of Anions		42.0			meq/L	0.1	0.5	03/12/07 0:00	calc
Sum of Cations		42.7			meq/L	0.1	0.5	03/12/07 0:00	calc
Chloride	M325.2 - Colorimetric	151		*	mg/L	5	30	11/29/06 19:21	jff
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	12/07/06 14:50	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.94		*	mg/L	0.02	0.1	11/30/06 15:40	jff
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2920			mg/L	10	20	11/21/06 15:24	lcp
Sulfate	SM4500 SO4-D	1650			mg/L	10	50	12/06/06 10:31	ct
TDS (calculated)	Calculation	2710			mg/L	10	50	03/12/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.08						03/12/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: IW-14

ACZ Sample ID: **L60019-03**
 Date Sampled: 11/15/06 12:58
 Date Received: 11/17/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1897			mS/cm			11/15/06 12:58	bd
pH (Field)	Field Measurement	6.9			units			11/15/06 12:58	bd
Temperature (Field)	Field Measurement	26.8			C			11/15/06 12:58	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	532		*	mg/L	0.4	2	12/13/06 21:10	gme
Magnesium, dissolved	M200.7 ICP	113			mg/L	0.4	2	12/13/06 21:10	gme
Potassium, dissolved	M200.7 ICP	7.9			mg/L	0.6	2	12/04/06 18:45	gme
Sodium, dissolved	M200.7 ICP	159		*	mg/L	0.6	2	12/13/06 21:10	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		126	H		mg/L	2	20	11/30/06 0:00	ct
Carbonate as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Hydroxide as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Total Alkalinity		126	H	*	mg/L	2	20	11/30/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.6			%			02/02/07 0:00	calc
Sum of Anions		44.5			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		43.1			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	132		*	mg/L	2	10	11/29/06 19:23	jff
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/07/06 15:00	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.49		*	mg/L	0.02	0.1	12/01/06 20:32	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	3010			mg/L	10	20	11/21/06 15:27	lcp
Sulfate	SM4500 SO4-D	1820			mg/L	10	50	12/06/06 10:39	ct
TDS (calculated)	Calculation	2840			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.06						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: IW-15

ACZ Sample ID: **L60019-04**
 Date Sampled: 11/15/06 13:13
 Date Received: 11/17/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1841			mS/cm			11/15/06 13:13	bd
pH (Field)	Field Measurement	7.0			units			11/15/06 13:13	bd
Temperature (Field)	Field Measurement	27.0			C			11/15/06 13:13	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	547		*	mg/L	0.4	2	12/13/06 21:14	gme
Magnesium, dissolved	M200.7 ICP	102			mg/L	0.4	2	12/13/06 21:14	gme
Potassium, dissolved	M200.7 ICP	7.8			mg/L	0.6	2	12/04/06 18:55	gme
Sodium, dissolved	M200.7 ICP	131		*	mg/L	0.6	2	12/13/06 21:14	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		128	H		mg/L	2	20	11/30/06 0:00	ct
Carbonate as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Hydroxide as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Total Alkalinity		128	H	*	mg/L	2	20	11/30/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.3			%			02/02/07 0:00	calc
Sum of Anions		42.8			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		41.7			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	153		*	mg/L	2	10	11/29/06 19:23	jlf
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	12/07/06 15:07	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.91		*	mg/L	0.02	0.1	12/01/06 20:33	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2920			mg/L	10	20	11/21/06 15:28	lcp
Sulfate	SM4500 SO4-D	1710			mg/L	10	50	12/06/06 10:43	ct
TDS (calculated)	Calculation	2730			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.07						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN

Sample ID: IW-16

ACZ Sample ID: **L60019-05**

Date Sampled: 11/15/06 13:29

Date Received: 11/17/06

Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1815			mS/cm			11/15/06 13:29	bd
pH (Field)	Field Measurement	6.9			units			11/15/06 13:29	bd
Temperature (Field)	Field Measurement	27.2			C			11/15/06 13:29	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	539		*	mg/L	0.4	2	12/13/06 21:26	gme
Magnesium, dissolved	M200.7 ICP	125			mg/L	0.4	2	12/13/06 21:26	gme
Potassium, dissolved	M200.7 ICP	7.3			mg/L	0.6	2	12/04/06 18:59	gme
Sodium, dissolved	M200.7 ICP	114		*	mg/L	0.6	2	12/13/06 21:26	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		128	H		mg/L	2	20	11/30/06 0:00	ct
Carbonate as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Hydroxide as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Total Alkalinity		128	H	*	mg/L	2	20	11/30/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.5			%			02/02/07 0:00	calc
Sum of Anions		43.7			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		42.4			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	170		*	mg/L	2	10	11/29/06 19:24	jff
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/07/06 15:09	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.22		*	mg/L	0.02	0.1	12/01/06 20:38	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2970			mg/L	10	20	11/21/06 15:30	lcp
Sulfate	SM4500 SO4-D	1730		*	mg/L	10	50	12/06/06 10:50	ct
TDS (calculated)	Calculation	2760			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.08						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: IW-17

ACZ Sample ID: **L60019-06**
Date Sampled: 11/15/06 14:02
Date Received: 11/17/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1698			mS/cm			11/15/06 14:02	bd
pH (Field)	Field Measurement	6.8			units			11/15/06 14:02	bd
Temperature (Field)	Field Measurement	27.1			C			11/15/06 14:02	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	489		*	mg/L	0.4	2	12/13/06 21:30	gme
Magnesium, dissolved	M200.7 ICP	117			mg/L	0.4	2	12/13/06 21:30	gme
Potassium, dissolved	M200.7 ICP	7.6			mg/L	0.6	2	12/04/06 19:02	gme
Sodium, dissolved	M200.7 ICP	124		*	mg/L	0.6	2	12/13/06 21:30	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		127	H		mg/L	2	20	11/30/06 0:00	ct
Carbonate as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Hydroxide as CaCO3			UH		mg/L	2	20	11/30/06 0:00	ct
Total Alkalinity		127	H	*	mg/L	2	20	11/30/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.6			%			02/02/07 0:00	calc
Sum of Anions		39.2			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		39.7			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	132		*	mg/L	5	30	11/29/06 19:25	jff
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/07/06 15:21	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.39		*	mg/L	0.02	0.1	12/01/06 20:39	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2770			mg/L	10	20	11/21/06 15:31	lcp
Sulfate	SM4500 SO4-D	1570		*	mg/L	10	50	12/06/06 10:54	ct
TDS (calculated)	Calculation	2520			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.10						02/02/07 0:00	calc

Arizona license number: AZ0102



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

<i>B</i>	Analyte concentration detected at a value between MDL and PQL.
<i>H</i>	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
<i>U</i>	Analyte was analyzed for but not detected at the indicated MDL

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita

ACZ Project ID: **L60019**

Project ID: OJ00XN

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217313													
WG217313LCSW2	LCSW	11/29/06 17:11	WC061113-1	820		818.6	mg/L	99.8	80	120			
WG217313LCSW5	LCSW	11/29/06 21:43	WC061113-1	820		820.3	mg/L	100	80	120			
L60019-06DUP	DUP	11/30/06 1:06			127	127.5	mg/L				0.4	20	
WG217313LCSW8	LCSW	11/30/06 1:19	WC061113-1	820		822.1	mg/L	100.3	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	2		1.917	mg/L	95.9	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.09	0.09			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	1		1.029	mg/L	102.9	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	1	U	1.059	mg/L	105.9	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	1	U	1.053	mg/L	105.3	85	115	0.57	20	
L60019-03AS	AS	12/01/06 22:09	II061116-2	2	U	2.086	mg/L	104.3	85	115			
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	2	U	2.109	mg/L	105.5	85	115	1.1	20	
WG217501													
WG217501ICV	ICV	12/04/06 17:47	II061128-2	2		2.037	mg/L	101.9	95	105			
WG217501ICB	ICB	12/04/06 17:52				U	mg/L		-0.09	0.09			
WG217501LFB	LFB	12/04/06 18:06	II061202-2	1		1.064	mg/L	106.4	85	115			
L59933-01AS	AS	12/04/06 18:12	II061202-2	5	U	5.33	mg/L	106.6	85	115			
L59933-01ASD	ASD	12/04/06 18:16	II061202-2	5	U	5.25	mg/L	105	85	115	1.51	20	
L60019-03AS	AS	12/04/06 18:49	II061202-2	2	.14	2.182	mg/L	102.1	85	115			
L60019-03ASD	ASD	12/04/06 18:52	II061202-2	2	.14	2.223	mg/L	104.2	85	115	1.86	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.02008		.01974	mg/L	98.3	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0012	0.0012			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.00625		.00648	mg/L	103.7	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.0125	U	.01304	mg/L	104.3	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.0125	U	.01299	mg/L	103.9	70	130	0.38	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05368	mg/L	107.4	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0015	0.0015			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05404	mg/L	108.1	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	.003	.119	mg/L	116	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	.003	.1166	mg/L	113.6	70	130	2.04	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60019**

Project ID: OJ00XN

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	2		2.0064	mg/L	100.3	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.009	0.009			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	.5		.523	mg/L	104.6	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	.5	.033	.5651	mg/L	106.4	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	.5	.033	.5602	mg/L	105.4	85	115	0.87	20	
L60019-03AS	AS	12/01/06 22:09	II061116-2	1	.05	1.0671	mg/L	101.7	85	115			
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	1	.05	1.0936	mg/L	104.4	85	115	2.45	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05044	mg/L	100.9	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05154	mg/L	103.1	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	U	.09636	mg/L	96.4	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	U	.09644	mg/L	96.4	70	130	0.08	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05141	mg/L	102.8	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05145	mg/L	102.9	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	U	.10056	mg/L	100.6	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	U	.09856	mg/L	98.6	70	130	2.01	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	100		97.19	mg/L	97.2	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.6	0.6			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	67.93192		69.36	mg/L	102.1	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	67.93192	13.2	82.84	mg/L	102.5	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	67.93192	13.2	82.46	mg/L	102	85	115	0.46	20	
L60019-03AS	AS	12/01/06 22:09	II061116-2	135.86384	539	628.46	mg/L	65.8	85	115			M3
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	135.86384	539	645.66	mg/L	78.5	85	115	2.7	20	M3
WG218066													
WG218066ICV	ICV	12/13/06 20:29	II061209-1	100		98.62	mg/L	98.6	95	105			
WG218066ICB	ICB	12/13/06 20:33				U	mg/L		-0.6	0.6			
WG218066LFB	LFB	12/13/06 20:49	II061207-3	67.95918		68.56	mg/L	100.9	85	115			
L59909-01AS	AS	12/13/06 20:57	II061207-3	67.95918	233	289.36	mg/L	82.9	85	115			M3
L59909-01ASD	ASD	12/13/06 21:01	II061207-3	67.95918	233	294.31	mg/L	90.2	85	115	1.7	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L60019**

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217310													
WG217310ICV	ICV	11/29/06 15:41	WI061113-3	55		57.6	mg/L	104.7	90	110			
WG217310ICB	ICB	11/29/06 15:42				1.1	mg/L		-3	3			
WG217340													
WG217340ICV	ICV	11/29/06 18:42	WI061113-3	55		60	mg/L	109.1	90	110			
WG217340ICB	ICB	11/29/06 18:43				1	mg/L		-3	3			
WG217340LFB	LFB	11/29/06 18:44	WI061127-1	30		31	mg/L	103.3	90	110			
L60022-01DUP	DUP	11/29/06 19:01			2	1.7	mg/L				16.2	20	RA
L60017-02AS	AS	11/29/06 19:13	WI061127-1	300	270	669	mg/L	133	90	110			M1
L60017-03DUP	DUP	11/29/06 19:15			1090	1102	mg/L				1.1	20	
L60019-06AS	AS	11/29/06 19:26	WI061127-1	150	132	272	mg/L	93.3	90	110			

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217501													
WG217501ICV	ICV	12/04/06 17:47	II061128-2	2		2.035	mg/L	101.8	95	105			
WG217501ICB	ICB	12/04/06 17:52				U	mg/L		-0.03	0.03			
WG217501LFB	LFB	12/04/06 18:06	II061202-2	.5		.542	mg/L	108.4	85	115			
L59933-01AS	AS	12/04/06 18:12	II061202-2	2.5	U	2.653	mg/L	106.1	85	115			
L59933-01ASD	ASD	12/04/06 18:16	II061202-2	2.5	U	2.715	mg/L	108.6	85	115	2.31	20	
L60019-03AS	AS	12/04/06 18:49	II061202-2	1	U	1.075	mg/L	107.5	85	115			
L60019-03ASD	ASD	12/04/06 18:52	II061202-2	1	U	1.107	mg/L	110.7	85	115	2.93	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	2		1.897	mg/L	94.9	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.03	0.03			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	.5		.507	mg/L	101.4	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	.5	U	.511	mg/L	102.2	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	.5	U	.506	mg/L	101.2	85	115	0.98	20	
L60019-03AS	AS	12/01/06 22:09	II061116-2	1	U	.972	mg/L	97.2	85	115			
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	1	U	.999	mg/L	99.9	85	115	2.74	20	

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217313													
WG217313PBW1	PBW	11/29/06 16:59				U	µmhos/cm		-10	10			
WG217313LCSW1	LCSW	11/29/06 17:00	PCN25347	1408.8		1522	µmhos/cm	108	80	120			
WG217313PBW2	PBW	11/29/06 21:30				5	µmhos/cm		-10	10			
WG217313LCSW4	LCSW	11/29/06 21:32	PCN25347	1408.8		1503	µmhos/cm	106.7	80	120			
L60019-06DUP	DUP	11/30/06 1:06			3200	3180	µmhos/cm				0.6	20	
WG217313LCSW7	LCSW	11/30/06 1:08	PCN25347	1408.8		1488	µmhos/cm	105.6	80	120			

Phelps Dodge Sierrita

ACZ Project ID: **L60019**

Project ID: OJ00XN

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	2		1.915	mg/L	95.8	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.03	0.03			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	.5		.514	mg/L	102.8	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	.5	U	.461	mg/L	92.2	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	.5	U	.422	mg/L	84.4	85	115	8.83	20	M2
L60019-03AS	AS	12/01/06 22:09	II061116-2	1	U	1.04	mg/L	104	85	115			
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	1	U	1.055	mg/L	105.5	85	115	1.43	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217341													
WG217341ICV	ICV	11/29/06 20:41	WI061122-3	.3		.2911	mg/L	97	90	110			
WG217341ICB	ICB	11/29/06 20:42				U	mg/L		-0.015	0.015			
WG217240LRB	LRB	11/29/06 20:42				U	mg/L		-0.015	0.015			
WG217240LFB	LFB	11/29/06 20:43	WI061122-7	.2		.2133	mg/L	106.7	90	110			
L60014-06DUP	DUP	11/29/06 20:57			.015	.0112	mg/L				29	20	RA
L60019-01LFM	LFM	11/29/06 20:58	WI061122-7	.2	.015	.2288	mg/L	106.9	90	110			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217723													
WG217723ICV	ICV	12/07/06 10:04	WC061128-6	1.996		1.98	mg/L	99.2	95	105			
WG217723ICB	ICB	12/07/06 10:12				U	mg/L		-0.3	0.3			
WG217723LFB1-2	LFB	12/07/06 10:40	WC061021-1	4.99902		5.14	mg/L	102.8	90	110			
WG217723LFB2	LFB	12/07/06 12:44	WC061021-1	4.99902		5.14	mg/L	102.8	90	110			
L60019-06AS	AS	12/07/06 15:28	WC061021-1	4.99902	.3	5.33	mg/L	100.6	85	115			
L60019-06DUP	DUP	12/07/06 15:35			.3	.33	mg/L				9.5	20	RA

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	2		1.919	mg/L	96	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.06	0.06			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	1		1.039	mg/L	103.9	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	1	U	1.055	mg/L	105.5	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	1	U	1.051	mg/L	105.1	85	115	0.38	20	
L60019-03AS	AS	12/01/06 22:09	II061116-2	2	.04	2.045	mg/L	100.3	85	115			
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	2	.04	2.104	mg/L	103.2	85	115	2.84	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05202	mg/L	104	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.04987	mg/L	99.7	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	.0007	.09926	mg/L	98.6	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	.0007	.09772	mg/L	97	70	130	1.56	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60019**

Project ID: OJ00XN

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217501													
WG217501ICV	ICV	12/04/06 17:47	II061128-2	100		98.34	mg/L	98.3	95	105			
WG217501ICB	ICB	12/04/06 17:52				U	mg/L		-0.6	0.6			
WG217501LFB	LFB	12/04/06 18:06	II061202-2	54.94443		55.68	mg/L	101.3	85	115			
L59933-01AS	AS	12/04/06 18:12	II061202-2	274.72215	38	315.7	mg/L	101.1	85	115			
L59933-01ASD	ASD	12/04/06 18:16	II061202-2	274.72215	38	313.3	mg/L	100.2	85	115	0.76	20	
L60019-03AS	AS	12/04/06 18:49	II061202-2	109.88886	120	232.16	mg/L	102.1	85	115			
L60019-03ASD	ASD	12/04/06 18:52	II061202-2	109.88886	120	235.23	mg/L	104.9	85	115	1.31	20	
WG218066													
WG218066ICV	ICV	12/13/06 20:29	II061209-1	100		95.69	mg/L	95.7	95	105			
WG218066ICB	ICB	12/13/06 20:33				U	mg/L		-0.6	0.6			
WG218066LFB	LFB	12/13/06 20:49	II061207-3	54.98614		54.85	mg/L	99.8	85	115			
L59909-01AS	AS	12/13/06 20:57	II061207-3	54.98614	79.8	129.38	mg/L	90.2	85	115			
L59909-01ASD	ASD	12/13/06 21:01	II061207-3	54.98614	79.8	132.93	mg/L	96.6	85	115	2.71	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	2		1.8918	mg/L	94.6	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.015	0.015			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	.5		.5221	mg/L	104.4	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	.5	U	.5322	mg/L	106.4	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	.5	U	.5283	mg/L	105.7	85	115	0.74	20	
L60019-03AS	AS	12/01/06 22:09	II061116-2	1	U	1.016	mg/L	101.6	85	115			
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	1	U	1.043	mg/L	104.3	85	115	2.62	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216633													
WG216633ICV	ICV	11/20/06 18:29	II061110-4	.00498		.00501	mg/L	100.6	95	105			
WG216633ICB	ICB	11/20/06 18:31				U	mg/L		-0.0002	0.0002			
WG216845													
WG216845LRB	LRB	11/21/06 14:40				U	mg/L		-0.00044	0.00044			
WG216845LFB	LFB	11/21/06 14:42	II061109-3	.002		.00218	mg/L	109	85	115			
L59990-06LFM	LFM	11/21/06 15:20	II061109-3	.002	U	.00232	mg/L	116	85	115			MA
L59990-06LFMD	LFMD	11/21/06 15:23	II061109-3	.002	U	.00217	mg/L	108.5	85	115	6.68	20	
WG217150													
WG217150ICV	ICV	11/29/06 15:27	II061129-1	.00498		.00483	mg/L	97	95	105			
WG217150ICB	ICB	11/29/06 15:30				U	mg/L		-0.0002	0.0002			
WG217151													
WG217151LRB	LRB	11/29/06 17:02				U	mg/L		-0.00044	0.00044			
WG217151LFB	LFB	11/29/06 17:05	II061121-2	.002		.00205	mg/L	102.5	85	115			
L57611-19LFM	LFM	11/29/06 17:11	II061121-2	.002	U	.00171	mg/L	85.5	85	115			
L57611-19LFMD	LFMD	11/29/06 17:13	II061121-2	.002	U	.00179	mg/L	89.5	85	115	4.57	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60019**

Project ID: OJ00XN

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	2		1.962	mg/L	98.1	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.03	0.03			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	.5		.513	mg/L	102.6	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	.5	U	.475	mg/L	95	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	.5	U	.451	mg/L	90.2	85	115	5.18	20	
L60019-03AS	AS	12/01/06 22:09	II061116-2	1	.08	1.069	mg/L	98.9	85	115			
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	1	.08	1.105	mg/L	102.5	85	115	3.31	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	2		1.897	mg/L	94.9	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.03	0.03			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	.5		.497	mg/L	99.4	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	.5	U	.517	mg/L	103.4	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	.5	U	.509	mg/L	101.8	85	115	1.56	20	
L60019-03AS	AS	12/01/06 22:09	II061116-2	1	U	.98	mg/L	98	85	115			
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	1	U	1.012	mg/L	101.2	85	115	3.21	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217410													
WG217410ICV	ICV	11/30/06 14:43	WI060906-3	2.416		2.385	mg/L	98.7	90	110			
WG217410ICB	ICB	11/30/06 14:45				U	mg/L		-0.06	0.06			
WG217410LFB1	LFB	11/30/06 15:08	WI060906-4	2		1.971	mg/L	98.6	90	110			
WG217410LFB2	LFB	11/30/06 15:26	WI060906-4	2		2.055	mg/L	102.8	90	110			
L60014-06AS	AS	11/30/06 15:31	WI060906-4	2	.9	2.683	mg/L	89.2	90	110			M2
L60015-01DUP	DUP	11/30/06 15:34			U	.041	mg/L				200	20	RA
WG217494													
WG217494ICV	ICV	12/01/06 18:55	WI060906-3	2.416		2.432	mg/L	100.7	90	110			
WG217494ICB	ICB	12/01/06 18:56				U	mg/L		-0.06	0.06			
WG217497													
WG217497ICV	ICV	12/01/06 20:03	WI060906-3	2.416		2.348	mg/L	97.2	90	110			
WG217497ICB	ICB	12/01/06 20:05				U	mg/L		-0.06	0.06			
WG217497LFB1	LFB	12/01/06 20:06	WI060906-4	2		1.991	mg/L	99.6	90	110			
L59998-14AS	AS	12/01/06 20:27	WI060906-4	2	.08	2.184	mg/L	105.2	90	110			
L59998-15DUP	DUP	12/01/06 20:29			.02	.022	mg/L				9.5	20	RA

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217313													
WG217313LCSW3	LCSW	11/29/06 17:14	PCN25442	6		6.04	units	100.7	90	110			
WG217313LCSW6	LCSW	11/29/06 21:46	PCN25442	6		6.04	units	100.7	90	110			
L60019-06DUP	DUP	11/30/06 1:06			7.9	7.92	units				0.3	20	
WG217313LCSW9	LCSW	11/30/06 1:23	PCN25442	6		6.05	units	100.8	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L60019**

Project ID: OJ00XN

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217501													
WG217501ICV	ICV	12/04/06 17:47	II061128-2	20		20.03	mg/L	100.2	95	105			
WG217501ICB	ICB	12/04/06 17:52				U	mg/L		-0.9	0.9			
WG217501LFB	LFB	12/04/06 18:06	II061202-2	99.46819		99.29	mg/L	99.8	85	115			
L59933-01AS	AS	12/04/06 18:12	II061202-2	497.34095	U	499.1	mg/L	100.4	85	115			
L59933-01ASD	ASD	12/04/06 18:16	II061202-2	497.34095	U	492.2	mg/L	99	85	115	1.39	20	
L60019-03AS	AS	12/04/06 18:49	II061202-2	198.93638	7.9	205.08	mg/L	99.1	85	115			
L60019-03ASD	ASD	12/04/06 18:52	II061202-2	198.93638	7.9	206.19	mg/L	99.7	85	115	0.54	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216990													
WG216990PBW	PBW	11/21/06 15:00				12	mg/L		-20	20			
WG216990LCSW	LCSW	11/21/06 15:01	PCN25978	260		300	mg/L	115.4	80	120			
L60024-01DUP	DUP	11/21/06 15:34			260	264	mg/L				1.5	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05276	mg/L	105.5	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05062	mg/L	101.2	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	.0012	.11076	mg/L	109.6	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	.0012	.10814	mg/L	106.9	70	130	2.39	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217657													
WG217657ICV	ICV	12/06/06 20:06	II061128-2	100		99.6	mg/L	99.6	95	105			
WG217657ICB	ICB	12/06/06 20:10				U	mg/L		-0.9	0.9			
WG217657LFB	LFB	12/06/06 20:26	II061202-2	99.78197		104.3	mg/L	104.5	85	115			
L60015-02AS	AS	12/06/06 21:31	II061202-2	99.78197	170	267.69	mg/L	97.9	85	115			
L60015-02ASD	ASD	12/06/06 21:35	II061202-2	99.78197	170	266.65	mg/L	96.9	85	115	0.39	20	
WG218066													
WG218066ICV	ICV	12/13/06 20:29	II061209-1	100		99.48	mg/L	99.5	95	105			
WG218066ICB	ICB	12/13/06 20:33				U	mg/L		-0.9	0.9			
WG218066LFB	LFB	12/13/06 20:49	II061207-3	99.90786		100.92	mg/L	101	85	115			
L59909-01AS	AS	12/13/06 20:57	II061207-3	99.90786	223	307.13	mg/L	84.2	85	115			MA
L59909-01ASD	ASD	12/13/06 21:01	II061207-3	99.90786	223	316.48	mg/L	93.6	85	115	3	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217675													
WG217675PBW	PBW	12/06/06 10:00				U	mg/L		-30	30			
WG217675LCSW	LCSW	12/06/06 10:03	WC060911-2	100		97	mg/L	97	80	120			
L60019-04DUP	DUP	12/06/06 10:47			1710	1711	mg/L				0.1	20	
L60155-04DUP	DUP	12/06/06 11:30			U	U	mg/L				0	20	RA

Phelps Dodge Sierrita

ACZ Project ID: **L60019**

Project ID: OJ00XN

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.056		.05675	mg/L	101.3	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05092	mg/L	101.8	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	U	.10288	mg/L	102.9	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	U	.10064	mg/L	100.6	70	130	2.2	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217492													
WG217492ICV	ICV	12/01/06 20:45	II061128-2	2		1.929	mg/L	96.5	95	105			
WG217492ICB	ICB	12/01/06 20:49				U	mg/L		-0.03	0.03			
WG217492LFB	LFB	12/01/06 21:05	II061116-2	.5		.517	mg/L	103.4	85	115			
L59933-01AS	AS	12/01/06 21:13	II061116-2	.5	U	.517	mg/L	103.4	85	115			
L59933-01ASD	ASD	12/01/06 21:17	II061116-2	.5	U	.513	mg/L	102.6	85	115	0.78	20	
L60019-03AS	AS	12/01/06 22:09	II061116-2	1	U	1.016	mg/L	101.6	85	115			
L60019-03ASD	ASD	12/01/06 22:13	II061116-2	1	U	1.053	mg/L	105.3	85	115	3.58	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60019**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION	
L60019-01	WG217492	Copper, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.	
	WG216845	Mercury, dissolved	M245.1 CVAA	MA		Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217340	Chloride	M325.2 - Colorimetric	M1		Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217723	Fluoride	SM4500F-C	RA		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217410	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2		Matrix spike recovery was low, the method control sample recovery was acceptable.
			M353.2 - H2SO4 preserved	RA		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG217313	Total Alkalinity	SM2320B - Titration	H1	Sample analysis performed past holding time.		
L60019-02	WG217492	Copper, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.	
	WG217340	Chloride	M325.2 - Colorimetric	M1		Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217723	Fluoride	SM4500F-C	RA		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217410	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2		Matrix spike recovery was low, the method control sample recovery was acceptable.
			M353.2 - H2SO4 preserved	RA		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG217313	Total Alkalinity	SM2320B - Titration	H1	Sample analysis performed past holding time.		
L60019-03	WG218066	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.	
		Sodium, dissolved	M200.7 ICP	MA		Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217340	Chloride	M325.2 - Colorimetric	M1		Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217723	Fluoride	SM4500F-C	RA		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217497	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA		Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217313	Total Alkalinity	SM2320B - Titration	H1		Sample analysis performed past holding time.

Phelps Dodge Sierrita

ACZ Project ID: **L60019**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60019-04	WG218066	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Sodium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217340	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217723	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217497	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217313	Total Alkalinity	SM2320B - Titration	H1	Sample analysis performed past holding time.
L60019-05	WG218066	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Sodium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217340	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217723	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217497	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217675	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG217313	Total Alkalinity	SM2320B - Titration	H1	Sample analysis performed past holding time.	
L60019-06	WG218066	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Sodium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217340	Chloride	M325.2 - Colorimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217723	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217497	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217675	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG217313	Total Alkalinity	SM2320B - Titration	H1	Sample analysis performed past holding time.	

Phelps Dodge Sierrita

ACZ Project ID: **L60019**



No certification qualifiers associated with this analysis

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60019
Date Received: 11/17/2006
Received By:
Date Printed: 11/17/2006

Receipt Verification

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

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

Trip blank has headspace.

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

The client was not contacted.

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
641	2.5	20

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

Notes

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60019
Date Received: 11/17/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60019-01	DUP111506A		Y		Y							<input type="checkbox"/>
L60019-02	IW-13		Y		Y							<input type="checkbox"/>
L60019-03	IW-14		Y		Y							<input type="checkbox"/>
L60019-04	IW-15		Y		Y							<input type="checkbox"/>
L60019-05	IW-16		Y		Y							<input type="checkbox"/>
L60019-06	IW-17		Y		Y							<input type="checkbox"/>
L60019-07	TRIP BLANK									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

March 12, 2007

Project ID: OJ00XN
ACZ Project ID: L60077

Bill Dorris:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 21, 2006 and re-reported on February 12, 2007. This project was assigned to ACZ's project number, L60077. Please reference this number in all future inquiries.

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

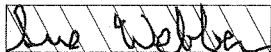
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60077. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Mar/07

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

March 12, 2007

Project ID: OJ00XN

ACZ Project ID: L60077

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 8 ground water samples from Phelps Dodge Sierrita on November 21, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L60077. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes, per client request.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures.

ACZ Laboratories, Inc.

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

Inorganic Analytical Results

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: PZ-7

ACZ Sample ID: **L60077-02**
Date Sampled: 11/16/06 09:42
Date Received: 11/21/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1025			mS/cm			11/16/06 9:42	bd
pH (Field)	Field Measurement	6.9			units			11/16/06 9:42	bd
Temperature (Field)	Field Measurement	21.7			C			11/16/06 9:42	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	145			mg/L	0.2	1	12/04/06 22:31	wfg
Magnesium, dissolved	M200.7 ICP	39.7			mg/L	0.2	1	12/04/06 22:31	wfg
Potassium, dissolved	M200.7 ICP	4.1			mg/L	0.3	1	12/04/06 22:31	wfg
Sodium, dissolved	M200.7 ICP	31.7			mg/L	0.3	1	12/04/06 22:31	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		105			mg/L	2	20	11/30/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/30/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/30/06 0:00	ct
Total Alkalinity		105			mg/L	2	20	11/30/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		9.1			%			02/02/07 0:00	calc
Sum of Anions		10.0			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		12.0			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	79		*	mg/L	1	5	12/04/06 17:08	jlf
Fluoride	SM4500F-C	0.4	B	*	mg/L	0.1	0.5	12/11/06 18:55	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.19		*	mg/L	0.02	0.1	12/01/06 21:51	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	800			mg/L	10	20	11/22/06 15:50	lcp
Sulfate	SM4500 SO4-D	270	H	*	mg/L	10	50	12/15/06 16:04	seb
TDS (calculated)	Calculation	633			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.26						02/02/07 0:00	calc

Arizona license number: AZ0102



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita

ACZ Project ID: L60077

Project ID: OJ00XN

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217353													
WG217353LCSW2	LCSW	11/30/06 9:45	WC061113-1	820		810.1	mg/L	98.8	80	120			
WG217353LCSW5	LCSW	11/30/06 12:59	WC061113-1	820		821.3	mg/L	100.2	80	120			
L60077-04DUP	DUP	11/30/06 16:16			33	32.7	mg/L				0.9	20	
WG217353LCSW8	LCSW	11/30/06 16:29	WC061113-1	820		826.3	mg/L	100.8	80	120			
WG217450													
WG217450LCSW2	LCSW	12/01/06 9:37	WC061113-1	820		819.4	mg/L	99.9	80	120			
WG217450LCSW5	LCSW	12/01/06 11:37	WC061113-1	820		825.1	mg/L	100.6	80	120			
L60082-03DUP	DUP	12/01/06 12:51			151	151.6	mg/L				0.4	20	
WG217450LCSW8	LCSW	12/01/06 15:04	WC061113-1	820		832.5	mg/L	101.5	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	2		1.975	mg/L	98.8	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.09	0.09			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	1		1.027	mg/L	102.7	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	5	U	5.17	mg/L	103.4	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	5	U	5.2	mg/L	104	85	115	0.58	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.02008		.01974	mg/L	98.3	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0012	0.0012			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.00625		.00648	mg/L	103.7	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.0125	U	.01304	mg/L	104.3	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.0125	U	.01299	mg/L	103.9	70	130	0.38	20	
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.0125	U	.01284	mg/L	102.7	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.0125	U	.01332	mg/L	106.6	70	130	3.67	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05368	mg/L	107.4	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0015	0.0015			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05404	mg/L	108.1	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	.003	.119	mg/L	116	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	.003	.1166	mg/L	113.6	70	130	2.04	20	
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	.003	.1147	mg/L	111.7	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	.003	.1161	mg/L	113.1	70	130	1.21	20	

Phelps Dodge Sierrita

ACZ Project ID: L60077

Project ID: OJ00XN

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217656													
WG217656ICV	ICV	12/06/06 13:14	II061128-2	2		2.0014	mg/L	100.1	95	105			
WG217656ICE	ICE	12/06/06 13:18				U	mg/L		-0.009	0.009			
WG217656LFB	LFB	12/06/06 13:31	II061202-2	.5		.5343	mg/L	106.9	85	115			
L60077-01AS	AS	12/06/06 13:37	II061202-2	2.5	U	2.831	mg/L	113.2	85	115			
L60077-01ASD	ASD	12/06/06 13:42	II061202-2	2.5	U	2.843	mg/L	113.7	85	115	0.42	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05044	mg/L	100.9	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05154	mg/L	103.1	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	U	.09636	mg/L	96.4	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	U	.09644	mg/L	96.4	70	130	0.08	20	
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	U	.09458	mg/L	94.6	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	U	.09352	mg/L	93.5	70	130	1.13	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05141	mg/L	102.8	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05145	mg/L	102.9	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	U	.10056	mg/L	100.6	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	U	.09856	mg/L	98.6	70	130	2.01	20	
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	.0007	.09722	mg/L	96.5	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	.0007	.10112	mg/L	100.4	70	130	3.93	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	100		101.13	mg/L	101.1	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.6	0.6			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	67.93192		70.66	mg/L	104	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	339.6596	427	768.1	mg/L	100.4	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	339.6596	427	758.4	mg/L	97.6	85	115	1.27	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60077**

Project ID: OJ00XN

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217552													
WG217552ICV	ICV	12/04/06 15:11	WI061113-3	55		56.2	mg/L	102.2	90	110			
WG217552ICB	ICB	12/04/06 15:12				1.1	mg/L		-3	3			
WG217553													
WG217553ICV	ICV	12/04/06 16:30	WI061113-3	55		56.1	mg/L	102	90	110			
WG217553ICB	ICB	12/04/06 16:31				U	mg/L		-3	3			
WG217553LFB1	LFB	12/04/06 16:32	WI061127-1	30		28.9	mg/L	96.3	90	110			
WG217553LFB2	LFB	12/04/06 16:59	WI061127-1	30		28.8	mg/L	96	90	110			
L60074-04DUP	DUP	12/04/06 17:03			21	21.3	mg/L				1.4	20	
L60074-03AS	AS	12/04/06 17:17	WI061127-1	300	350	529	mg/L	59.7	90	110			M2

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217656													
WG217656ICV	ICV	12/06/06 13:14	II061128-2	2		1.989	mg/L	99.5	95	105			
WG217656ICB	ICB	12/06/06 13:18				U	mg/L		-0.03	0.03			
WG217656LFB	LFB	12/06/06 13:31	II061202-2	.5		.55	mg/L	110	85	115			
L60077-01AS	AS	12/06/06 13:37	II061202-2	2.5	U	2.823	mg/L	112.9	85	115			
L60077-01ASD	ASD	12/06/06 13:42	II061202-2	2.5	U	2.811	mg/L	112.4	85	115	0.43	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217668													
WG217668ICV	ICV	12/04/06 22:01	II061128-2	2		1.898	mg/L	94.9	95	105			
WG217668ICB	ICB	12/04/06 22:05				U	mg/L		-0.03	0.03			
WG217668LFB	LFB	12/04/06 22:18	II061202-2	.5		.521	mg/L	104.2	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	2.5	U	2.593	mg/L	103.7	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	2.5	U	2.564	mg/L	102.6	85	115	1.12	20	

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217353													
WG217353PBW1	PBW	11/30/06 9:33				U	µmhos/cm		-10	10			
WG217353LCSW1	LCSW	11/30/06 9:34	PCN25347	1408.8		1477	µmhos/cm	104.8	80	120			
WG217353PBW2	PBW	11/30/06 12:46				U	µmhos/cm		-10	10			
WG217353LCSW4	LCSW	11/30/06 12:48	PCN25347	1408.8		1488	µmhos/cm	105.6	80	120			
L60077-04DUP	DUP	11/30/06 16:16			3960	3940	µmhos/cm				0.5	20	
WG217353LCSW7	LCSW	11/30/06 16:17	PCN25347	1408.8		1520	µmhos/cm	107.9	80	120			
WG217450													
WG217450PBW1	PBW	12/01/06 9:24				U	µmhos/cm		-10	10			
WG217450LCSW1	LCSW	12/01/06 9:26	PCN25347	1408.8		1467	µmhos/cm	104.1	80	120			
WG217450PBW2	PBW	12/01/06 11:25				U	µmhos/cm		-10	10			
WG217450LCSW4	LCSW	12/01/06 11:27	PCN25347	1408.8		1469	µmhos/cm	104.3	80	120			
L60082-03DUP	DUP	12/01/06 12:51			487	487	µmhos/cm				0	20	
WG217450LCSW7	LCSW	12/01/06 14:54	PCN25347	1408.8		1483	µmhos/cm	105.3	80	120			

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60077

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	2		1.894	mg/L	94.7	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.03	0.03			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	.5		.47	mg/L	94	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	2.5	U	2.287	mg/L	91.5	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	2.5	U	2.269	mg/L	90.8	85	115	0.79	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217341													
WG217341ICV	ICV	11/29/06 20:41	WI061122-3	.3		.2911	mg/L	97	90	110			
WG217341ICB	ICB	11/29/06 20:42				U	mg/L		-0.015	0.015			
WG217240LRB	LRB	11/29/06 20:42				U	mg/L		-0.015	0.015			
WG217240LFB	LFB	11/29/06 20:43	WI061122-7	.2		.2133	mg/L	106.7	90	110			
L60014-06DUP	DUP	11/29/06 20:57			.015	.0112	mg/L				29	20	RA
L60019-01LFM	LFM	11/29/06 20:58	WI061122-7	.2	.015	.2288	mg/L	106.9	90	110			
WG217343													
WG217343ICV	ICV	11/29/06 21:14	WI061122-3	.3		.308	mg/L	102.7	90	110			
WG217343ICB	ICB	11/29/06 21:14				U	mg/L		-0.015	0.015			
WG217296LRB	LRB	11/29/06 21:15				U	mg/L		-0.015	0.015			
WG217296LFB	LFB	11/29/06 21:16	WI061122-7	.2		.2061	mg/L	103.1	90	110			
L60042-01DUP	DUP	11/29/06 21:18			10.1	9.89	mg/L				2.1	20	
L60042-02LFM	LFM	11/29/06 21:42	SCN000254	10	25.7	34.53	mg/L	88.3	90	110			M2

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217964													
WG217964ICV	ICV	12/11/06 17:18	WC061211-2	1.996		1.93	mg/L	96.7	95	105			
WG217964ICB	ICB	12/11/06 17:24				U	mg/L		-0.3	0.3			
WG217964LFB1	LFB	12/11/06 17:30	WC061021-1	4.99902		5.05	mg/L	101	90	110			
L60014-05AS	AS	12/11/06 17:40	WC061021-1	4.99902	.4	5.22	mg/L	96.4	85	115			
L60014-05DUP	DUP	12/11/06 17:47			.4	.42	mg/L				4.9	20	RA
L60077-03AS	AS	12/11/06 19:04	WC061021-1	4.99902	1	6.02	mg/L	100.4	85	115			
L60077-03DUP	DUP	12/11/06 19:12			1	1.09	mg/L				8.6	20	
WG217964LFB2	LFB	12/11/06 20:16	WC061021-1	4.99902		5.15	mg/L	103	90	110			

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	2		1.975	mg/L	98.8	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.06	0.06			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	1		1.08	mg/L	108	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	5	7.4	12.81	mg/L	108.2	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	5	7.4	12.7	mg/L	106	85	115	0.86	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60077**

Project ID: OJ00XN

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05202	mg/L	104	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.04987	mg/L	99.7	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	.0007	.09926	mg/L	98.6	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	.0007	.09772	mg/L	97	70	130	1.56	20	
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	U	.10126	mg/L	101.3	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	U	.10234	mg/L	102.3	70	130	1.06	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	100		98.36	mg/L	98.4	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.6	0.6			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	54.94443		57.06	mg/L	103.9	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	274.72215	248	526	mg/L	101.2	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	274.72215	248	519.8	mg/L	98.9	85	115	1.19	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217656													
WG217656ICV	ICV	12/06/06 13:14	II061128-2	2		1.9353	mg/L	96.8	95	105			
WG217656ICB	ICB	12/06/06 13:18				U	mg/L		-0.015	0.015			
WG217656LFB	LFB	12/06/06 13:31	II061202-2	.5		.564	mg/L	112.8	85	115			
L60077-01AS	AS	12/06/06 13:37	II061202-2	2.5	1.82	4.683	mg/L	114.5	85	115			
L60077-01ASD	ASD	12/06/06 13:42	II061202-2	2.5	1.82	4.686	mg/L	114.6	85	115	0.06	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217153													
WG217153ICV	ICV	11/30/06 9:49	II061129-1	.00498		.00502	mg/L	100.8	90	110			
WG217153ICB	ICB	11/30/06 9:52				U	mg/L		-0.0006	0.0006			
WG217155													
WG217155LRB	LRB	11/30/06 13:19				U	mg/L		-0.00044	0.00044			
WG217155LFB	LFB	11/30/06 13:21	II061121-2	.002		.00208	mg/L	104	85	115			
L59238-08LFM	LFM	11/30/06 13:29	HG10XSPIK	.02	U	.0202	mg/L	101	85	115			
L59238-08LFMD	LFMD	11/30/06 13:31	HG10XSPIK	.02	U	.0208	mg/L	104	85	115	2.93	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	2		2.024	mg/L	101.2	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.03	0.03			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	.5		.505	mg/L	101	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	2.5	2.35	4.817	mg/L	98.7	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	2.5	2.35	4.793	mg/L	97.7	85	115	0.5	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60077**

Project ID: OJ00XN

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	2		1.952	mg/L	97.6	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.03	0.03			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	.5		.545	mg/L	109	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	2.5	U	2.782	mg/L	111.3	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	2.5	U	2.804	mg/L	112.2	85	115	0.79	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217494													
WG217494ICV	ICV	12/01/06 18:55	WI060906-3	2.416		2.432	mg/L	100.7	90	110			
WG217494ICB	ICB	12/01/06 18:56				U	mg/L		-0.06	0.06			
WG217497													
WG217497ICV	ICV	12/01/06 20:03	WI060906-3	2.416		2.348	mg/L	97.2	90	110			
WG217497ICB	ICB	12/01/06 20:05				U	mg/L		-0.06	0.06			
WG217497LFB1	LFB	12/01/06 20:06	WI060906-4	2		1.991	mg/L	99.6	90	110			
L59998-14AS	AS	12/01/06 20:27	WI060906-4	2	.08	2.184	mg/L	105.2	90	110			
L59998-15DUP	DUP	12/01/06 20:29			.02	.022	mg/L				9.5	20	RA
WG217498													
WG217498ICV	ICV	12/01/06 21:13	WI060906-3	2.416		2.385	mg/L	98.7	90	110			
WG217498ICB	ICB	12/01/06 21:14				U	mg/L		-0.06	0.06			
WG217498LFB1	LFB	12/01/06 21:16	WI060906-4	2		2.014	mg/L	100.7	90	110			
L59958-02AS	AS	12/01/06 21:37	WI060906-4	2	.19	2.501	mg/L	115.6	90	110			M1
L59958-03DUP	DUP	12/01/06 21:39			1.79	1.799	mg/L				0.5	20	
WG217498LFB2	LFB	12/01/06 21:54	WI060906-4	2		2.015	mg/L	100.8	90	110			

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217353													
WG217353LCSW3	LCSW	11/30/06 9:48	PCN25442	6		6.06	units	101	90	110			
WG217353LCSW6	LCSW	11/30/06 13:02	PCN25442	6		6.04	units	100.7	90	110			
L60077-04DUP	DUP	11/30/06 16:16			7.5	7.38	units				1.6	20	
WG217353LCSW9	LCSW	11/30/06 16:32	PCN25442	6		6.02	units	100.3	90	110			
WG217450													
WG217450LCSW3	LCSW	12/01/06 9:40	PCN25442	6		6.03	units	100.5	90	110			
WG217450LCSW6	LCSW	12/01/06 11:41	PCN25442	6		6.02	units	100.3	90	110			
L60082-03DUP	DUP	12/01/06 12:51			8.2	8.19	units				0.1	20	
WG217450LCSW9	LCSW	12/01/06 15:08	PCN25442	6		6.04	units	100.7	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	20		20.75	mg/L	103.8	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.9	0.9			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	99.46819		104.35	mg/L	104.9	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	497.34095	18	543.2	mg/L	105.6	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	497.34095	18	542.5	mg/L	105.5	85	115	0.13	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60077**

Project ID: OJ00XN

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217050													
WG217050PBW	PBW	11/22/06 15:40				18	mg/L		-20	20			
WG217050LCSW	LCSW	11/22/06 15:41	PCN25978	260		286	mg/L	110	80	120			
WG217228													
WG217228PBW	PBW	11/28/06 14:45				U	mg/L		-20	20			
WG217228LCSW	LCSW	11/28/06 14:46	PCN25973	260		266	mg/L	102.3	80	120			
L60122-08DUP	DUP	11/28/06 15:29			1140	1138	mg/L				0.2	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05276	mg/L	105.5	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05062	mg/L	101.2	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	.0012	.11076	mg/L	109.6	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	.0012	.10814	mg/L	106.9	70	130	2.39	20	
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	.0054	.10934	mg/L	103.9	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	.0054	.11158	mg/L	106.2	70	130	2.03	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	100		101.47	mg/L	101.5	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.9	0.9			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	99.78197		103.88	mg/L	104.1	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	498.90985	901	1359.7	mg/L	91.9	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	498.90985	901	1344.4	mg/L	88.9	85	115	1.13	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218241													
WG218241PBW	PBW	12/15/06 15:30				U	mg/L		-30	30			
WG218241LCSW	LCSW	12/15/06 15:32	WC061207-2	100		92	mg/L	92	80	120			
L59958-04DUP	DUP	12/15/06 15:47			510	521	mg/L				2.1	20	
L60172-07DUP	DUP	12/15/06 16:30			480	472	mg/L				1.7	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.056		.05675	mg/L	101.3	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05092	mg/L	101.8	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	U	.10288	mg/L	102.9	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	U	.10064	mg/L	100.6	70	130	2.2	20	
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	U	.10366	mg/L	103.7	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	U	.10628	mg/L	106.3	70	130	2.5	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L60077**

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217568													
WG217568ICV	ICV	12/04/06 22:01	II061128-2	2		1.957	mg/L	97.9	95	105			
WG217568ICB	ICB	12/04/06 22:05				U	mg/L		-0.03	0.03			
WG217568LFB	LFB	12/04/06 22:18	II061202-2	.5		.532	mg/L	106.4	85	115			
L60077-01AS	AS	12/04/06 22:24	II061202-2	2.5	U	2.679	mg/L	107.2	85	115			
L60077-01ASD	ASD	12/04/06 22:28	II061202-2	2.5	U	2.603	mg/L	104.1	85	115	2.88	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60077**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60077-01	WG217553	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217498	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217050	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	ZO	TDS concentration is based on a final residue greater than 200 mg.
	WG218241	Sulfate	SM4500 SO4-D	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
L60077-02	WG217553	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217498	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG218241	Sulfate	SM4500 SO4-D	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
L60077-03	WG217553	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217497	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60077-04	WG217553	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217498	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
L60077-05	WG217296	Cyanide, total	M335.4 - Manual Distillation	QB	Method-specified preservation criteria cannot be met due to sample matrix.
	WG217553	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG217497	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217228	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric M160.1 - Gravimetric	H2 ZO	Initial analysis within holding time. Reanalysis for the required dilution was past holding time. TDS concentration is based on a final residue greater than 200 mg.

Phelps Dodge Sierrita

ACZ Project ID: **L60077**

ACZ ID	WGR/NUM	PARAMETER	METHOD	QUAL	DESCRIPTION	
L60077-06	WG217296	Cyanide, total	M335.4 - Manual Distillation	QB	Method-specified preservation criteria cannot be met due to sample matrix.	
	WG217553	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.	
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.	
	WG217497	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
	WG217450	pH	pH measured at	M150.1 - Electrometric	EB	A pH value outside the range of the probe standardization is estimated.
				M150.1 - Electrometric	EB	A pH value outside the range of the probe standardization is estimated.
WG217228	Residue, Filterable (TDS) @180C		M160.1 - Gravimetric	H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.	
			M160.1 - Gravimetric	ZO	TDS concentration is based on a final residue greater than 200 mg.	
L60077-08	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.	

Phelps Dodge Sierrita

ACZ Project ID: **L60077**



No certification qualifiers associated with this analysis

Sample Receipt

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60077
Date Received: 11/21/2006
Received By:
Date Printed: 11/21/2006

Receipt Verification

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

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

Trip blank has headspace.

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

The client was not contacted.

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1295	3.2	24

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

Notes

Sample #2:green-added 2mL HNO3 to adjust ph.

ACZ Laboratories, Inc.

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

Sample Receipt

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60077
Date Received: 11/21/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60077-01	PZ-4		Y		Y							<input type="checkbox"/>
L60077-02	PZ-7		Y		Y							<input type="checkbox"/>
L60077-03	RECLAIM		Y		Y							<input type="checkbox"/>
L60077-04	RECLAIM POND		Y		Y							<input type="checkbox"/>
L60077-05	PLS		Y		Y							<input type="checkbox"/>
L60077-06	RAFFINATE		Y		Y							<input type="checkbox"/>
L60077-07	VOA TRIP BLANK									X		<input type="checkbox"/>
L60077-08	CYANIDE TRIP BLANK									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



P.O. Box 527, Green Valley, AZ 85622

ANALYTICAL REQUEST SHEET

Chain of Custody

PO# - OJ00XN

COC Number:

60077

Page 1 of 1

Lab Use Only	Location	Date	Time	# of Cont.	Preservatives					Field Data			Analysis Requested	
					HNO ₃	H ₂ SO ₄	NaOH	HCL	Unpres.	pH	Cond	Temp		
	PZ-4	11/16/2006	12:40	8	1	1	1	1	2	5	7.11	3950	24.5	Ambient Suite
	PZ-7	11/16/2006	9:42	8	1	1	1	1	2	5	6.87	1025	21.7	Ambient Suite
	RECLAIM	11/17/2006	12:12	8	1	1	1	1	2	5	7.50	1558	23.6	Ambient Suite
	Reclaim Pond	11/17/2006	11:46	8	1	1	1	1	2	5	8.40	1666	16	Ambient Suite
	PLS	11/17/2006	12:56	8	1	1	1	1	2	5	2.69	18130	21.6	Ambient Suite
	RAFFINATE	11/17/2006	13:12	8	1	1	1	1	2	5	2.49	25000	20.7	Ambient Suite

Sample Submitted By: Billy Dorris

Report Results To: Billy Dorris

Telephone No. 520-648-8873

Fax No.

Samples Submitted on Ice: Yes / No

Telephone No. 520-648-8873

Surrendered By: Billy Dorris

Received By: MOS

Date: 12/06/06 Time: 10:43

Surrendered By:

Received By:

Date:

Comments/Special Instructions:

Received By:

Date:

Laboratory Name and Address:
 ACZ Laboratory
 30400 Downhill Drive
 Steamboat Springs, CO 80487
 Phone: 8003345493

Fax No. 520-648-8608

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

March 12, 2007

Project ID: OJ00XN
ACZ Project ID: L60082

Bill Dorris:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 21, 2006 and re-reported on February 12, 2007. This project was assigned to ACZ's project number, L60082. Please reference this number in all future inquiries.

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

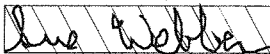
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60082. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Mar/07

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

March 12, 2007

Project ID: OJ00XN

ACZ Project ID: L60082

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 8 ground water samples from Phelps Dodge Sierrita on November 21, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L60082. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes, per client request.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures.

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: DUP111706A

ACZ Sample ID: **L60082-01**
 Date Sampled: 11/17/06 00:00
 Date Received: 11/21/06
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	45.5			mg/L	0.2	1	11/28/06 1:34	wfg
Magnesium, dissolved	M200.7 ICP	4.7			mg/L	0.2	1	11/28/06 1:34	wfg
Potassium, dissolved	M200.7 ICP	2.8			mg/L	0.3	1	11/28/06 1:34	wfg
Sodium, dissolved	M200.7 ICP	51.6			mg/L	0.3	1	11/28/06 1:34	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		151			mg/L	2	20	12/01/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/01/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/01/06 0:00	ct
Total Alkalinity		151			mg/L	2	20	12/01/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		3.1			%			03/12/07 0:00	calc
Sum of Anions		4.7			meq/L	0.1	0.5	03/12/07 0:00	calc
Sum of Cations		5.0			meq/L	0.1	0.5	03/12/07 0:00	calc
Chloride	M325.2 - Colorimetric	15		*	mg/L	1	5	12/04/06 15:27	jif
Fluoride	SM4500F-C	0.6		*	mg/L	0.1	0.5	12/06/06 16:02	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.39			mg/L	0.02	0.1	12/07/06 22:37	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	320			mg/L	10	20	11/22/06 16:36	lcp
Sulfate	SM4500 SO4-D	60		*	mg/L	10	50	12/08/06 18:16	seb
TDS (calculated)	Calculation	271			mg/L	10	50	03/12/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.18						03/12/07 0:00	calc

Arizona license number: AZ0102

ACZ Laboratories, Inc.

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

Inorganic Analytical Results

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: S-1

ACZ Sample ID: **L60082-02**
Date Sampled: 11/17/06 09:30
Date Received: 11/21/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	527			mS/cm			11/17/06 9:30	bd
pH (Field)	Field Measurement	7.6			units			11/17/06 9:30	bd
Temperature (Field)	Field Measurement	21.1			C			11/17/06 9:30	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	54.6			mg/L	0.2	1	11/28/06 1:43	wfg
Magnesium, dissolved	M200.7 ICP	6.3			mg/L	0.2	1	11/28/06 1:43	wfg
Potassium, dissolved	M200.7 ICP	2.9			mg/L	0.3	1	11/28/06 1:43	wfg
Sodium, dissolved	M200.7 ICP	47.4			mg/L	0.3	1	11/28/06 1:43	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		153			mg/L	2	20	12/01/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/01/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/01/06 0:00	ct
Total Alkalinity		153			mg/L	2	20	12/01/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		2.9			%			02/02/07 0:00	calc
Sum of Anions		5.1			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		5.4			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	15		*	mg/L	1	5	12/04/06 15:29	jif
Fluoride	SM4500F-C	0.6		*	mg/L	0.1	0.5	12/06/06 16:11	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.35			mg/L	0.02	0.1	12/07/06 21:43	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	350			mg/L	10	20	11/22/06 16:37	lcp
Sulfate	SM4500 SO4-D	80		*	mg/L	10	50	12/08/06 18:20	seb
TDS (calculated)	Calculation	299			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.17						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: S-3

ACZ Sample ID: **L60082-03**
 Date Sampled: 11/17/06 09:55
 Date Received: 11/21/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	502			mS/cm			11/17/06 9:55	bd
pH (Field)	Field Measurement	7.6			units			11/17/06 9:55	bd
Temperature (Field)	Field Measurement	25.3			C			11/17/06 9:55	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	46.0			mg/L	0.2	1	11/28/06 1:47	wfg
Magnesium, dissolved	M200.7 ICP	4.8			mg/L	0.2	1	11/28/06 1:47	wfg
Potassium, dissolved	M200.7 ICP	2.8			mg/L	0.3	1	11/28/06 1:47	wfg
Sodium, dissolved	M200.7 ICP	51.9			mg/L	0.3	1	11/28/06 1:47	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		151			mg/L	2	20	12/01/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/01/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/01/06 0:00	ct
Total Alkalinity		151			mg/L	2	20	12/01/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		4.2			%			02/02/07 0:00	calc
Sum of Anions		4.6			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		5.0			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	12		*	mg/L	1	5	12/04/06 15:30	jif
Fluoride	SM4500F-C	0.6		*	mg/L	0.1	0.5	12/06/06 16:19	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.31			mg/L	0.02	0.1	12/07/06 21:45	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	340			mg/L	10	20	11/22/06 16:39	lcp
Sulfate	SM4500 SO4-D	60			mg/L	10	50	12/09/06 9:55	cas
TDS (calculated)	Calculation	269			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.26						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: S-4

ACZ Sample ID: **L60082-04**
 Date Sampled: 11/17/06 10:17
 Date Received: 11/21/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	507			mS/cm			11/17/06 10:17	bd
pH (Field)	Field Measurement	7.4			units			11/17/06 10:17	bd
Temperature (Field)	Field Measurement	26.0			C			11/17/06 10:17	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	44.3			mg/L	0.2	1	11/28/06 1:50	wfg
Magnesium, dissolved	M200.7 ICP	4.7			mg/L	0.2	1	11/28/06 1:50	wfg
Potassium, dissolved	M200.7 ICP	3.0			mg/L	0.3	1	11/28/06 1:50	wfg
Sodium, dissolved	M200.7 ICP	55.4			mg/L	0.3	1	11/28/06 1:50	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		150			mg/L	2	20	12/01/06 0:00	ct
Carbonate as CaCO ₃			U		mg/L	2	20	12/01/06 0:00	ct
Hydroxide as CaCO ₃			U		mg/L	2	20	12/01/06 0:00	ct
Total Alkalinity		150			mg/L	2	20	12/01/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		3.0			%			02/02/07 0:00	calc
Sum of Anions		4.8			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		5.1			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	12		*	mg/L	1	5	12/04/06 15:31	jlf
Fluoride	SM4500F-C	0.7		*	mg/L	0.1	0.5	12/06/06 16:21	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.13			mg/L	0.02	0.1	12/07/06 21:47	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	320			mg/L	10	20	11/22/06 16:40	lcp
Sulfate	SM4500 SO4-D	70			mg/L	10	50	12/09/06 9:58	cas
TDS (calculated)	Calculation	280			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.14						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: S-5

ACZ Sample ID: **L60082-05**
Date Sampled: 11/17/06 10:38
Date Received: 11/21/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	570			mS/cm			11/17/06 10:38	bd
pH (Field)	Field Measurement	7.4			units			11/17/06 10:38	bd
Temperature (Field)	Field Measurement	24.7			C			11/17/06 10:38	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	53.3			mg/L	0.2	1	11/28/06 1:54	wfg
Magnesium, dissolved	M200.7 ICP	6.5			mg/L	0.2	1	11/28/06 1:54	wfg
Potassium, dissolved	M200.7 ICP	3.1			mg/L	0.3	1	11/28/06 1:54	wfg
Sodium, dissolved	M200.7 ICP	58.5			mg/L	0.3	1	11/28/06 1:54	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		161			mg/L	2	20	12/01/06 0:00	ct
Carbonate as CaCO ₃			U		mg/L	2	20	12/01/06 0:00	ct
Hydroxide as CaCO ₃			U		mg/L	2	20	12/01/06 0:00	ct
Total Alkalinity		161			mg/L	2	20	12/01/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		4.5			%			02/02/07 0:00	calc
Sum of Anions		5.3			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		5.8			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	13		*	mg/L	1	5	12/04/06 15:32	jff
Fluoride	SM4500F-C	0.7		*	mg/L	0.1	0.5	12/06/06 16:24	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.08			mg/L	0.02	0.1	12/07/06 21:48	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	360			mg/L	10	20	11/22/06 16:41	lcp
Sulfate	SM4500 SO4-D	80			mg/L	10	50	12/09/06 10:00	cas
TDS (calculated)	Calculation	312			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.15						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: S-6

ACZ Sample ID: **L60082-06**
 Date Sampled: 11/17/06 10:55
 Date Received: 11/21/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	643			mS/cm			11/17/06 10:55	bd
pH (Field)	Field Measurement	7.5			units			11/17/06 10:55	bd
Temperature (Field)	Field Measurement	22.5			C			11/17/06 10:55	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	71.4			mg/L	0.2	1	11/28/06 1:57	wfg
Magnesium, dissolved	M200.7 ICP	11.4			mg/L	0.2	1	11/28/06 1:57	wfg
Potassium, dissolved	M200.7 ICP	2.6			mg/L	0.3	1	11/28/06 1:57	wfg
Sodium, dissolved	M200.7 ICP	56.4			mg/L	0.3	1	11/28/06 1:57	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		191			mg/L	2	20	12/01/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/01/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/01/06 0:00	ct
Total Alkalinity		191			mg/L	2	20	12/01/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		4.5			%			02/02/07 0:00	calc
Sum of Anions		6.4			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		7.0			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	17		*	mg/L	1	5	12/04/06 15:35	jif
Fluoride	SM4500F-C	0.8		*	mg/L	0.1	0.5	12/06/06 16:27	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.73			mg/L	0.02	0.1	12/07/06 21:49	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	440			mg/L	10	20	11/22/06 16:43	lcp
Sulfate	SM4500 SO4-D	100			mg/L	10	50	12/09/06 10:03	cas
TDS (calculated)	Calculation	374			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.18						02/02/07 0:00	calc

Arizona license number: AZ0102



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita

ACZ Project ID: **L60082**

Project ID: OJ00XN

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217450													
WG217450LCSW2	LCSW	12/01/06 9:37	WC061113-1	820		819.4	mg/L	99.9	80	120			
WG217450LCSW5	LCSW	12/01/06 11:37	WC061113-1	820		825.1	mg/L	100.6	80	120			
L60082-03DUP	DUP	12/01/06 12:51			151	151.6	mg/L				0.4	20	
L60110-06DUP	DUP	12/01/06 14:52			945	940.8	mg/L				0.4	20	
WG217450LCSW8	LCSW	12/01/06 15:04	WC061113-1	820		832.5	mg/L	101.5	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	II061113-6	2		1.946	mg/L	97.3	95	105			
WG217168ICB	ICB	11/28/06 0:12				.038	mg/L		-0.09	0.09			
WG217168LFB	LFB	11/28/06 0:24	II061116-2	1		1.006	mg/L	100.6	85	115			
L59980-01AS	AS	11/28/06 1:17	II061116-2	10	U	9.84	mg/L	98.4	85	115			
L59980-01ASD	ASD	11/28/06 1:21	II061116-2	10	U	9.83	mg/L	98.3	85	115	0.1	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.02008		.01974	mg/L	98.3	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0012	0.0012			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.00625		.00648	mg/L	103.7	85	115			
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.0125	U	.01284	mg/L	102.7	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.0125	U	.01332	mg/L	106.6	70	130	3.67	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05368	mg/L	107.4	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0015	0.0015			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05404	mg/L	108.1	85	115			
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	.003	.1147	mg/L	111.7	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	.003	.1161	mg/L	113.1	70	130	1.21	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	II061113-6	2		1.9876	mg/L	99.4	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.009	0.009			
WG217168LFB	LFB	11/28/06 0:24	II061116-2	.5		.5073	mg/L	101.5	85	115			
L59980-01AS	AS	11/28/06 1:17	II061116-2	5	U	4.862	mg/L	97.2	85	115			
L59980-01ASD	ASD	11/28/06 1:21	II061116-2	5	U	4.88	mg/L	97.6	85	115	0.37	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60082**

Project ID: OJ00XN

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05044	mg/L	100.9	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05154	mg/L	103.1	85	115			
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	U	.09458	mg/L	94.6	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	U	.09352	mg/L	93.5	70	130	1.13	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05141	mg/L	102.8	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05145	mg/L	102.9	85	115			
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	.0007	.09722	mg/L	96.5	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	.0007	.10112	mg/L	100.4	70	130	3.93	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	II061113-6	100		101.16	mg/L	101.2	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.6	0.6			
WG217168LFB	LFB	11/28/06 0:24	II061116-2	67.93192		71.73	mg/L	105.6	85	115			
L59980-01AS	AS	11/28/06 1:17	II061116-2	679.3192	454	1106.5	mg/L	96.1	85	115			
L59980-01ASD	ASD	11/28/06 1:21	II061116-2	679.3192	454	1100.8	mg/L	95.2	85	115	0.52	20	

Chloride

M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217552													
WG217552ICV	ICV	12/04/06 15:11	WI061113-3	55		56.2	mg/L	102.2	90	110			
WG217552ICB	ICB	12/04/06 15:12				1.1	mg/L		-3	3			
WG217552LFB1	LFB	12/04/06 15:13	WI061127-1	30		29.8	mg/L	99.3	90	110			
L60082-01AS	AS	12/04/06 15:28	WI061127-1	30	15	51	mg/L	120	90	110			M1
L60082-02DUP	DUP	12/04/06 15:29			15	14.5	mg/L				3.4	20	
WG217552LFB2	LFB	12/04/06 15:58	WI061127-1	30		29.7	mg/L	99	90	110			

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	II061113-6	2		1.975	mg/L	98.8	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.03	0.03			
WG217168LFB	LFB	11/28/06 0:24	II061116-2	.5		.514	mg/L	102.8	85	115			
L59980-01AS	AS	11/28/06 1:17	II061116-2	5	U	4.85	mg/L	97	85	115			
L59980-01ASD	ASD	11/28/06 1:21	II061116-2	5	U	4.88	mg/L	97.6	85	115	0.62	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60082**

Project ID: OJ00XN

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217305													
WG217305ICV	ICV	11/29/06 22:28	II061128-2	2		1.955	mg/L	97.8	95	105			
WG217305ICB	ICB	11/29/06 22:32				U	mg/L		-0.03	0.03			
WG217305LFB	LFB	11/29/06 22:48	II061116-2	.5		.52	mg/L	104	85	115			
L59980-03AS	AS	11/29/06 23:52	II061116-2	1	U	.986	mg/L	98.6	85	115			
L59980-03ASD	ASD	11/29/06 23:56	II061116-2	1	U	.969	mg/L	96.9	85	115	1.74	20	

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217450													
WG217450PBW1	PBW	12/01/06 9:24				U	µmhos/cm		-10	10			
WG217450LCSW1	LCSW	12/01/06 9:26	PCN25347	1408.8		1467	µmhos/cm	104.1	80	120			
WG217450PBW2	PBW	12/01/06 11:25				U	µmhos/cm		-10	10			
WG217450LCSW4	LCSW	12/01/06 11:27	PCN25347	1408.8		1469	µmhos/cm	104.3	80	120			
L60082-03DUP	DUP	12/01/06 12:51			487	487	µmhos/cm				0	20	
L60110-06DUP	DUP	12/01/06 14:52			10000	10010	µmhos/cm				0.1	20	
WG217450LCSW7	LCSW	12/01/06 14:54	PCN25347	1408.8		1483	µmhos/cm	105.3	80	120			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217238													
WG217238ICV	ICV	11/28/06 22:50	II061113-6	2		1.898	mg/L	94.9	95	105			
WG217238ICB	ICB	11/28/06 22:54				U	mg/L		-0.03	0.03			
WG217238LFB	LFB	11/28/06 23:10	II061116-2	.5		.502	mg/L	100.4	85	115			
L59980-01AS	AS	11/29/06 0:15	II061116-2	5	U	5.07	mg/L	101.4	85	115			
L59980-01ASD	ASD	11/29/06 0:19	II061116-2	5	U	5.11	mg/L	102.2	85	115	0.79	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217341													
WG217341ICV	ICV	11/29/06 20:41	WI061122-3	.3		.2911	mg/L	97	90	110			
WG217341ICB	ICB	11/29/06 20:42				U	mg/L		-0.015	0.015			
WG217343													
WG217343ICV	ICV	11/29/06 21:14	WI061122-3	.3		.308	mg/L	102.7	90	110			
WG217343ICB	ICB	11/29/06 21:14				U	mg/L		-0.015	0.015			
WG217296LRB	LRB	11/29/06 21:15				U	mg/L		-0.015	0.015			
WG217296LFB	LFB	11/29/06 21:16	WI061122-7	.2		.2061	mg/L	103.1	90	110			
L60081-01DUP	DUP	11/29/06 21:30			U	U	mg/L				0	20	RA
L60081-02LFM	LFM	11/29/06 21:32	WI061122-7	.2	U	.1847	mg/L	92.4	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L60082**

Project ID: OJ00XN

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217662													
WG217662ICV	ICV	12/06/06 15:30	WC061128-6	1.996		1.96	mg/L	98.2	95	105			
WG217662ICB	ICB	12/06/06 15:32				U	mg/L		-0.3	0.3			
WG217662LFB	LFB	12/06/06 15:38	WC061021-1	4.99902		4.84	mg/L	96.8	90	110			
L60082-02AS	AS	12/06/06 16:13	WC061021-1	4.99902	.6	6.03	mg/L	108.6	85	115			
L60082-02DUP	DUP	12/06/06 16:16			.6	.53	mg/L				12.4	20	RA
L60155-04AS	AS	12/06/06 16:52	WC061021-1	4.99902	.2	5.53	mg/L	106.6	85	115			
L60155-04DUP	DUP	12/06/06 16:54			.2	.17	mg/L				16.2	20	RA

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	I1061113-6	2		1.965	mg/L	98.3	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.06	0.06			
WG217168LFB	LFB	11/28/06 0:24	I1061116-2	1		1.069	mg/L	106.9	85	115			
L59980-01AS	AS	11/28/06 1:17	I1061116-2	10	U	10.36	mg/L	103.6	85	115			
L59980-01ASD	ASD	11/28/06 1:21	I1061116-2	10	U	10.35	mg/L	103.5	85	115	0.1	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05202	mg/L	104	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.04987	mg/L	99.7	85	115			
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	U	.10126	mg/L	101.3	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	U	.10234	mg/L	102.3	70	130	1.06	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	I1061113-6	100		98.81	mg/L	98.8	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.6	0.6			
WG217168LFB	LFB	11/28/06 0:24	I1061116-2	54.94443		57.92	mg/L	105.4	85	115			
L59980-01AS	AS	11/28/06 1:17	I1061116-2	549.4443	341	873.1	mg/L	96.8	85	115			
L59980-01ASD	ASD	11/28/06 1:21	I1061116-2	549.4443	341	867.3	mg/L	95.8	85	115	0.67	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	I1061113-6	2		1.9158	mg/L	95.8	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.015	0.015			
WG217168LFB	LFB	11/28/06 0:24	I1061116-2	.5		.5357	mg/L	107.1	85	115			
L59980-01AS	AS	11/28/06 1:17	I1061116-2	5	U	5.128	mg/L	102.6	85	115			
L59980-01ASD	ASD	11/28/06 1:21	I1061116-2	5	U	5.133	mg/L	102.7	85	115	0.1	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60082

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217153													
WG217153ICV	ICV	11/30/06 9:49	II061129-1	.00498		.00502	mg/L	100.8	90	110			
WG217153ICE	ICB	11/30/06 9:52				U	mg/L		-0.0006	0.0006			
WG217155													
WG217155LRB	LRB	11/30/06 13:19				U	mg/L		-0.00044	0.00044			
WG217155LFB	LFB	11/30/06 13:21	II061121-2	.002		.00208	mg/L	104	85	115			
L60079-02LFM	LFM	11/30/06 14:01	II061121-2	.002	U	.00209	mg/L	104.5	85	115			
L60079-02LFMD	LFMD	11/30/06 14:03	II061121-2	.002	U	.00196	mg/L	98	85	115	6.42	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	II061113-6	2		2.01	mg/L	100.5	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.03	0.03			
WG217168LFB	LFB	11/28/06 0:24	II061116-2	.5		.512	mg/L	102.4	85	115			
L59980-01AS	AS	11/28/06 1:17	II061116-2	5	U	4.86	mg/L	97.2	85	115			
L59980-01ASD	ASD	11/28/06 1:21	II061116-2	5	U	4.86	mg/L	97.2	85	115	0	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217305													
WG217305ICV	ICV	11/29/06 22:28	II061128-2	2		1.947	mg/L	97.4	95	105			
WG217305ICB	ICB	11/29/06 22:32				U	mg/L		-0.03	0.03			
WG217305LFB	LFB	11/29/06 22:48	II061116-2	.5		.51	mg/L	102	85	115			
L59980-03AS	AS	11/29/06 23:52	II061116-2	1	U	.97	mg/L	97	85	115			
L59980-03ASD	ASD	11/29/06 23:56	II061116-2	1	U	.957	mg/L	95.7	85	115	1.35	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217822													
WG217822ICV	ICV	12/07/06 20:31	WI061207-1	2.416		2.214	mg/L	91.6	90	110			
WG217822ICB	ICB	12/07/06 20:32				U	mg/L		-0.06	0.06			
WG217823													
WG217823ICV	ICV	12/07/06 21:37	WI061207-1	2.416		2.327	mg/L	96.3	90	110			
WG217823ICB	ICB	12/07/06 21:38				U	mg/L		-0.06	0.06			
WG217823LFB	LFB	12/07/06 21:39	WI060906-4	2		1.999	mg/L	100	90	110			
L60082-02DUP	DUP	12/07/06 21:44			2.35	2.502	mg/L				6.3	20	
WG217823LFB	LFB	12/07/06 22:17	WI060906-4	2		1.997	mg/L	99.9	90	110			
L60082-01AS	AS	12/07/06 22:38	WI060906-4	2	1.39	3.355	mg/L	98.3	90	110			

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L60082**

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217450													
WG217450LCSW3	LCSW	12/01/06 9:40	PCN25442	6		6.03	units	100.5	90	110			
WG217450LCSW6	LCSW	12/01/06 11:41	PCN25442	6		6.02	units	100.3	90	110			
L60082-03DUP	DUP	12/01/06 12:51			8.2	8.19	units				0.1	20	
L60110-06DUP	DUP	12/01/06 14:52			8.6	8.6	units				0	20	
WG217450LCSW9	LCSW	12/01/06 15:08	PCN25442	6		6.04	units	100.7	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	II061113-6	20		20.39	mg/L	102	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.9	0.9			
WG217168LFB	LFB	11/28/06 0:24	II061116-2	99.46819		103.13	mg/L	103.7	85	115			
L59980-01AS	AS	11/28/06 1:17	II061116-2	994.6819	13	1009.3	mg/L	100.2	85	115			
L59980-01ASD	ASD	11/28/06 1:21	II061116-2	994.6819	13	1009	mg/L	100.1	85	115	0.03	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217051													
WG217051PBW	PBW	11/22/06 16:30				U	mg/L		-20	20			
WG217051LCSW	LCSW	11/22/06 16:31	PCN25978	260		260	mg/L	100	80	120			
L60084-01DUP	DUP	11/22/06 16:45			2900	2932	mg/L				1.1	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05276	mg/L	105.5	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05062	mg/L	101.2	85	115			
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	.0054	.10934	mg/L	103.9	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	.0054	.11158	mg/L	106.2	70	130	2.03	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	II061113-6	100		101.45	mg/L	101.5	95	105			
WG217168ICV	ICV	11/28/06 0:08	II061113-6	100		101.7	mg/L	101.7	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.9	0.9			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-6	6			
WG217168LFB	LFB	11/28/06 0:24	II061116-2	99.78197		101.2	mg/L	101.4	85	115			
WG217168LFB	LFB	11/28/06 0:24	II061116-2	99.78197		104.85	mg/L	105.1	85	115			
L59980-01AS	AS	11/28/06 1:17	II061116-2	997.8197	996	1859.3	mg/L	91.1	85	115			
L59980-01ASD	ASD	11/28/06 1:21	II061116-2	997.8197	996	1855.7	mg/L	90.8	85	115	0.05	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60082

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217816													
WG217816PBW	PBW	12/08/06 17:00				U	mg/L		-30	30			
WG217816LCSW	LCSW	12/08/06 17:03	WC061207-2	100		100	mg/L	100	80	120			
L59930-03DUP	DUP	12/08/06 17:17			U	U	mg/L				0	20	RA
L60082-02DUP	DUP	12/08/06 18:21			80	64	mg/L				22.2	20	RA
WG217896													
WG217896PBW	PBW	12/09/06 9:50				U	mg/L		-30	30			
WG217896LCSW	LCSW	12/09/06 9:52	WC061207-2	100		102	mg/L	102	80	120			
L60084-06DUP	DUP	12/09/06 10:22			1060	1093	mg/L				3.1	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.056		.05675	mg/L	101.3	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05092	mg/L	101.8	85	115			
L60077-03AS	AS	11/29/06 8:49	MS061023-3	.1	U	.10366	mg/L	103.7	70	130			
L60077-03ASD	ASD	11/29/06 8:55	MS061023-3	.1	U	.10628	mg/L	106.3	70	130	2.5	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217168													
WG217168ICV	ICV	11/28/06 0:08	II061113-6	2		1.92	mg/L	96	95	105			
WG217168ICB	ICB	11/28/06 0:12				U	mg/L		-0.03	0.03			
WG217168LFB	LFB	11/28/06 0:24	II061116-2	.5		.535	mg/L	107	85	115			
L59980-01AS	AS	11/28/06 1:17	II061116-2	5	U	5.03	mg/L	100.6	85	115			
L59980-01ASD	ASD	11/28/06 1:21	II061116-2	5	U	4.99	mg/L	99.8	85	115	0.8	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60082**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60082-01	WG217552	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217662	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217816	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60082-02	WG217552	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217662	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217816	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60082-03	WG217552	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217662	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60082-04	WG217552	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217662	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60082-05	WG217552	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217662	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60082-06	WG217552	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217662	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60082-08	WG217343	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L60082**



No certification qualifiers associated with this analysis

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60082
Date Received: 11/21/2006
Received By:
Date Printed: 11/21/2006

Receipt Verification

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

	YES	NO	NA
			X
X			
			X
X			
X			
X			
X			
X			
			X
X			
		X	
			X

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

The trip blank contains headspace.

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
1350		2.9	21

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

Notes

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60082
Date Received: 11/21/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60082-01	DUP111706A		Y		Y							<input type="checkbox"/>
L60082-02	S-1		Y		Y							<input type="checkbox"/>
L60082-03	S-3		Y		Y							<input type="checkbox"/>
L60082-04	S-4		Y		Y							<input type="checkbox"/>
L60082-05	S-5		Y		Y							<input type="checkbox"/>
L60082-06	S-6		Y		Y							<input type="checkbox"/>
L60082-07	TB062906-11									X		<input type="checkbox"/>
L60082-08	CNTB111706-01									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L60082

COC Number:

Page 4 of 7



ANALYTICAL REQUEST SHEET

Chain of Custody PO# - OJ00XN

P.O. Box 527, Green Valley, AZ 85622

Lab Use Only	Location	Date	Time	# of Cont.	Preservatives					Field Data				Analysis Requested
					HNO ₃	H ₂ SO ₄	NaOH	HCL	Unpres.	pH	Cond	Temp		
	DUP111706A	11/17/2006		8	1	1	1	2	5					Ambient Suite
	S-1	11/17/2006	9:30	8	1	1	1	2	5	7.57	527	21.1		Ambient Suite
	S-3	11/17/2006	9:55	8	1	1	1	2	5	7.64	502	25.3		Ambient Suite
	S-4	11/17/2006	10:17	8	1	1	1	2	5	7.38	507	26		Ambient Suite
	S-5	11/17/2006	10:38	8	1	1	1	2	5	7.39	570	24.7		Ambient Suite
	S-6	11/17/2006	10:55	8	1	1	1	2	5	7.50	643	22.5		Ambient Suite

Sample Submitted By: Billy Dorris Telephone No. 520-648-8873 Fax No.

Report Results To: Billy Dorris Telephone No. 520-648-8873 Fax No. 520-648-8608

Samples Submitted on Ice Yes / No

Surrendered By: *Billy Z Davis* Received By: *MSS* Date: *11/21/06* Time: *11:37*

Surrendered By: _____ Received By: _____ Date: _____ Time: _____

Comments/Special Instructions: _____

Laboratory Name and Address:
 ACZ Laboratory
 30400 Downhill Drive
 Steamboat Springs, CO 80487
 Phone: 8003345493

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

March 12, 2007

Project ID: OJ00XN
ACZ Project ID: L60131

Bill Dorris:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 28, 2006 and re-reported on February 12, 2007. This project was assigned to ACZ's project number, L60131. Please reference this number in all future inquiries.

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

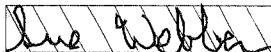
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60131. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Mar/07

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

March 12, 2007

Project ID: OJ00XN

ACZ Project ID: L60131

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 8 ground water samples from Phelps Dodge Sierrita on November 28, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L60131. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes, per client request.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures.

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: IW-11

ACZ Sample ID: **L60131-02**
Date Sampled: 11/21/06 10:50
Date Received: 11/28/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	2460			mS/cm			11/21/06 10:50	bd
pH (Field)	Field Measurement	7.1			units			11/21/06 10:50	bd
Temperature (Field)	Field Measurement	23.9			C			11/21/06 10:50	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	498			mg/L	0.4	2	12/07/06 22:56	msh
Magnesium, dissolved	M200.7 ICP	95.6			mg/L	0.4	2	12/07/06 22:56	msh
Potassium, dissolved	M200.7 ICP	8.4			mg/L	0.6	2	12/07/06 22:56	msh
Sodium, dissolved	M200.7 ICP	199		*	mg/L	0.6	2	12/07/06 22:56	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		126			mg/L	2	20	12/04/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/04/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/04/06 0:00	ct
Total Alkalinity		126			mg/L	2	20	12/04/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		3.0			%			02/02/07 0:00	calc
Sum of Anions		39.3			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		41.7			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	114		*	mg/L	5	30	12/11/06 13:39	jlf
Fluoride	SM4500F-C	0.3		B	mg/L	0.1	0.5	12/11/06 20:08	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.67			mg/L	0.02	0.1	12/02/06 19:23	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2890		*	mg/L	10	20	11/28/06 17:50	lcp
Sulfate	SM4500 SO4-D	1600			mg/L	10	50	12/14/06 16:07	lcp
TDS (calculated)	Calculation	2590			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.12						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN

Sample ID: IW-22

ACZ Sample ID: **L60131-03**

Date Sampled: 11/21/06 11:19

Date Received: 11/28/06

Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	2490			mS/cm			11/21/06 11:19	bd
pH (Field)	Field Measurement	6.9			units			11/21/06 11:19	bd
Temperature (Field)	Field Measurement	25.1			C			11/21/06 11:19	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	517			mg/L	0.4	2	12/07/06 23:00	msh
Magnesium, dissolved	M200.7 ICP	82.1			mg/L	0.4	2	12/07/06 23:00	msh
Potassium, dissolved	M200.7 ICP	10.5			mg/L	0.6	2	12/07/06 23:00	msh
Sodium, dissolved	M200.7 ICP	193		*	mg/L	0.6	2	12/07/06 23:00	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		141			mg/L	2	20	12/04/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/04/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/04/06 0:00	ct
Total Alkalinity		141			mg/L	2	20	12/04/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.2			%			02/02/07 0:00	calc
Sum of Anions		42.3			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		41.3			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	127		*	mg/L	5	30	12/11/06 13:22	jif
Fluoride	SM4500F-C	0.3	B		mg/L	0.1	0.5	12/11/06 20:11	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.00			mg/L	0.02	0.1	12/02/06 19:25	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2950		*	mg/L	10	20	11/28/06 17:52	lcp
Sulfate	SM4500 SO4-D	1710			mg/L	10	50	12/14/06 16:10	lcp
TDS (calculated)	Calculation	2720			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.08						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: DUP112106A

ACZ Sample ID: **L60131-04**
 Date Sampled: 11/21/06 00:00
 Date Received: 11/28/06
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	524			mg/L	0.4	2	12/07/06 23:03	msh
Magnesium, dissolved	M200.7 ICP	112			mg/L	0.4	2	12/07/06 23:03	msh
Potassium, dissolved	M200.7 ICP	7.3			mg/L	0.6	2	12/07/06 23:03	msh
Sodium, dissolved	M200.7 ICP	108		*	mg/L	0.6	2	12/07/06 23:03	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		127			mg/L	2	20	12/04/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/04/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/04/06 0:00	ct
Total Alkalinity		127			mg/L	2	20	12/04/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.4			%			03/12/07 0:00	calc
Sum of Anions		39.2			meq/L	0.1	0.5	03/12/07 0:00	calc
Sum of Cations		40.3			meq/L	0.1	0.5	03/12/07 0:00	calc
Chloride	M325.2 - Colorimetric	95		*	mg/L	5	30	12/11/06 13:23	jlf
Fluoride	SM4500F-C	0.3		B	mg/L	0.1	0.5	12/11/06 20:13	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.93			mg/L	0.02	0.1	12/02/06 19:30	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2790		*	mg/L	10	20	11/28/06 17:54	lcp
Sulfate	SM4500 SO4-D	1620			mg/L	10	50	12/14/06 16:17	lcp
TDS (calculated)	Calculation	2540			mg/L	10	50	03/12/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.10						03/12/07 0:00	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita

ACZ Project ID: **L60131**

Project ID: OJ00XN

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217520													
WG217520LCSW2	LCSW	12/04/06 17:31	WC061113-1	820		795.8	mg/L	97	80	120			
WG217520LCSW5	LCSW	12/04/06 19:37	WC061113-1	820		820.5	mg/L	100.1	80	120			
L60131-02DUP	DUP	12/04/06 21:06			126	126.5	mg/L				0.4	20	
L60151-06DUP	DUP	12/04/06 22:26			263	261.3	mg/L				0.6	20	
WG217520LCSW8	LCSW	12/04/06 22:39	WC061113-1	820		820.8	mg/L	100.1	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217857													
WG217857ICV	ICV	12/08/06 13:37	II061128-2	2		1.939	mg/L	97	95	105			
WG217857ICB	ICB	12/08/06 13:40				U	mg/L		-0.09	0.09			
WG217857LFB	LFB	12/08/06 13:53	II061207-3	1		1.084	mg/L	108.4	85	115			
L59976-01AS	AS	12/08/06 14:03	II061207-3	1	U	1.082	mg/L	108.2	85	115			
L59976-01ASD	ASD	12/08/06 14:07	II061207-3	1	U	1.068	mg/L	106.8	85	115	1.3	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.02008		.0202	mg/L	100.6	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0012	0.0012			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.00625		.00658	mg/L	105.3	85	115			
L60130-01AS	AS	12/01/06 9:52	MS061023-3	.00625	.0013	.00692	mg/L	89.9	70	130			
L60130-01ASD	ASD	12/01/06 9:58	MS061023-3	.00625	.0013	.00702	mg/L	91.5	70	130	1.43	20	
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.00625	U	.00529	mg/L	84.6	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.00625	U	.00542	mg/L	86.7	70	130	2.43	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.05478	mg/L	109.6	90	110			
WG217434ICB	ICB	12/01/06 9:33				.00069	mg/L		-0.0015	0.0015			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.0536	mg/L	107.2	85	115			
L60130-01AS	AS	12/01/06 9:52	MS061023-3	.05	.004	.06377	mg/L	119.5	70	130			
L60130-01ASD	ASD	12/01/06 9:58	MS061023-3	.05	.004	.06333	mg/L	118.7	70	130	0.69	20	
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.0566	mg/L	113.2	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.05687	mg/L	113.7	70	130	0.48	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	2		2.0603	mg/L	103	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.009	0.009			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	.5		.5139	mg/L	102.8	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	.5	.372	.8663	mg/L	98.9	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	.5	.372	.8799	mg/L	101.6	85	115	1.56	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60131**

Project ID: OJ00XN

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.04992	mg/L	99.8	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.05014	mg/L	100.3	85	115			
L60130-01AS	AS	12/01/06 9:52	MS061023-3	.05	.0001	.04479	mg/L	89.4	70	130			
L60130-01ASD	ASD	12/01/06 9:58	MS061023-3	.05	.0001	.04499	mg/L	89.8	70	130	0.45	20	
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.04979	mg/L	99.6	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.0499	mg/L	99.8	70	130	0.22	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.05129	mg/L	102.6	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.0514	mg/L	102.8	85	115			
L60130-01AS	AS	12/01/06 9:52	MS061023-3	.05	.0019	.05142	mg/L	99	70	130			
L60130-01ASD	ASD	12/01/06 9:58	MS061023-3	.05	.0019	.05096	mg/L	98.1	70	130	0.9	20	
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.05259	mg/L	105.2	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.05234	mg/L	104.7	70	130	0.48	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	100		98.24	mg/L	98.2	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.6	0.6			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	67.95918		68.28	mg/L	100.5	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	67.95918	3.5	73.06	mg/L	102.4	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	67.95918	3.5	73.27	mg/L	102.7	85	115	0.29	20	

Chloride

M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217920													
WG217920ICV	ICV	12/11/06 9:24	WI061113-3	55		60.1	mg/L	109.3	90	110			
WG217920ICB	ICB	12/11/06 9:25				1.4	mg/L		-3	3			
WG217920LFB1	LFB	12/11/06 9:26	WI061127-1	30		29.3	mg/L	97.7	90	110			
WG217920LFB2	LFB	12/11/06 9:53	WI061127-1	30		29	mg/L	96.7	90	110			
L60131-01AS	AS	12/11/06 10:08	WI061127-1	600	430	1105	mg/L	112.5	90	110			M1
L60131-02DUP	DUP	12/11/06 13:42			114	112.6	mg/L				1.2	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	2		1.942	mg/L	97.1	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.03	0.03			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	.5		.499	mg/L	99.8	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	.5	U	.517	mg/L	103.4	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	.5	U	.525	mg/L	105	85	115	1.54	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60131**

Project ID: OJ00XN

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	2		1.934	mg/L	96.7	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.03	0.03			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	.5		.504	mg/L	100.8	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	.5	U	.51	mg/L	102	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	.5	U	.518	mg/L	103.6	85	115	1.56	20	

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217520													
WG217520PBW1	PBW	12/04/06 17:19				U	µmhos/cm		-10	10			
WG217520LCSW1	LCSW	12/04/06 17:20	PCN25347	1408.8		1526	µmhos/cm	108.3	80	120			
WG217520PBW2	PBW	12/04/06 19:25				U	µmhos/cm		-10	10			
WG217520LCSW4	LCSW	12/04/06 19:27	PCN25347	1408.8		1524	µmhos/cm	108.2	80	120			
L60131-02DUP	DUP	12/04/06 21:06			3300	3320	µmhos/cm				0.6	20	
L60151-06DUP	DUP	12/04/06 22:26			3620	3590	µmhos/cm				0.8	20	
WG217520LCSW7	LCSW	12/04/06 22:28	PCN25347	1408.8		1502	µmhos/cm	106.6	80	120			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217857													
WG217857ICV	ICV	12/08/06 13:37	II061128-2	2		1.908	mg/L	95.4	95	105			
WG217857ICB	ICB	12/08/06 13:40				U	mg/L		-0.03	0.03			
WG217857LFB	LFB	12/08/06 13:53	II061207-3	.5		.514	mg/L	102.8	85	115			
L59976-01AS	AS	12/08/06 14:03	II061207-3	.5	U	.523	mg/L	104.6	85	115			
L59976-01ASD	ASD	12/08/06 14:07	II061207-3	.5	U	.525	mg/L	105	85	115	0.38	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217726													
WG217726ICV	ICV	12/06/06 16:35	WI061122-3	.3		.2916	mg/L	97.2	90	110			
WG217726ICB	ICB	12/06/06 16:35				U	mg/L		-0.015	0.015			
WG217740													
WG217740ICV	ICV	12/06/06 19:39	WI061122-3	.3		.2977	mg/L	99.2	90	110			
WG217740ICB	ICB	12/06/06 19:40				U	mg/L		-0.015	0.015			
WG217704LRB	LRB	12/06/06 19:41				U	mg/L		-0.015	0.015			
WG217704LFB	LFB	12/06/06 19:42	WI061122-7	.2		.1799	mg/L	90	90	110			
L60150-03LFM	LFM	12/06/06 19:54	WI061122-7	.2	.01	.228	mg/L	109	90	110			
L60151-07LFM	LFM	12/06/06 20:16	WI061122-7	.2	U	.1939	mg/L	97	90	110			
L60150-02DUP	DUP	12/06/06 20:19			.007	.005	mg/L				33.3	20	RA

Phelps Dodge Sierrita

ACZ Project ID: **L60131**

Project ID: OJ00XN

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217964													
WG217964ICV	ICV	12/11/06 17:18	WC061211-2	1.996		1.93	mg/L	96.7	95	105			
WG217964ICB	ICB	12/11/06 17:24				U	mg/L		-0.3	0.3			
WG217964LFB1	LFB	12/11/06 17:30	WC061021-1	4.99902		5.05	mg/L	101	90	110			
L60077-03AS	AS	12/11/06 19:04	WC061021-1	4.99902	1	6.02	mg/L	100.4	85	115			
L60077-03DUP	DUP	12/11/06 19:12			1	1.09	mg/L				8.6	20	
WG217964LFB2	LFB	12/11/06 20:16	WC061021-1	4.99902		5.15	mg/L	103	90	110			
L60131-05AS	AS	12/11/06 20:27	WC061021-1	4.99902	U	5.17	mg/L	103.4	85	115			
L60131-05DUP	DUP	12/11/06 20:31			U	.11	mg/L				200	20	RA

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217857													
WG217857ICV	ICV	12/08/06 13:37	II061128-2	2		1.943	mg/L	97.2	95	105			
WG217857ICB	ICB	12/08/06 13:40				U	mg/L		-0.06	0.06			
WG217857LFB	LFB	12/08/06 13:53	II061207-3	1		1.117	mg/L	111.7	85	115			
L59976-01AS	AS	12/08/06 14:03	II061207-3	1	.32	1.096	mg/L	77.6	85	115			M1
L59976-01ASD	ASD	12/08/06 14:07	II061207-3	1	.32	1.096	mg/L	77.6	85	115	0	20	M1

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.04789	mg/L	95.8	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.04561	mg/L	91.2	85	115			
L60130-01AS	AS	12/01/06 9:52	MS061023-3	.05	U	.04743	mg/L	94.9	70	130			
L60130-01ASD	ASD	12/01/06 9:58	MS061023-3	.05	U	.0472	mg/L	94.4	70	130	0.49	20	
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.04541	mg/L	90.8	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.0455	mg/L	91	70	130	0.2	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	100		95.97	mg/L	96	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.6	0.6			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	54.98614		54.6	mg/L	99.3	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	54.98614	5.4	60.03	mg/L	99.4	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	54.98614	5.4	60.46	mg/L	100.1	85	115	0.71	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	2		1.9373	mg/L	96.9	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.015	0.015			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	.5		.5168	mg/L	103.4	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	.5	U	.5244	mg/L	104.9	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	.5	U	.5318	mg/L	106.4	85	115	1.4	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60131

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217365													
WG217365ICV1	ICV	12/01/06 10:39	I1061129-1	.00498		.00475	mg/L	95.4	95	105			
WG217365ICB1	ICB	12/01/06 10:41				U	mg/L		-0.0002	0.0002			
WG217365ICV2	ICV	12/04/06 15:31	I1061129-1	.00498		.00491	mg/L	98.6	95	105			
WG217365ICB2	ICB	12/04/06 15:33				U	mg/L		-0.0002	0.0002			
WG217405													
WG217405LRB	LRB	12/01/06 14:48				U	mg/L		-0.00044	0.00044			
WG217405LFB	LFB	12/01/06 14:50	I1061121-2	.002		.00178	mg/L	89	85	115			
L60131-01LFM	LFM	12/01/06 14:57	I1061121-2	.002	U	.00191	mg/L	95.5	85	115			
L60131-01LFMD	LFMD	12/01/06 14:59	I1061121-2	.002	U	.00179	mg/L	89.5	85	115	6.49	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	I1061128-2	2		2.003	mg/L	100.2	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.03	0.03			
WG217805LFB	LFB	12/07/06 22:20	I1061207-3	.5		.506	mg/L	101.2	85	115			
L59976-01AS	AS	12/07/06 22:32	I1061207-3	.5	U	.509	mg/L	101.8	85	115			
L59976-01ASD	ASD	12/07/06 22:36	I1061207-3	.5	U	.511	mg/L	102.2	85	115	0.39	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	I1061128-2	2		1.941	mg/L	97.1	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.03	0.03			
WG217805LFB	LFB	12/07/06 22:20	I1061207-3	.5		.501	mg/L	100.2	85	115			
L59976-01AS	AS	12/07/06 22:32	I1061207-3	.5	U	.51	mg/L	102	85	115			
L59976-01ASD	ASD	12/07/06 22:36	I1061207-3	.5	U	.515	mg/L	103	85	115	0.98	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217513													
WG217513ICV	ICV	12/02/06 18:06	WI060906-3	2.416		2.411	mg/L	99.8	90	110			
WG217513ICB	ICB	12/02/06 18:07				U	mg/L		-0.06	0.06			
WG217512													
WG217512ICV	ICV	12/02/06 18:55	WI060906-3	2.416		2.441	mg/L	101	90	110			
WG217512ICB	ICB	12/02/06 18:56				U	mg/L		-0.06	0.06			
WG217512LFB	LFB	12/02/06 18:57	WI060906-4	2		2.182	mg/L	109.1	90	110			
L60130-05AS	AS	12/02/06 19:49	WI060906-4	40	19.3	62.5	mg/L	108	90	110			
L60130-06DUP	DUP	12/02/06 19:52			8.14	8.209	mg/L				0.8	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60131**

Project ID: OJ00XN

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217520													
WG217520LCSW3	LCSW	12/04/06 17:34	PCN25442	6		6.04	units	100.7	90	110			
WG217520LCSW6	LCSW	12/04/06 19:40	PCN25442	6		6.02	units	100.3	90	110			
L60131-02DUP	DUP	12/04/06 21:06			7.7	7.74	units				0.5	20	
L60151-06DUP	DUP	12/04/06 22:26			7.9	7.87	units				0.4	20	
WG217520LCSW9	LCSW	12/04/06 22:43	PCN25442	6		6	units	100	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	20		20.3	mg/L	101.5	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.9	0.9			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	99.51014		101.19	mg/L	101.7	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	99.51014	1.6	107.47	mg/L	106.4	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	99.51014	1.6	108.07	mg/L	107	85	115	0.56	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217264													
WG217264PBW	PBW	11/28/06 17:15				U	mg/L		-20	20			
WG217264LCSW	LCSW	11/28/06 17:16	PCN25973	260		238	mg/L	91.5	80	120			
L60131-06DUP	DUP	11/28/06 17:59			U	U	mg/L				0	20	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.05416	mg/L	108.3	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.05055	mg/L	101.1	85	115			
L60130-01AS	AS	12/01/06 9:52	MS061023-3	.05	.0016	.06088	mg/L	118.6	70	130			
L60130-01ASD	ASD	12/01/06 9:58	MS061023-3	.05	.0016	.06	mg/L	116.8	70	130	1.46	20	
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.05743	mg/L	114.9	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.05752	mg/L	115	70	130	0.16	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	100		98.7	mg/L	98.7	95	105			
WG217805ICV	ICV	12/07/06 22:00	II061128-2	100		101.5	mg/L	101.5	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-6	6			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.9	0.9			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	99.90786		100	mg/L	100.1	85	115			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	99.90786		101.99	mg/L	102.1	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	99.90786	822	885.1	mg/L	63.2	85	115			M3
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	99.90786	822	894.9	mg/L	73	85	115	1.1	20	M3

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L60131**

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218175													
WG218175PBW	PBW	12/14/06 15:35				U	mg/L		-30	30			
WG218175LCSW	LCSW	12/14/06 15:38	WC061207-2	100		91	mg/L	91	80	120			
L60131-03DUP	DUP	12/14/06 16:14			1710	1589	mg/L				7.3	20	
L60150-04DUP	DUP	12/14/06 16:50			1580	1605	mg/L				1.6	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.056		.05249	mg/L	93.7	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.04696	mg/L	93.9	85	115			
L60130-01AS	AS	12/01/06 9:52	MS061023-3	.05	.0001	.04955	mg/L	98.9	70	130			
L60130-01ASD	ASD	12/01/06 9:58	MS061023-3	.05	.0001	.04921	mg/L	98.2	70	130	0.69	20	
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.0468	mg/L	93.6	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.04689	mg/L	93.8	70	130	0.19	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217857													
WG217857ICV	ICV	12/08/06 13:37	II061128-2	2		1.912	mg/L	95.6	95	105			
WG217857ICB	ICB	12/08/06 13:40				U	mg/L		-0.03	0.03			
WG217857LFB	LFB	12/08/06 13:53	II061207-3	.5		.508	mg/L	101.6	85	115			
L59976-01AS	AS	12/08/06 14:03	II061207-3	.5	U	.522	mg/L	104.4	85	115			
L59976-01ASD	ASD	12/08/06 14:07	II061207-3	.5	U	.519	mg/L	103.8	85	115	0.58	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60131**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60131-01	WG217704	Cyanide, total	M335.4 - Manual Distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG217805	Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG217264	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	H3	Sample was received and analyzed past holding time.	
		M160.1 - Gravimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L60131-02	WG217704	Cyanide, total	M335.4 - Manual Distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG217857	Iron, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217805	Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
M335.4 - Colorimetric w/ distillation			RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
WG217264	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L60131-03	WG217704	Cyanide, total	M335.4 - Manual Distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG217857	Iron, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217805	Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
M335.4 - Colorimetric w/ distillation			RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
WG217264	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	

Phelps Dodge Sierrita

ACZ Project ID: **L60131**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60131-04	WG217704	Cyanide, total	M335.4 - Manual Distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG217857	Iron, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217805	Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
				M335.4 - Colorimetric w/ distillation	RA
	WG217264	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60131-05	WG217857	Iron, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217805	Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217264	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60131-06	WG217857	Iron, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217805	Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217264	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60131-07	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L60131**



No certification qualifiers associated with this analysis

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60131
Date Received: 11/28/2006
Received By:
Date Printed: 11/29/2006

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1194	0.6	18

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

Notes

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60131
Date Received: 11/28/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60131-01	BW-3		Y		Y							<input type="checkbox"/>
L60131-02	IW-11		Y		Y							<input type="checkbox"/>
L60131-03	IW-22		Y		Y							<input type="checkbox"/>
L60131-04	DUP112106A		Y		Y							<input type="checkbox"/>
L60131-05	EQB112206A		Y		Y							<input type="checkbox"/>
L60131-06	TB112206A		Y		Y							<input type="checkbox"/>
L60131-07	CN TB111706-01									X		<input type="checkbox"/>
L60131-08	TB111706-04									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L60131

COC Number:

Page 1 of 1

ANALYTICAL REQUEST SHEET

Chain of Custody PO# - OJ00XN



P.O. Box 527, Green Valley, AZ 85622

Lab Use Only	Location	Date	Time	# of Cont.	Preservatives					Field Data			Analysis Requested
					HNO ₃	H ₂ SO ₄	NaOH	HCL	Unpres.	pH	Cond	Temp	
	BW-3	11/20/2006	14:51	8	1	1	1	2	5	7.06	3060	24.5	Ambient Suite
	IW-11	11/21/2006	10:50	8	1	1	1	2	5	7.13	2460	23.9	Ambient Suite
	IW-22	11/21/2006	11:19	8	1	1	1	2	5	6.86	2490	25.1	Ambient Suite
	DUP112106A	11/21/2006		8	1	1	1	2	5				Ambient Suite
	EQB112206A	11/22/2006	12:00	8	1	1	1	2	5	6.12	59.5	30.4	Ambient Suite
	TB112206A	11/22/2006	11:55	8	1	1	1	2	5	5.86	47.7	30.8	Ambient Suite

Sample Submitted By: Billy Dorris Telephone No. 520-648-8873 Fax No.

Report Results To: Billy Dorris Telephone No. 520-648-8873 Fax No. 520-648-8608

Samples Submitted on Ice: Yes / No

Surrendered By: *Billy F. Dorris* Received By: *Thomas Gentry* Date: 11-28-06 Time: 11:07

Surrendered By: _____ Date: _____ Time: _____

Comments/Special Instructions: _____

Laboratory Name and Address:
 ACZ Laboratory
 30400 Downhill Drive
 Steamboat Springs, CO 80487
 Phone: 8003345493

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

March 12, 2007

Project ID: OJ00XN
ACZ Project ID: L60150

Bill Dorris:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 29, 2006 and re-reported on February 12, 2007. This project was assigned to ACZ's project number, L60150. Please reference this number in all future inquiries.

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

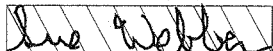
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60150. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Mar/07

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

March 12, 2007

Project ID: OJ00XN

ACZ Project ID: L60150

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 8 ground water samples from Phelps Dodge Sierrita on November 29, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L60150. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes, per client request.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures.

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: IW-18

ACZ Sample ID: **L60150-01**
 Date Sampled: 11/21/06 10:19
 Date Received: 11/29/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1919			mS/cm			11/21/06 10:19	bd
pH (Field)	Field Measurement	6.9			units			11/21/06 10:19	bd
Temperature (Field)	Field Measurement	28.0			C			11/21/06 10:19	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	530			mg/L	0.4	2	12/07/06 23:15	msh
Magnesium, dissolved	M200.7 ICP	112			mg/L	0.4	2	12/07/06 23:15	msh
Potassium, dissolved	M200.7 ICP	7.5			mg/L	0.6	2	12/07/06 23:15	msh
Sodium, dissolved	M200.7 ICP	107		*	mg/L	0.6	2	12/07/06 23:15	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		129			mg/L	2	20	12/05/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Total Alkalinity		129			mg/L	2	20	12/05/06 0:00	ct
Cation-Anion Balance	Calculation				%			02/02/07 0:00	calc
Cation-Anion Balance		0.6			%			02/02/07 0:00	calc
Sum of Anions		40.1			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		40.6			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	132		*	mg/L	5	30	12/11/06 13:23	jlf
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/11/06 20:49	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.92		*	mg/L	0.02	0.1	12/07/06 22:05	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2800	H	*	mg/L	10	20	11/30/06 14:50	lcp
Sulfate	SM4500 SO4-D	1610			mg/L	10	50	12/14/06 16:37	lcp
TDS (calculated)	Calculation	2580			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.09						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: IW-19

ACZ Sample ID: **L60150-02**
 Date Sampled: 11/21/06 10:02
 Date Received: 11/29/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1860			mS/cm			11/21/06 10:02	bd
pH (Field)	Field Measurement	6.8			units			11/21/06 10:02	bd
Temperature (Field)	Field Measurement	25.4			C			11/21/06 10:02	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	480		*	mg/L	0.4	2	12/07/06 23:19	msh
Magnesium, dissolved	M200.7 ICP	118			mg/L	0.4	2	12/07/06 23:19	msh
Potassium, dissolved	M200.7 ICP	7.4			mg/L	0.6	2	12/07/06 23:19	msh
Sodium, dissolved	M200.7 ICP	116			mg/L	0.6	2	12/07/06 23:19	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		144			mg/L	2	20	12/05/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Total Alkalinity		144			mg/L	2	20	12/05/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-0.1			%			02/02/07 0:00	calc
Sum of Anions		39.1			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		39.0			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	116		*	mg/L	5	30	12/11/06 13:25	jif
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/11/06 20:56	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.91		*	mg/L	0.02	0.1	12/07/06 22:06	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2700	H	*	mg/L	10	20	11/30/06 14:51	lcp
Sulfate	SM4500 SO4-D	1570			mg/L	10	50	12/14/06 16:40	lcp
TDS (calculated)	Calculation	2490			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.08						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: IW-20

ACZ Sample ID: **L60150-03**
 Date Sampled: 11/21/06 09:33
 Date Received: 11/29/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1894			mS/cm			11/21/06 9:33	bd
pH (Field)	Field Measurement	7.1			units			11/21/06 9:33	bd
Temperature (Field)	Field Measurement	24.3			C			11/21/06 9:33	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	477		*	mg/L	0.4	2	12/07/06 23:31	msh
Magnesium, dissolved	M200.7 ICP	118			mg/L	0.4	2	12/07/06 23:31	msh
Potassium, dissolved	M200.7 ICP	8.1			mg/L	0.6	2	12/07/06 23:31	msh
Sodium, dissolved	M200.7 ICP	131			mg/L	0.6	2	12/07/06 23:31	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		138			mg/L	2	20	12/05/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Total Alkalinity		138			mg/L	2	20	12/05/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.4			%			02/02/07 0:00	calc
Sum of Anions		38.4			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		39.5			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	111		*	mg/L	5	30	12/11/06 13:26	jff
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/11/06 21:03	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.65		*	mg/L	0.02	0.1	12/07/06 22:11	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2730	H	*	mg/L	10	20	11/30/06 14:54	lcp
Sulfate	SM4500 SO4-D	1550			mg/L	10	50	12/14/06 16:43	lcp
TDS (calculated)	Calculation	2480			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.10						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: IW-21

ACZ Sample ID: **L60150-04**
 Date Sampled: 11/21/06 09:05
 Date Received: 11/29/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	2320			mS/cm			11/21/06 9:05	bd
pH (Field)	Field Measurement	7.2			units			11/21/06 9:05	bd
Temperature (Field)	Field Measurement	23.8			C			11/21/06 9:05	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	484		*	mg/L	0.4	2	12/07/06 23:43	msh
Magnesium, dissolved	M200.7 ICP	119			mg/L	0.4	2	12/07/06 23:43	msh
Potassium, dissolved	M200.7 ICP	10.4			mg/L	0.6	2	12/07/06 23:43	msh
Sodium, dissolved	M200.7 ICP	141			mg/L	0.6	2	12/07/06 23:43	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		136			mg/L	2	20	12/05/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Total Alkalinity		136			mg/L	2	20	12/05/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.3			%			02/02/07 0:00	calc
Sum of Anions		39.4			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		40.4			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	123		*	mg/L	5	30	12/11/06 13:27	jff
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/11/06 21:10	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.36		*	mg/L	0.02	0.1	12/07/06 22:12	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2760	H	*	mg/L	10	20	11/30/06 14:56	lcp
Sulfate	SM4500 SO4-D	1580			mg/L	10	50	12/14/06 16:46	lcp
TDS (calculated)	Calculation	2540			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.09						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: IW-23

ACZ Sample ID: **L60150-05**
Date Sampled: 11/21/06 11:35
Date Received: 11/29/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	2450			mS/cm			11/21/06 11:35	bd
pH (Field)	Field Measurement	6.9			units			11/21/06 11:35	bd
Temperature (Field)	Field Measurement	26.0			C			11/21/06 11:35	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	529		*	mg/L	0.4	2	12/07/06 23:47	msh
Magnesium, dissolved	M200.7 ICP	99.1			mg/L	0.4	2	12/07/06 23:47	msh
Potassium, dissolved	M200.7 ICP	9.6			mg/L	0.6	2	12/07/06 23:47	msh
Sodium, dissolved	M200.7 ICP	168			mg/L	0.6	2	12/07/06 23:47	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		158			mg/L	2	20	12/05/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	12/05/06 0:00	ct
Total Alkalinity		158			mg/L	2	20	12/05/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		3.3			%			02/02/07 0:00	calc
Sum of Anions		39.5			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		42.2			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	141		*	mg/L	5	30	12/11/06 13:28	jlf
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/11/06 21:17	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.06		*	mg/L	0.02	0.1	12/07/06 22:14	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2880	H	*	mg/L	10	20	11/30/06 14:57	lcp
Sulfate	SM4500 SO4-D	1540			mg/L	100	500	12/15/06 9:56	lcp
TDS (calculated)	Calculation	2580			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.12						02/02/07 0:00	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60150

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217631													
WG217631LCSW2	LCSW	12/05/06 17:14	WC061113-1	820		814.5	mg/L	99.3	80	120			
WG217631LCSW5	LCSW	12/05/06 19:47	WC061113-1	820		824.6	mg/L	100.6	80	120			
L60172-06DUP	DUP	12/05/06 22:32			246	245.8	mg/L				0.1	20	
WG217631LCSW8	LCSW	12/05/06 22:44	WC061113-1	820		821.5	mg/L	100.2	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217857													
WG217857ICV	ICV	12/08/06 13:37	II061128-2	2		1.939	mg/L	97	95	105			
WG217857ICB	ICB	12/08/06 13:40				U	mg/L		-0.09	0.09			
WG217857LFB	LFB	12/08/06 13:53	II061207-3	1		1.084	mg/L	108.4	85	115			
L59976-01AS	AS	12/08/06 14:03	II061207-3	1	U	1.082	mg/L	108.2	85	115			
L59976-01ASD	ASD	12/08/06 14:07	II061207-3	1	U	1.068	mg/L	106.8	85	115	1.3	20	
L60150-02AS	AS	12/08/06 14:47	II061207-3	2	U	2.165	mg/L	108.3	85	115			
L60150-02ASD	ASD	12/08/06 14:50	II061207-3	2	U	2.167	mg/L	108.4	85	115	0.09	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.02008		.0202	mg/L	100.6	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0012	0.0012			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.00625		.00658	mg/L	105.3	85	115			
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.00625	U	.00529	mg/L	84.6	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.00625	U	.00542	mg/L	86.7	70	130	2.43	20	
WG217540													
WG217540ICV	ICV	12/04/06 16:51	MS061106-2	.02008		.02006	mg/L	99.9	90	110			
WG217540ICB	ICB	12/04/06 16:56				U	mg/L		-0.0012	0.0012			
WG217540LFB	LFB	12/04/06 17:02	MS061023-3	.00625		.00653	mg/L	104.5	85	115			
L60129-07AS	AS	12/04/06 17:20	MS061023-3	.3125	U	.325	mg/L	104	70	130			
L60129-07ASD	ASD	12/04/06 17:26	MS061023-3	.3125	U	.328	mg/L	105	70	130	0.92	20	
L60150-05AS	AS	12/04/06 18:36	MS061023-3	.00625	U	.00652	mg/L	104.3	70	130			
L60150-05ASD	ASD	12/04/06 18:42	MS061023-3	.00625	U	.00644	mg/L	103	70	130	1.23	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60150

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.05478	mg/L	109.6	90	110			
WG217434ICB	ICB	12/01/06 9:33				.00069	mg/L		-0.0015	0.0015			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.0536	mg/L	107.2	85	115			
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.0566	mg/L	113.2	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.05687	mg/L	113.7	70	130	0.48	20	
WG217540													
WG217540ICV	ICV	12/04/06 16:51	MS061106-2	.05		.05447	mg/L	108.9	90	110			
WG217540ICB	ICB	12/04/06 16:56				U	mg/L		-0.0015	0.0015			
WG217540LFB	LFB	12/04/06 17:02	MS061023-3	.05		.05619	mg/L	112.4	85	115			
L60129-07AS	AS	12/04/06 17:20	MS061023-3	2.5	U	2.754	mg/L	110.2	70	130			
L60129-07ASD	ASD	12/04/06 17:26	MS061023-3	2.5	U	2.753	mg/L	110.1	70	130	0.04	20	
L60150-05AS	AS	12/04/06 18:36	MS061023-3	.05	.0025	.06409	mg/L	123.2	70	130			
L60150-05ASD	ASD	12/04/06 18:42	MS061023-3	.05	.0025	.06356	mg/L	122.1	70	130	0.83	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	I1061128-2	2		2.0603	mg/L	103	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.009	0.009			
WG217805LFB	LFB	12/07/06 22:20	I1061207-3	.5		.5139	mg/L	102.8	85	115			
L59976-01AS	AS	12/07/06 22:32	I1061207-3	.5	.372	.8663	mg/L	98.9	85	115			
L59976-01ASD	ASD	12/07/06 22:36	I1061207-3	.5	.372	.8799	mg/L	101.6	85	115	1.56	20	
L60150-02AS	AS	12/07/06 23:23	I1061207-3	1	.071	1.0875	mg/L	101.7	85	115			
L60150-02ASD	ASD	12/07/06 23:27	I1061207-3	1	.071	1.0849	mg/L	101.4	85	115	0.24	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60150

Beryllium, dissolved		M200.8 ICP-MS											
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.04992	mg/L	99.8	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.05014	mg/L	100.3	85	115			
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.04979	mg/L	99.6	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.0499	mg/L	99.8	70	130	0.22	20	
WG217540													
WG217540ICV	ICV	12/04/06 16:51	MS061106-2	.05		.04864	mg/L	97.3	90	110			
WG217540ICB	ICB	12/04/06 16:56				U	mg/L		-0.0003	0.0003			
WG217540LFB	LFB	12/04/06 17:02	MS061023-3	.05		.05047	mg/L	100.9	85	115			
L60129-07AS	AS	12/04/06 17:20	MS061023-3	2.5	.023	2.5045	mg/L	99.3	70	130			
L60129-07ASD	ASD	12/04/06 17:26	MS061023-3	2.5	.023	2.509	mg/L	99.4	70	130	0.18	20	
L60150-05AS	AS	12/04/06 18:36	MS061023-3	.05	U	.05316	mg/L	106.3	70	130			
L60150-05ASD	ASD	12/04/06 18:42	MS061023-3	.05	U	.0542	mg/L	108.4	70	130	1.94	20	
WG217653													
WG217653ICV	ICV	12/06/06 4:30	MS061106-2	.05		.05099	mg/L	102	90	110			
WG217653ICB	ICB	12/06/06 4:36				U	mg/L		-0.0003	0.0003			
WG217653LFB	LFB	12/06/06 4:42	MS061023-3	.05		.05067	mg/L	101.3	85	115			
L59998-16AS	AS	12/06/06 4:54	MS061023-3	.25	U	.2543	mg/L	101.7	70	130			
L59998-16ASD	ASD	12/06/06 5:00	MS061023-3	.25	U	.25955	mg/L	103.8	70	130	2.04	20	

Cadmium, dissolved		M200.8 ICP-MS											
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.05129	mg/L	102.6	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.0514	mg/L	102.8	85	115			
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.05259	mg/L	105.2	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.05234	mg/L	104.7	70	130	0.48	20	
WG217540													
WG217540ICV	ICV	12/04/06 16:51	MS061106-2	.05		.05184	mg/L	103.7	90	110			
WG217540ICB	ICB	12/04/06 16:56				U	mg/L		-0.0003	0.0003			
WG217540LFB	LFB	12/04/06 17:02	MS061023-3	.05		.05199	mg/L	104	85	115			
L60129-07AS	AS	12/04/06 17:20	MS061023-3	2.5	.03	2.576	mg/L	101.8	70	130			
L60129-07ASD	ASD	12/04/06 17:26	MS061023-3	2.5	.03	2.6015	mg/L	102.9	70	130	0.99	20	
L60150-05AS	AS	12/04/06 18:36	MS061023-3	.05	.0001	.04971	mg/L	99.2	70	130			
L60150-05ASD	ASD	12/04/06 18:42	MS061023-3	.05	.0001	.05	mg/L	99.8	70	130	0.58	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60150

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	100		98.24	mg/L	98.2	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.6	0.6			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	67.95918		68.28	mg/L	100.5	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	67.95918	3.5	73.06	mg/L	102.4	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	67.95918	3.5	73.27	mg/L	102.7	85	115	0.29	20	
L60150-02AS	AS	12/07/06 23:23	II061207-3	135.91836	480	588.88	mg/L	80.1	85	115			M3
L60150-02ASD	ASD	12/07/06 23:27	II061207-3	135.91836	480	587.42	mg/L	79	85	115	0.25	20	M3

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217920													
WG217920ICV	ICV	12/11/06 9:24	WI061113-3	55		60.1	mg/L	109.3	90	110			
WG217920ICB	ICB	12/11/06 9:25				1.4	mg/L		-3	3			
WG217920LFB1	LFB	12/11/06 9:26	WI061127-1	30		29.3	mg/L	97.7	90	110			
L60143-01AS	AS	12/11/06 9:41	WI061127-1	30	64	97.4	mg/L	111.3	90	110			M1
WG217920LFB2	LFB	12/11/06 9:53	WI061127-1	30		29	mg/L	96.7	90	110			
L60150-01DUP	DUP	12/11/06 13:24			132	130.8	mg/L				0.9	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	2		1.942	mg/L	97.1	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.03	0.03			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	.5		.499	mg/L	99.8	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	.5	U	.517	mg/L	103.4	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	.5	U	.525	mg/L	105	85	115	1.54	20	
L60150-02AS	AS	12/07/06 23:23	II061207-3	1	U	1.004	mg/L	100.4	85	115			
L60150-02ASD	ASD	12/07/06 23:27	II061207-3	1	U	1.01	mg/L	101	85	115	0.6	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	2		1.934	mg/L	96.7	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.03	0.03			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	.5		.504	mg/L	100.8	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	.5	U	.51	mg/L	102	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	.5	U	.518	mg/L	103.6	85	115	1.56	20	
L60150-02AS	AS	12/07/06 23:23	II061207-3	1	U	.984	mg/L	98.4	85	115			
L60150-02ASD	ASD	12/07/06 23:27	II061207-3	1	U	.984	mg/L	98.4	85	115	0	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60150

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217631													
WG217631PBW1	PBW	12/05/06 17:02				U	µmhos/cm		-10	10			
WG217631LCSW1	LCSW	12/05/06 17:03	PCN25347	1408.8		1500	µmhos/cm	106.5	80	120			
WG217631PBW2	PBW	12/05/06 19:35				U	µmhos/cm		-10	10			
WG217631LCSW4	LCSW	12/05/06 19:36	PCN25347	1408.8		1497	µmhos/cm	106.3	80	120			
L60172-06DUP	DUP	12/05/06 22:32			494	490	µmhos/cm				0.8	20	
WG217631LCSW7	LCSW	12/05/06 22:33	PCN25347	1408.8		1474	µmhos/cm	104.6	80	120			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217857													
WG217857ICV	ICV	12/08/06 13:37	II061128-2	2		1.908	mg/L	95.4	95	105			
WG217857ICB	ICB	12/08/06 13:40				U	mg/L		-0.03	0.03			
WG217857LFB	LFB	12/08/06 13:53	II061207-3	.5		.514	mg/L	102.8	85	115			
L59976-01AS	AS	12/08/06 14:03	II061207-3	.5	U	.523	mg/L	104.6	85	115			
L59976-01ASD	ASD	12/08/06 14:07	II061207-3	.5	U	.525	mg/L	105	85	115	0.38	20	
L60150-02AS	AS	12/08/06 14:47	II061207-3	1	U	1.07	mg/L	107	85	115			
L60150-02ASD	ASD	12/08/06 14:50	II061207-3	1	U	1.064	mg/L	106.4	85	115	0.56	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217655													
WG217655ICV	ICV	12/05/06 21:16	WI061122-3	.3		.2981	mg/L	99.4	90	110			
WG217655ICB	ICB	12/05/06 21:17				U	mg/L		-0.015	0.015			
WG217546LRB	LRB	12/05/06 21:18				U	mg/L		-0.015	0.015			
WG217546LFB	LFB	12/05/06 21:19	WI061122-7	.2		.1903	mg/L	95.2	90	110			
L60130-02DUP	DUP	12/05/06 21:21			U	U	mg/L				0	20	RA
L60130-03LFM	LFM	12/05/06 21:22	WI061122-7	.2	U	.2078	mg/L	103.9	90	110			
WG217726													
WG217726ICV	ICV	12/06/06 16:35	WI061122-3	.3		.2916	mg/L	97.2	90	110			
WG217726ICB	ICB	12/06/06 16:35				U	mg/L		-0.015	0.015			
WG217740													
WG217740ICV	ICV	12/06/06 19:39	WI061122-3	.3		.2977	mg/L	99.2	90	110			
WG217740ICB	ICB	12/06/06 19:40				U	mg/L		-0.015	0.015			
WG217704LRB	LRB	12/06/06 19:41				U	mg/L		-0.015	0.015			
WG217704LFB	LFB	12/06/06 19:42	WI061122-7	.2		.1799	mg/L	90	90	110			
L60150-03LFM	LFM	12/06/06 19:54	WI061122-7	.2	.01	.228	mg/L	109	90	110			
L60151-06DUP	DUP	12/06/06 20:14			U	U	mg/L				0	20	RA
L60151-07LFM	LFM	12/06/06 20:16	WI061122-7	.2	U	.1939	mg/L	97	90	110			
L60150-02DUP	DUP	12/06/06 20:19			.007	.005	mg/L				33.3	20	RA

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60150

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217964													
WG217964ICV	ICV	12/11/06 17:18	WC061211-2	1.996		1.93	mg/L	96.7	95	105			
WG217964ICB	ICB	12/11/06 17:24				U	mg/L		-0.3	0.3			
WG217964LFB1	LFB	12/11/06 17:30	WC061021-1	4.99902		5.05	mg/L	101	90	110			
WG217964LFB2	LFB	12/11/06 20:16	WC061021-1	4.99902		5.15	mg/L	103	90	110			
L60131-05AS	AS	12/11/06 20:27	WC061021-1	4.99902	U	5.17	mg/L	103.4	85	115			
L60131-05DUP	DUP	12/11/06 20:31			U	.11	mg/L				200	20	RA

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217857													
WG217857ICV	ICV	12/08/06 13:37	II061128-2	2		1.943	mg/L	97.2	95	105			
WG217857ICB	ICB	12/08/06 13:40				U	mg/L		-0.06	0.06			
WG217857LFB	LFB	12/08/06 13:53	II061207-3	1		1.117	mg/L	111.7	85	115			
L59976-01AS	AS	12/08/06 14:03	II061207-3	1	.32	1.096	mg/L	77.6	85	115			M1
L59976-01ASD	ASD	12/08/06 14:07	II061207-3	1	.32	1.096	mg/L	77.6	85	115	0	20	M1
L60150-02AS	AS	12/08/06 14:47	II061207-3	2	.07	2.201	mg/L	106.6	85	115			
L60150-02ASD	ASD	12/08/06 14:50	II061207-3	2	.07	2.198	mg/L	106.4	85	115	0.14	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.04789	mg/L	95.8	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.04561	mg/L	91.2	85	115			
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.04541	mg/L	90.8	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.0455	mg/L	91	70	130	0.2	20	
WG217540													
WG217540ICV	ICV	12/04/06 16:51	MS061106-2	.05		.05321	mg/L	106.4	90	110			
WG217540ICB	ICB	12/04/06 16:56				U	mg/L		-0.0003	0.0003			
WG217540LFB	LFB	12/04/06 17:02	MS061023-3	.05		.05158	mg/L	103.2	85	115			
L60129-07AS	AS	12/04/06 17:20	MS061023-3	2.5	U	2.5195	mg/L	100.8	70	130			
L60129-07ASD	ASD	12/04/06 17:26	MS061023-3	2.5	U	2.5315	mg/L	101.3	70	130	0.48	20	
L60150-05AS	AS	12/04/06 18:36	MS061023-3	.05	.0006	.05418	mg/L	107.2	70	130			
L60150-05ASD	ASD	12/04/06 18:42	MS061023-3	.05	.0006	.05419	mg/L	107.2	70	130	0.02	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	100		95.97	mg/L	96	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.6	0.6			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	54.98614		54.6	mg/L	99.3	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	54.98614	5.4	60.03	mg/L	99.4	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	54.98614	5.4	60.46	mg/L	100.1	85	115	0.71	20	
L60150-02AS	AS	12/07/06 23:23	II061207-3	109.97228	118	223.09	mg/L	95.6	85	115			
L60150-02ASD	ASD	12/07/06 23:27	II061207-3	109.97228	118	222.2	mg/L	94.8	85	115	0.4	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60150

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	2		1.9373	mg/L	96.9	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.015	0.015			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	.5		.5168	mg/L	103.4	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	.5	U	.5244	mg/L	104.9	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	.5	U	.5318	mg/L	106.4	85	115	1.4	20	
L60150-02AS	AS	12/07/06 23:23	II061207-3	1	U	1.024	mg/L	102.4	85	115			
L60150-02ASD	ASD	12/07/06 23:27	II061207-3	1	U	1.025	mg/L	102.5	85	115	0.1	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217365													
WG217365ICV1	ICV	12/01/06 10:39	II061129-1	.00498		.00475	mg/L	95.4	95	105			
WG217365ICB1	ICB	12/01/06 10:41				U	mg/L		-0.0002	0.0002			
WG217365ICV2	ICV	12/04/06 15:31	II061129-1	.00498		.00491	mg/L	98.6	95	105			
WG217365ICB2	ICB	12/04/06 15:33				U	mg/L		-0.0002	0.0002			
WG217405													
WG217405LRB	LRB	12/01/06 14:48				U	mg/L		-0.00044	0.00044			
WG217405LFB	LFB	12/01/06 14:50	II061121-2	.002		.00178	mg/L	89	85	115			
L60150-01LFM	LFM	12/01/06 15:27	II061121-2	.002	U	.00184	mg/L	92	85	115			
L60150-01LFMD	LFMD	12/01/06 15:29	II061121-2	.002	U	.00183	mg/L	91.5	85	115	0.54	20	
WG217589													
WG217589ICV	ICV	12/06/06 10:26	II061129-1	.00498		.00478	mg/L	96	95	105			
WG217589ICB	ICB	12/06/06 10:28				U	mg/L		-0.0002	0.0002			
WG217589LRB	LRB	12/06/06 10:31				U	mg/L		-0.00044	0.00044			
WG217589LFB	LFB	12/06/06 10:33	II061121-2	.002		.00183	mg/L	91.5	85	115			
L59240-08LFM	LFM	12/06/06 10:39	II061121-2	.002	U	.00179	mg/L	89.5	85	115			
L59240-08LFMD	LFMD	12/06/06 10:42	II061121-2	.002	U	.00181	mg/L	90.5	85	115	1.11	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	2		2.003	mg/L	100.2	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.03	0.03			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	.5		.506	mg/L	101.2	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	.5	U	.509	mg/L	101.8	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	.5	U	.511	mg/L	102.2	85	115	0.39	20	
L60150-02AS	AS	12/07/06 23:23	II061207-3	1	.03	1.004	mg/L	97.4	85	115			
L60150-02ASD	ASD	12/07/06 23:27	II061207-3	1	.03	1.008	mg/L	97.8	85	115	0.4	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L60150**

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	2		1.941	mg/L	97.1	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.03	0.03			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	.5		.501	mg/L	100.2	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	.5	U	.51	mg/L	102	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	.5	U	.515	mg/L	103	85	115	0.96	20	
L60150-02AS	AS	12/07/06 23:23	II061207-3	1	U	.984	mg/L	98.4	85	115			
L60150-02ASD	ASD	12/07/06 23:27	II061207-3	1	U	.997	mg/L	99.7	85	115	1.31	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217822													
WG217822ICV	ICV	12/07/06 20:31	WI061207-1	2.416		2.214	mg/L	91.6	90	110			
WG217822ICB	ICB	12/07/06 20:32				U	mg/L		-0.06	0.06			
WG217823													
WG217823ICV	ICV	12/07/06 21:37	WI061207-1	2.416		2.327	mg/L	96.3	90	110			
WG217823ICB	ICB	12/07/06 21:38				U	mg/L		-0.06	0.06			
WG217823LFB	LFB	12/07/06 21:39	WI060906-4	2		1.999	mg/L	100	90	110			
L60145-01AS	AS	12/07/06 22:00	WI060906-4	2	.05	1.894	mg/L	92.2	90	110			
L60145-02DUP	DUP	12/07/06 22:03			U	U	mg/L				0	20	RA
WG217823LFB	LFB	12/07/06 22:17	WI060906-4	2		1.997	mg/L	99.9	90	110			

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217631													
WG217631LCSW3	LCSW	12/05/06 17:18	PCN25442	6		5.98	units	99.7	90	110			
WG217631LCSW6	LCSW	12/05/06 19:50	PCN25442	6		6.02	units	100.3	90	110			
L60172-06DUP	DUP	12/05/06 22:32			8.2	8.17	units				0.4	20	
WG217631LCSW9	LCSW	12/05/06 22:47	PCN25442	6		6.03	units	100.5	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	20		20.3	mg/L	101.5	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.9	0.9			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	99.51014		101.19	mg/L	101.7	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	99.51014	1.6	107.47	mg/L	106.4	85	115			
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	99.51014	1.6	108.07	mg/L	107	85	115	0.56	20	
L60150-02AS	AS	12/07/06 23:23	II061207-3	199.02028	7.4	212.51	mg/L	103.1	85	115			
L60150-02ASD	ASD	12/07/06 23:27	II061207-3	199.02028	7.4	212.84	mg/L	103.2	85	115	0.16	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60150

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SDN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217411													
WG217411PBW	PBW	11/30/06 14:35				U	mg/L		-20	20			
WG217411LCSW	LCSW	11/30/06 14:36	PCN25973	260		260	mg/L	100	80	120			
L60150-02DUP	DUP	11/30/06 14:53			2700	2704	mg/L				0.1	20	
L60151-06DUP	DUP	11/30/06 15:09			2260	2208	mg/L				2.3	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SDN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.05		.05416	mg/L	108.3	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.05055	mg/L	101.1	85	115			
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.05743	mg/L	114.9	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.05752	mg/L	115	70	130	0.16	20	
WG217540													
WG217540ICV	ICV	12/04/06 16:51	MS061106-2	.05		.05395	mg/L	107.9	90	110			
WG217540ICB	ICB	12/04/06 16:56				U	mg/L		-0.0003	0.0003			
WG217540LFB	LFB	12/04/06 17:02	MS061023-3	.05		.05338	mg/L	106.8	85	115			
L60129-07AS	AS	12/04/06 17:20	MS061023-3	2.5	U	2.571	mg/L	102.8	70	130			
L60129-07ASD	ASD	12/04/06 17:26	MS061023-3	2.5	U	2.531	mg/L	101.2	70	130	1.57	20	
L60150-05AS	AS	12/04/06 18:36	MS061023-3	.05	.0022	.06702	mg/L	129.6	70	130			
L60150-05ASD	ASD	12/04/06 18:42	MS061023-3	.05	.0022	.0654	mg/L	126.4	70	130	2.45	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SDN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217805													
WG217805ICV	ICV	12/07/06 22:00	II061128-2	100		98.7	mg/L	98.7	95	105			
WG217805ICV	ICV	12/07/06 22:00	II061128-2	100		101.5	mg/L	101.5	95	105			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-6	6			
WG217805ICB	ICB	12/07/06 22:04				U	mg/L		-0.9	0.9			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	99.90786		100	mg/L	100.1	85	115			
WG217805LFB	LFB	12/07/06 22:20	II061207-3	99.90786		101.99	mg/L	102.1	85	115			
L59976-01AS	AS	12/07/06 22:32	II061207-3	99.90786	822	885.1	mg/L	63.2	85	115			M3
L59976-01ASD	ASD	12/07/06 22:36	II061207-3	99.90786	822	894.9	mg/L	73	85	115	1.1	20	M3
L60150-02AS	AS	12/07/06 23:23	II061207-3	199.81572	116	313.54	mg/L	98.9	85	115			
L60150-02ASD	ASD	12/07/06 23:27	II061207-3	199.81572	116	312.93	mg/L	98.6	85	115	0.19	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SDN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218175													
WG218175PBW	PBW	12/14/06 15:35				U	mg/L		-30	30			
WG218175LCSW	LCSW	12/14/06 15:38	WC061207-2	100		91	mg/L	91	80	120			
L60150-04DUP	DUP	12/14/06 16:50			1580	1605	mg/L				1.6	20	
WG218200													
WG218200PBW	PBW	12/15/06 9:50				U	mg/L		-30	30			
WG218200LCSW	LCSW	12/15/06 9:53	WC061207-2	100		100	mg/L	100	80	120			
L60153-02DUP	DUP	12/15/06 10:26			140	142	mg/L				1.4	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60150

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217434													
WG217434ICV	ICV	12/01/06 9:27	MS061106-2	.056		.05249	mg/L	93.7	90	110			
WG217434ICB	ICB	12/01/06 9:33				U	mg/L		-0.0003	0.0003			
WG217434LFB	LFB	12/01/06 9:39	MS061023-3	.05		.04696	mg/L	93.9	85	115			
L60131-05AS	AS	12/01/06 11:17	MS061023-3	.05	U	.0468	mg/L	93.6	70	130			
L60131-05ASD	ASD	12/01/06 11:23	MS061023-3	.05	U	.04689	mg/L	93.8	70	130	0.19	20	
WG217540													
WG217540ICV	ICV	12/04/06 16:51	MS061106-2	.056		.05818	mg/L	103.9	90	110			
WG217540ICB	ICB	12/04/06 16:56				U	mg/L		-0.0003	0.0003			
WG217540LFB	LFB	12/04/06 17:02	MS061023-3	.05		.05329	mg/L	106.6	85	115			
L60129-07AS	AS	12/04/06 17:20	MS061023-3	2.5	U	2.612	mg/L	104.5	70	130			
L60129-07ASD	ASD	12/04/06 17:26	MS061023-3	2.5	U	2.6135	mg/L	104.5	70	130	0.06	20	
L60150-05AS	AS	12/04/06 18:36	MS061023-3	.05	U	.05418	mg/L	108.4	70	130			
L60150-05ASD	ASD	12/04/06 18:42	MS061023-3	.05	U	.05314	mg/L	106.3	70	130	1.94	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217857													
WG217857ICV	ICV	12/08/06 13:37	II061128-2	2		1.912	mg/L	95.6	95	105			
WG217857ICB	ICB	12/08/06 13:40				U	mg/L		-0.03	0.03			
WG217857LFB	LFB	12/08/06 13:53	II061207-3	.5		.508	mg/L	101.6	85	115			
L59976-01AS	AS	12/08/06 14:03	II061207-3	.5	U	.522	mg/L	104.4	85	115			
L59976-01ASD	ASD	12/08/06 14:07	II061207-3	.5	U	.519	mg/L	103.8	85	115	0.58	20	
L60150-02AS	AS	12/08/06 14:47	II061207-3	1	U	1.022	mg/L	102.2	85	115			
L60150-02ASD	ASD	12/08/06 14:50	II061207-3	1	U	1.018	mg/L	101.8	85	115	0.39	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60150**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60150-01	WG217704	Cyanide, total	M335.4 - Manual Distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG217857	Iron, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217805	Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217823	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217411	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	H3	Sample was received and analyzed past holding time.
L60150-02	WG217704	Cyanide, total	M335.4 - Manual Distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG217805	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217823	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217411	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	H3	Sample was received and analyzed past holding time.

Phelps Dodge Sierrita

ACZ Project ID: **L60150**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60150-03	WG217704	Cyanide, total	M335.4 - Manual Distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG217805	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217823	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217411	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	H3	Sample was received and analyzed past holding time.
L60150-04	WG217704	Cyanide, total	M335.4 - Manual Distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG217805	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217823	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217411	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	H3	Sample was received and analyzed past holding time.

Phelps Dodge Sierrita

ACZ Project ID: **L60150**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60150-05	WG217704	Cyanide, total	M335.4 - Manual Distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG217805	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217823	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217411	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	H3	Sample was received and analyzed past holding time.
L60150-06	WG217805	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG217920	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217740	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217823	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217411	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
		M160.1 - Gravimetric	ZO	TDS concentration is based on a final residue greater than 200 mg.	
L60150-07	WG217655	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L60150**

No certification qualifiers associated with this analysis

Phelps Dodge Sierrita

OJ00XN

ACZ Project ID: L60150

Date Received: 11/29/2006

Received By:

Date Printed: 11/29/2006

Receipt Verification

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

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1262	1.2	19

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

Notes

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60150
Date Received: 11/29/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60150-01	IW-18		Y		Y							<input type="checkbox"/>
L60150-02	IW-19		Y		Y							<input type="checkbox"/>
L60150-03	IW-20		Y		Y							<input type="checkbox"/>
L60150-04	IW-21		Y		Y							<input type="checkbox"/>
L60150-05	IW-23		Y		Y							<input type="checkbox"/>
L60150-06	BW-4		Y		Y							<input type="checkbox"/>
L60150-07	CN TB11706-03											<input type="checkbox"/>
L60150-08	VLP TB11706-03											<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



P.O. Box 527, Green Valley, AZ 85622

ANALYTICAL REQUEST SHEET

Chain of Custody PO# - OJ00XN

COC Number: L60150

Page 1 of 4

Lab Use Only	Location	Date	Time	# of Cont.	Preservatives					Field Data			Analysis Requested	
					HNO ₃	H ₂ SO ₄	NaOH	HCL	Unpres.	pH	Cond	Temp		
	IW-18	11/21/2006	10:19	8	1	1	1	1	2	5	6.89	1919	28	Ambient Suite
	IW-19	11/21/2006	10:02	8	1	1	1	1	2	5	6.84	1860	25.4	Ambient Suite
	IW-20	11/21/2006	9:33	8	1	1	1	1	2	5	7.05	1894	24.3	Ambient Suite
	IW-21	11/21/2006	9:05	8	1	1	1	1	2	5	7.16	2320	23.8	Ambient Suite
	IW-23	11/21/2006	11:35	8	1	1	1	1	2	5	6.88	2450	26	Ambient Suite
	BW-4	11/22/2006	8:30	8	1	1	1	1	2	5	6.65	2950	22.7	Ambient Suite

Sample Submitted By: Billy Dorris Telephone No. 520-648-8873 Fax No. _____

Report Results To: Billy Dorris Telephone No. 520-648-8873 Fax No. 520-648-8608

Samples Submitted on Ice Yes / No

Surrendered By: *Billy Z. Dorris* Received By: *Phyllis* Date: *11/29/06* Time: *15:47*

Surrendered By: _____ Received By: _____ Date: _____ Time: _____

Comments/Special Instructions: _____

Laboratory Name and Address:
 ACZ Laboratory
 30400 Downhill Drive
 Steamboat Springs, CO 80487
 Phone: 8003345493



P.O. Box 527, Green Valley, AZ 85622

ANALYTICAL REQUEST SHEET

Chain of Custody PO# - OJ00XN

COC Number: L60014

Page 1 of 1

Lab Use Only	Location	Date	Time	# of Cont.	Preservatives					Field Data			Analysis Requested
					HNO ₃	H ₂ SO ₄	NaOH	HCL	Unpres.	pH	Cond	Temp	
	IW-1	11/15/2006	9:18	8	1	1	1	2	5	6.78	1112	28.2	Ambient Suite
	IW-2	11/15/2006	9:32	8	1	1	1	2	5	6.94	604	27.8	Ambient Suite
	IW-3A	11/15/2006	10:04	8	1	1	1	2	5	6.95	1754	27.1	Ambient Suite
	IW-6A	11/15/2006	12:15	8	1	1	1	2	5	6.99	1966	24	Ambient Suite
	IW-9	11/15/2006	10:30	8	1	1	1	2	5	7.35	1946	24.8	Ambient Suite
	IW-10	11/15/2006	11:29	8	1	1	1	2	5	7.00	1859	24.7	Ambient Suite

Sample Submitted By: Billy Dorris Telephone No. 520-648-8873 Fax No. _____

Report Results To: Billy Dorris Telephone No. 520-648-8873 Fax No. 520-648-8608

Samples Submitted on Ice Yes / No

Surrendered By: Billy F. Dorris Received By: [Signature] Date: 11/15/06 Time: 12:57

Surrendered By: _____ Received By: _____ Date: _____ Time: _____

Comments/Special Instructions: _____

Laboratory Name and Address:
 ACZ Laboratory
 30400 Downhill Drive
 Steamboat Springs, CO 80487
 Phone: 8003345493

Phelps Dodge Sierrita
 OJ00XN

ACZ Project ID: L60014
 Date Received: 11/17/2006
 Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60014-01	IW-1		Y		Y							<input type="checkbox"/>
L60014-02	IW-2		Y		Y							<input type="checkbox"/>
L60014-03	IW-3A		Y		Y							<input type="checkbox"/>
L60014-04	IW-6A		Y		Y							<input type="checkbox"/>
L60014-05	IW-9		Y		Y							<input type="checkbox"/>
L60014-06	IW-10		Y		Y							<input type="checkbox"/>
L60014-07	TRIP BLANK									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

Sample Receipt

Phelps Dodge Sierrita
 OJ00XN

ACZ Project ID: L60014
 Date Received: 11/17/2006
 Received By:
 Date Printed: 11/17/2006

Receipt Verification

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

YES	NO	NA
		X
X		
		X
X		
X		
X		
X		
X		
		X
		X
	X	
		X

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

Trip blank has headspace.

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

The client was not contacted.

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1613	5.5	21

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

Notes

Phelps Dodge Sierrita

ACZ Project ID: **L60014**

No certification qualifiers associated with this analysis

Phelps Dodge Sierrita

ACZ Project ID: **L60014**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60014-04	WG216845	Mercury, dissolved	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217690	Sodium, dissolved	M200.7 ICP	BB	Target analyte detected in calibration blank at or above acceptance limit. Sample value was > 10X the concentration in the calibration blank.
	WG217331	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M325.2 - Colorimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217868	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217410	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217598	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60014-05	WG216845	Mercury, dissolved	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217690	Sodium, dissolved	M200.7 ICP	BB	Target analyte detected in calibration blank at or above acceptance limit. Sample value was > 10X the concentration in the calibration blank.
	WG217331	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217410	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217598	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60014-06	WG216845	Mercury, dissolved	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217690	Sodium, dissolved	M200.7 ICP	BB	Target analyte detected in calibration blank at or above acceptance limit. Sample value was > 10X the concentration in the calibration blank.
	WG217331	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217964	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217410	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217598	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L60014**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60014-01	WG216845	Mercury, dissolved	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217690	Sodium, dissolved	M200.7 ICP	BB	Target analyte detected in calibration blank at or above acceptance limit. Sample value was > 10X the concentration in the calibration blank.
	WG217331	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M325.2 - Colorimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217868	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217410	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
L60014-02	WG216845	Mercury, dissolved	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217690	Sodium, dissolved	M200.7 ICP	BB	Target analyte detected in calibration blank at or above acceptance limit. Sample value was > 10X the concentration in the calibration blank.
	WG217331	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M325.2 - Colorimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217868	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217410	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
L60014-03	WG216845	Mercury, dissolved	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217690	Sodium, dissolved	M200.7 ICP	BB	Target analyte detected in calibration blank at or above acceptance limit. Sample value was > 10X the concentration in the calibration blank.
	WG217331	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M325.2 - Colorimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217341	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217868	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217410	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60014

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217690													
WG217690ICV	ICV	12/07/06 0:21	II061120-1	100		101.25	mg/L	101.3	95	105			
WG217690ICB	ICB	12/07/06 0:25				.34	mg/L		-0.9	0.9			
WG217690LFB	LFB	12/07/06 0:38	II061202-2	99.78197		103.4	mg/L	103.6	85	115			
WG217690LFB	LFB	12/07/06 0:38	II061202-2	99.78197		106.27	mg/L	106.5	85	115			
L60014-01AS	AS	12/07/06 1:27	II061202-2	99.78197	66	165.43	mg/L	99.6	85	115			
L60014-01ASD	ASD	12/07/06 1:31	II061202-2	99.78197	66	165.08	mg/L	99.3	85	115	0.89	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217585													
L60014-03DUP	DUP	12/05/06 11:05			1590	1619	mg/L				1.8	20	
WG217585LCSW	LCSW	12/05/06 11:07	WC060911-2	100		102	mg/L	102	80	120			
WG217585PBW	PBW	12/05/06 11:09				U	mg/L		-30	30			
WG217598													
WG217598PBW	PBW	12/05/06 11:20				U	mg/L		-30	30			
WG217598LCSW	LCSW	12/05/06 11:26	WC060911-2	100		95	mg/L	95	80	120			
L60016-02DUP	DUP	12/05/06 12:33			U	U	mg/L				0	20	RA

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.056		.05675	mg/L	101.3	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05092	mg/L	101.8	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	U	.10288	mg/L	102.9	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	U	.10064	mg/L	100.6	70	130	2.2	20	
WG217242													
WG217242ICV	ICV	11/29/06 13:20	MS061106-2	.056		.0565	mg/L	100.9	90	110			
WG217242ICB	ICB	11/29/06 13:26				U	mg/L		-0.0003	0.0003			
WG217242LFB	LFB	11/29/06 13:32	MS061023-3	.05		.05134	mg/L	102.7	85	115			
L59958-03AS	AS	11/29/06 13:57	MS061023-3	.05	U	.0446	mg/L	89.2	70	130			
L59958-03ASD	ASD	11/29/06 14:03	MS061023-3	.05	U	.04603	mg/L	92.1	70	130	3.16	20	
L59930-11AS	AS	11/29/06 15:23	MS061023-3	.05	U	.04454	mg/L	89.1	70	130			
L59930-11ASD	ASD	11/29/06 15:30	MS061023-3	.05	U	.04457	mg/L	89.1	70	130	0.07	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		1.954	mg/L	97.7	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.03	0.03			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	.5		.548	mg/L	109.6	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	.5	.02	.556	mg/L	107.2	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	.5	.02	.545	mg/L	105	85	115	2	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	1	U	1.076	mg/L	107.6	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	1	U	1.071	mg/L	107.1	85	115	0.47	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60014**

Project ID: OJ00XN

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217313													
WG217313LCSW3	LCSW	11/29/06 17:14	PCN25442	6		6.04	units	100.7	90	110			
WG217313LCSW6	LCSW	11/29/06 21:46	PCN25442	6		6.04	units	100.7	90	110			
L60017-02DUP	DUP	11/29/06 23:27			8.2	8.23	units				0.4	20	
WG217313LCSW9	LCSW	11/30/06 1:23	PCN25442	6		6.05	units	100.8	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	20		20.24	mg/L	101.2	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.9	0.9			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	99.46819		103.95	mg/L	104.5	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	99.46819	1	106.95	mg/L	106.5	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	99.46819	1	105	mg/L	104.6	85	115	1.84	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	198.93638	7.1	215.17	mg/L	104.6	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	198.93638	7.1	216.59	mg/L	105.3	85	115	0.66	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216983													
WG216983PBW	PBW	11/21/06 14:15				U	mg/L		-20	20			
WG216983LCSW	LCSW	11/21/06 14:17	PCN25978	260		288	mg/L	110.8	80	120			
L60014-04DUP	DUP	11/21/06 15:15			3050	3034	mg/L				0.5	20	
WG216990													
WG216990PBW	PBW	11/21/06 15:00				12	mg/L		-20	20			
WG216990LCSW	LCSW	11/21/06 15:01	PCN25978	260		300	mg/L	115.4	80	120			
L60014-06DUP	DUP	11/21/06 15:18			2960	2936	mg/L				0.8	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05276	mg/L	105.5	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05062	mg/L	101.2	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	.0012	.11076	mg/L	109.6	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	.0012	.10814	mg/L	106.9	70	130	2.39	20	
WG217242													
WG217242ICV	ICV	11/29/06 13:20	MS061106-2	.05		.05287	mg/L	105.7	90	110			
WG217242ICB	ICB	11/29/06 13:26				U	mg/L		-0.0003	0.0003			
WG217242LFB	LFB	11/29/06 13:32	MS061023-3	.05		.04858	mg/L	97.2	85	115			
L59958-03AS	AS	11/29/06 13:57	MS061023-3	.05	.003	.05201	mg/L	98	70	130			
L59958-03ASD	ASD	11/29/06 14:03	MS061023-3	.05	.003	.05227	mg/L	98.5	70	130	0.5	20	
L59930-11AS	AS	11/29/06 15:23	MS061023-3	.05	U	.04249	mg/L	85	70	130			
L59930-11ASD	ASD	11/29/06 15:30	MS061023-3	.05	U	.04335	mg/L	86.7	70	130	2	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60014

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216633													
WG216633ICV	ICV	11/20/06 18:29	II061110-4	.00498		.00501	mg/L	100.6	95	105			
WG216633ICB	ICB	11/20/06 18:31				U	mg/L		-0.0002	0.0002			
WG216845													
WG216845LRB	LRB	11/21/06 14:40				U	mg/L		-0.00044	0.00044			
WG216845LFB	LFB	11/21/06 14:42	II061109-3	.002		.00218	mg/L	109	85	115			
L59990-06LFM	LFM	11/21/06 15:20	II061109-3	.002	U	.00232	mg/L	116	85	115			MA
L59990-06LFMD	LFMD	11/21/06 15:23	II061109-3	.002	U	.00217	mg/L	108.5	85	115	6.68	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		2.019	mg/L	101	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.03	0.03			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	.5		.521	mg/L	104.2	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	.5	U	.513	mg/L	102.6	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	.5	U	.501	mg/L	100.2	85	115	2.37	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	1	.21	1.212	mg/L	100.2	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	1	.21	1.215	mg/L	100.5	85	115	0.25	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		1.936	mg/L	96.8	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.03	0.03			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	.5		.561	mg/L	112.2	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	.5	.05	.593	mg/L	108.6	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	.5	.05	.593	mg/L	108.6	85	115	0	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	1	.04	1.108	mg/L	106.8	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	1	.04	1.112	mg/L	107.2	85	115	0.36	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217410													
WG217410ICV	ICV	11/30/06 14:43	WI060906-3	2.416		2.385	mg/L	98.7	90	110			
WG217410ICB	ICB	11/30/06 14:45				U	mg/L		-0.06	0.06			
WG217410LFB1	LFB	11/30/06 15:08	WI060906-4	2		1.971	mg/L	98.6	90	110			
L59903-04AS	AS	11/30/06 15:10	WI060906-4	2	.07	2.481	mg/L	120.6	90	110			M1
L59979-04DUP	DUP	11/30/06 15:15			.85	.847	mg/L				0.4	20	
WG217410LFB2	LFB	11/30/06 15:26	WI060906-4	2		2.055	mg/L	102.8	90	110			
L60014-06AS	AS	11/30/06 15:31	WI060906-4	2	.9	2.683	mg/L	89.2	90	110			M2
L60015-01DUP	DUP	11/30/06 15:34			U	.041	mg/L				200	20	RA

Phelps Dodge Sierrita

ACZ Project ID: **L60014**

Project ID: OJ00XN

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		1.98	mg/L	99	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.06	0.06			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	1		1.127	mg/L	112.7	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	1	U	1.118	mg/L	111.8	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	1	U	1.109	mg/L	110.9	85	115	0.81	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	2	U	2.18	mg/L	109	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	2	U	2.172	mg/L	108.6	85	115	0.37	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05202	mg/L	104	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.04987	mg/L	99.7	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	.0007	.09926	mg/L	98.6	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	.0007	.09772	mg/L	97	70	130	1.56	20	
WG217242													
WG217242ICV	ICV	11/29/06 13:20	MS061106-2	.05		.05181	mg/L	103.6	90	110			
WG217242ICB	ICB	11/29/06 13:26				U	mg/L		-0.0003	0.0003			
WG217242LFB	LFB	11/29/06 13:32	MS061023-3	.05		.05027	mg/L	100.5	85	115			
L59958-03AS	AS	11/29/06 13:57	MS061023-3	.05	U	.04335	mg/L	86.7	70	130			
L59958-03ASD	ASD	11/29/06 14:03	MS061023-3	.05	U	.0444	mg/L	88.8	70	130	2.39	20	
L59930-11AS	AS	11/29/06 15:23	MS061023-3	.05	U	.04308	mg/L	86.2	70	130			
L59930-11ASD	ASD	11/29/06 15:30	MS061023-3	.05	U	.04311	mg/L	86.2	70	130	0.07	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	100		97.13	mg/L	97.1	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.6	0.6			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	54.94443		58.15	mg/L	105.8	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	54.94443	88.8	145.39	mg/L	103	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	54.94443	88.8	143.27	mg/L	99.1	85	115	1.47	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	109.88886	84.5	196.86	mg/L	102.2	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	109.88886	84.5	196.22	mg/L	101.7	85	115	0.33	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		1.9465	mg/L	97.3	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.015	0.015			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	.5		.5744	mg/L	114.9	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	.5	.012	.5832	mg/L	114.2	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	.5	.012	.5758	mg/L	112.8	85	115	1.28	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	1	U	1.116	mg/L	111.6	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	1	U	1.113	mg/L	111.3	85	115	0.27	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60014

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217313													
WG217313PBW1	PBW	11/29/06 16:59				U	µmhos/cm		-10	10			
WG217313LCSW1	LCSW	11/29/06 17:00	PCN25347	1408.8		1522	µmhos/cm	108	80	120			
WG217313PBW2	PBW	11/29/06 21:30				5	µmhos/cm		-10	10			
WG217313LCSW4	LCSW	11/29/06 21:32	PCN25347	1408.8		1503	µmhos/cm	106.7	80	120			
L60017-02DUP	DUP	11/29/06 23:27			6960	6920	µmhos/cm				0.6	20	
WG217313LCSW7	LCSW	11/30/06 1:08	PCN25347	1408.8		1488	µmhos/cm	105.6	80	120			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		1.89	mg/L	94.5	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.03	0.03			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	.5		.491	mg/L	98.2	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	.5	U	.48	mg/L	96	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	.5	U	.476	mg/L	95.2	85	115	0.84	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	1	U	.905	mg/L	90.5	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	1	U	.892	mg/L	89.2	85	115	1.45	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217341													
WG217341ICV	ICV	11/29/06 20:41	WI061122-3	.3		.2911	mg/L	97	90	110			
WG217341ICB	ICB	11/29/06 20:42				U	mg/L		-0.015	0.015			
WG217240LRB	LRB	11/29/06 20:42				U	mg/L		-0.015	0.015			
WG217240LFB	LFB	11/29/06 20:43	WI061122-7	.2		.2133	mg/L	106.7	90	110			
L59974-01DUP	DUP	11/29/06 20:45			5.6	5.33	mg/L				4.9	20	
L59974-02LFM	LFM	11/29/06 20:47	WI061122-7	.2	U	.2679	mg/L	134	90	110			M1
L60014-06DUP	DUP	11/29/06 20:57			.015	.0112	mg/L				29	20	RA
L60019-01LFM	LFM	11/29/06 20:58	WI061122-7	.2	.015	.2288	mg/L	106.9	90	110			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217868													
WG217868ICV	ICV	12/08/06 17:42	WC061128-6	1.996		2.07	mg/L	103.7	95	105			
WG217868ICB	ICB	12/08/06 17:47				U	mg/L		-0.3	0.3			
WG217868LFB1	LFB	12/08/06 17:59	WC061021-1	4.99902		5.4	mg/L	108	90	110			
L60010-05AS	AS	12/08/06 19:34	WC061021-1	4.99902	.7	6.16	mg/L	109.2	85	115			
L60010-05DUP	DUP	12/08/06 19:41			.7	.65	mg/L				7.4	20	RA
WG217964													
WG217964ICV	ICV	12/11/06 17:18	WC061211-2	1.996		1.93	mg/L	96.7	95	105			
WG217964ICB	ICB	12/11/06 17:24				U	mg/L		-0.3	0.3			
WG217964LFB1	LFB	12/11/06 17:30	WC061021-1	4.99902		5.05	mg/L	101	90	110			
L60014-05AS	AS	12/11/06 17:40	WC061021-1	4.99902	.4	5.22	mg/L	96.4	85	115			
L60014-05DUP	DUP	12/11/06 17:47			.4	.42	mg/L				4.9	20	RA
WG217964LFB2	LFB	12/11/06 20:16	WC061021-1	4.99902		5.15	mg/L	103	90	110			

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60014

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	100		99.76	mg/L	99.8	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.6	0.6			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	67.93192		71.83	mg/L	105.7	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	67.93192	76.8	146.23	mg/L	102.2	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	67.93192	76.8	143.39	mg/L	98	85	115	1.96	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	135.86384	486	616.08	mg/L	95.7	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	135.86384	486	612.18	mg/L	92.9	85	115	0.64	20	

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217310													
WG217310ICV	ICV	11/29/06 15:41	WI061113-3	55		57.6	mg/L	104.7	90	110			
WG217310ICB	ICB	11/29/06 15:42				1.1	mg/L		-3	3			
WG217331													
WG217331ICV	ICV	11/29/06 17:45	WI061113-3	55		58.9	mg/L	107.1	90	110			
WG217331ICB	ICB	11/29/06 17:46				1.1	mg/L		-3	3			
WG217331LFB1	LFB	11/29/06 17:47	WI061127-1	30		30.3	mg/L	101	90	110			
L60011-04AS	AS	11/29/06 18:02	WI061127-1	30	3	40.4	mg/L	124.7	90	110			M1
L60011-05DUP	DUP	11/29/06 18:04			1	1.5	mg/L				40	20	RA
WG217331LFB2	LFB	11/29/06 18:14	WI061127-1	30		31	mg/L	103.3	90	110			
L60014-05AS	AS	11/29/06 18:37	WI061127-1	150	127	318.4	mg/L	127.6	90	110			M1
L60014-06DUP	DUP	11/29/06 19:32			154	169.6	mg/L				9.6	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		2.011	mg/L	100.6	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.03	0.03			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	.5		.558	mg/L	111.6	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	.5	U	.545	mg/L	109	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	.5	U	.54	mg/L	108	85	115	0.92	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	1	U	1.055	mg/L	105.5	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	1	U	1.048	mg/L	104.8	85	115	0.67	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		1.893	mg/L	94.7	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.03	0.03			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	.5		.541	mg/L	108.2	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	.5	U	.532	mg/L	106.4	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	.5	U	.522	mg/L	104.4	85	115	1.9	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	1	U	1.024	mg/L	102.4	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	1	U	1.018	mg/L	101.8	85	115	0.59	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60014

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05044	mg/L	100.9	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05154	mg/L	103.1	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	U	.09636	mg/L	96.4	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	U	.09644	mg/L	96.4	70	130	0.08	20	
WG217242													
WG217242ICV	ICV	11/29/06 13:20	MS061106-2	.05		.04976	mg/L	99.5	90	110			
WG217242ICB	ICB	11/29/06 13:26				U	mg/L		-0.0003	0.0003			
WG217242LFB	LFB	11/29/06 13:32	MS061023-3	.05		.05036	mg/L	100.7	85	115			
L59958-03AS	AS	11/29/06 13:57	MS061023-3	.05	U	.04696	mg/L	93.9	70	130			
L59958-03ASD	ASD	11/29/06 14:03	MS061023-3	.05	U	.04974	mg/L	99.5	70	130	5.75	20	
L59930-11AS	AS	11/29/06 15:23	MS061023-3	.05	.0009	.04101	mg/L	80.2	70	130			
L59930-11ASD	ASD	11/29/06 15:30	MS061023-3	.05	.0009	.04095	mg/L	80.1	70	130	0.15	20	
WG217329													
WG217329ICV	ICV	11/30/06 14:14	MS061106-2	.05		.04699	mg/L	94	90	110			
WG217329ICB	ICB	11/30/06 14:20				U	mg/L		-0.0003	0.0003			
WG217329LFB	LFB	11/30/06 14:26	MS061023-3	.05		.04992	mg/L	99.8	85	115			
L59982-01AS	AS	11/30/06 16:01	MS061023-3	.05	U	.04978	mg/L	99.6	70	130			
L59982-01ASD	ASD	11/30/06 16:06	MS061023-3	.05	U	.04978	mg/L	99.6	70	130	0	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05141	mg/L	102.8	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0003	0.0003			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05145	mg/L	102.9	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	U	.10056	mg/L	100.6	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	U	.09856	mg/L	98.6	70	130	2.01	20	
WG217242													
WG217242ICV	ICV	11/29/06 13:20	MS061106-2	.05		.05087	mg/L	101.7	90	110			
WG217242ICB	ICB	11/29/06 13:26				U	mg/L		-0.0003	0.0003			
WG217242LFB	LFB	11/29/06 13:32	MS061023-3	.05		.05126	mg/L	102.5	85	115			
L59958-03AS	AS	11/29/06 13:57	MS061023-3	.05	U	.04557	mg/L	91.1	70	130			
L59958-03ASD	ASD	11/29/06 14:03	MS061023-3	.05	U	.04744	mg/L	94.9	70	130	4.02	20	
L59930-11AS	AS	11/29/06 15:23	MS061023-3	.05	U	.04311	mg/L	86.2	70	130			
L59930-11ASD	ASD	11/29/06 15:30	MS061023-3	.05	U	.04325	mg/L	86.5	70	130	0.32	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60014

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.05		.05368	mg/L	107.4	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0015	0.0015			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.05		.05404	mg/L	108.1	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.1	.003	.119	mg/L	116	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.1	.003	.1166	mg/L	113.6	70	130	2.04	20	
WG217242													
WG217242ICV	ICV	11/29/06 13:20	MS061106-2	.05		.05317	mg/L	106.3	90	110			
WG217242ICB	ICB	11/29/06 13:26				U	mg/L		-0.0015	0.0015			
WG217242LFB	LFB	11/29/06 13:32	MS061023-3	.05		.05341	mg/L	106.8	85	115			
L59958-03AS	AS	11/29/06 13:57	MS061023-3	.05	.0014	.04988	mg/L	97	70	130			
L59958-03ASD	ASD	11/29/06 14:03	MS061023-3	.05	.0014	.05165	mg/L	100.5	70	130	3.49	20	
L59930-11AS	AS	11/29/06 15:23	MS061023-3	.05	.0143	.06341	mg/L	98.2	70	130			
L59930-11ASD	ASD	11/29/06 15:30	MS061023-3	.05	.0143	.06483	mg/L	101.1	70	130	2.21	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		2.0345	mg/L	101.7	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.009	0.009			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	.5		.5534	mg/L	110.7	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	.5	.015	.5742	mg/L	111.8	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	.5	.015	.566	mg/L	110.2	85	115	1.44	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	1	.032	1.1178	mg/L	108.6	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	1	.032	1.1188	mg/L	108.7	85	115	0.09	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60014

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217313													
WG217313LCSW2	LCSW	11/29/06 17:11	WC061113-1	820		818.6	mg/L	99.8	80	120			
WG217313LCSW5	LCSW	11/29/06 21:43	WC061113-1	820		820.3	mg/L	100	80	120			
L60017-02DUP	DUP	11/29/06 23:27			1080	1046.1	mg/L				3.2	20	
WG217313LCSW8	LCSW	11/30/06 1:19	WC061113-1	820		822.1	mg/L	100.3	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217491													
WG217491ICV	ICV	12/01/06 22:35	II061128-2	2		2.004	mg/L	100.2	95	105			
WG217491ICB	ICB	12/01/06 22:39				U	mg/L		-0.09	0.09			
WG217491LFB	LFB	12/01/06 22:52	II061116-2	1		1.065	mg/L	106.5	85	115			
L59902-01AS	AS	12/01/06 22:59	II061116-2	1	U	1.081	mg/L	108.1	85	115			
L59902-01ASD	ASD	12/01/06 23:02	II061116-2	1	U	1.073	mg/L	107.3	85	115	0.74	20	
L60014-04AS	AS	12/01/06 23:39	II061116-2	2	U	2.1	mg/L	105	85	115			
L60014-04ASD	ASD	12/01/06 23:42	II061116-2	2	U	2.09	mg/L	104.5	85	115	0.48	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217246													
WG217246ICV	ICV	11/29/06 6:58	MS061106-2	.02008		.01974	mg/L	98.3	90	110			
WG217246ICB	ICB	11/29/06 7:04				U	mg/L		-0.0012	0.0012			
WG217246LFB	LFB	11/29/06 7:10	MS061023-3	.00625		.00648	mg/L	103.7	85	115			
L60014-05AS	AS	11/29/06 7:22	MS061023-3	.0125	U	.01304	mg/L	104.3	70	130			
L60014-05ASD	ASD	11/29/06 7:29	MS061023-3	.0125	U	.01299	mg/L	103.9	70	130	0.38	20	
WG217242													
WG217242ICV	ICV	11/29/06 13:20	MS061106-2	.02008		.02004	mg/L	99.8	90	110			
WG217242ICB	ICB	11/29/06 13:26				U	mg/L		-0.0012	0.0012			
WG217242LFB	LFB	11/29/06 13:32	MS061023-3	.00625		.00661	mg/L	105.8	85	115			
L59958-03AS	AS	11/29/06 13:57	MS061023-3	.00625	U	.0059	mg/L	94.4	70	130			
L59958-03ASD	ASD	11/29/06 14:03	MS061023-3	.00625	U	.00604	mg/L	96.6	70	130	2.35	20	
L59930-11AS	AS	11/29/06 15:23	MS061023-3	.00625	U	.00602	mg/L	96.3	70	130			
L59930-11ASD	ASD	11/29/06 15:30	MS061023-3	.00625	U	.00606	mg/L	97	70	130	0.66	20	

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: IW-10

ACZ Sample ID: **L60014-06**
 Date Sampled: 11/15/06 11:29
 Date Received: 11/17/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1859			mS/cm			11/15/06 11:29	bd
pH (Field)	Field Measurement	7.0			units			11/15/06 11:29	bd
Temperature (Field)	Field Measurement	24.7			C			11/15/06 11:29	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	515			mg/L	0.4	2	12/01/06 23:49	gme
Magnesium, dissolved	M200.7 ICP	95.4			mg/L	0.4	2	12/01/06 23:49	gme
Potassium, dissolved	M200.7 ICP	10.6			mg/L	0.6	2	12/01/06 23:49	gme
Sodium, dissolved	M200.7 ICP	155		*	mg/L	0.6	2	12/07/06 1:47	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		158			mg/L	2	20	11/29/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Total Alkalinity		158			mg/L	2	20	11/29/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.7			%			02/02/07 0:00	calc
Sum of Anions		42.1			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		40.7			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	154		*	mg/L	5	30	11/29/06 19:32	jff
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/11/06 17:54	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.90		*	mg/L	0.02	0.1	11/30/06 15:30	jff
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2960			mg/L	10	20	11/21/06 15:16	lcp
Sulfate	SM4500 SO4-D	1650		*	mg/L	10	50	12/05/06 11:44	lcp
TDS (calculated)	Calculation	2680			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.10						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: IW-9

ACZ Sample ID: **L60014-05**
 Date Sampled: 11/15/06 10:30
 Date Received: 11/17/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1946			mS/cm			11/15/06 10:30	bd
pH (Field)	Field Measurement	7.4			units			11/15/06 10:30	bd
Temperature (Field)	Field Measurement	24.8			C			11/15/06 10:30	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	500			mg/L	0.4	2	12/01/06 23:45	gme
Magnesium, dissolved	M200.7 ICP	100			mg/L	0.4	2	12/01/06 23:45	gme
Potassium, dissolved	M200.7 ICP	12.4			mg/L	0.6	2	12/01/06 23:45	gme
Sodium, dissolved	M200.7 ICP	175		*	mg/L	0.6	2	12/07/06 1:44	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		125			mg/L	2	20	11/29/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Total Alkalinity		125			mg/L	2	20	11/29/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-2.1			%			02/02/07 0:00	calc
Sum of Anions		43.0			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		41.2			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	127		*	mg/L	5	30	11/29/06 18:36	jif
Fluoride	SM4500F-C	0.4	B	*	mg/L	0.1	0.5	12/11/06 17:33	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.85		*	mg/L	0.02	0.1	11/30/06 15:25	jif
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2960			mg/L	10	20	11/21/06 15:15	lcp
Sulfate	SM4500 SO4-D	1760		*	mg/L	10	50	12/05/06 11:38	lcp
TDS (calculated)	Calculation	2750			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.08						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: IW-6A

ACZ Sample ID: **L60014-04**
 Date Sampled: 11/15/06 12:15
 Date Received: 11/17/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1966			mS/cm			11/15/06 12:15	bd
pH (Field)	Field Measurement	7.0			units			11/15/06 12:15	bd
Temperature (Field)	Field Measurement	24.0			C			11/15/06 12:15	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	486			mg/L	0.4	2	12/01/06 23:35	gme
Magnesium, dissolved	M200.7 ICP	84.5			mg/L	0.4	2	12/01/06 23:35	gme
Potassium, dissolved	M200.7 ICP	7.1			mg/L	0.6	2	12/01/06 23:35	gme
Sodium, dissolved	M200.7 ICP	237		*	mg/L	0.6	2	12/07/06 1:41	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		110			mg/L	2	20	11/29/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Total Alkalinity		110			mg/L	2	20	11/29/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.1			%			02/02/07 0:00	calc
Sum of Anions		42.7			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		41.8			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	125		*	mg/L	2	10	11/29/06 18:35	jff
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/08/06 20:09	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.72		*	mg/L	0.02	0.1	11/30/06 15:24	jff
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	3050			mg/L	10	20	11/21/06 15:12	lcp
Sulfate	SM4500 SO4-D	1760		*	mg/L	10	50	12/05/06 11:32	lcp
TDS (calculated)	Calculation	2770			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.10						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: IW-3A

ACZ Sample ID: **L60014-03**
Date Sampled: 11/15/06 10:04
Date Received: 11/17/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1754			mS/cm			11/15/06 10:04	bd
pH (Field)	Field Measurement	7.0			units			11/15/06 10:04	bd
Temperature (Field)	Field Measurement	27.1			C			11/15/06 10:04	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	491			mg/L	0.4	2	12/01/06 23:32	gme
Magnesium, dissolved	M200.7 ICP	112			mg/L	0.4	2	12/01/06 23:32	gme
Potassium, dissolved	M200.7 ICP	14.8			mg/L	0.6	2	12/01/06 23:32	gme
Sodium, dissolved	M200.7 ICP	120		*	mg/L	0.6	2	12/07/06 1:37	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		119			mg/L	2	20	11/29/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Total Alkalinity		119			mg/L	2	20	11/29/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-0.1			%			02/02/07 0:00	calc
Sum of Anions		39.5			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		39.4			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	131		*	mg/L	2	10	11/29/06 18:34	jlf
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/08/06 20:02	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.01		*	mg/L	0.02	0.1	11/30/06 15:23	jlf
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2770			mg/L	10	20	11/21/06 15:09	lcp
Sulfate	SM4500 SO4-D	1590			mg/L	10	50	12/05/06 11:02	lcp
TDS (calculated)	Calculation	2530			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.09						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: IW-2

ACZ Sample ID: **L60014-02**
Date Sampled: 11/15/06 09:32
Date Received: 11/17/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	604			mS/cm			11/15/06 9:32	bd
pH (Field)	Field Measurement	6.9			units			11/15/06 9:32	bd
Temperature (Field)	Field Measurement	27.8			C			11/15/06 9:32	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	60.7			mg/L	0.2	1	12/01/06 23:29	gme
Magnesium, dissolved	M200.7 ICP	13.0			mg/L	0.2	1	12/01/06 23:29	gme
Potassium, dissolved	M200.7 ICP	5.5			mg/L	0.3	1	12/01/06 23:29	gme
Sodium, dissolved	M200.7 ICP	43.0		*	mg/L	0.3	1	12/07/06 1:34	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		151			mg/L	2	20	11/29/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Total Alkalinity		151			mg/L	2	20	11/29/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		4.3			%			02/02/07 0:00	calc
Sum of Anions		5.6			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		6.1			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	17		*	mg/L	1	5	11/29/06 18:11	jif
Fluoride	SM4500F-C	0.4	B	*	mg/L	0.1	0.5	12/08/06 19:55	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.12		*	mg/L	0.02	0.1	11/30/06 15:22	jif
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	380			mg/L	10	20	11/21/06 15:07	lcp
Sulfate	SM4500 SO4-D	100			mg/L	10	50	12/05/06 11:00	lcp
TDS (calculated)	Calculation	330			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.15						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: IW-1

ACZ Sample ID: **L60014-01**
Date Sampled: 11/15/06 09:18
Date Received: 11/17/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1112			mS/cm			11/15/06 9:18	bd
pH (Field)	Field Measurement	6.8			units			11/15/06 9:18	bd
Temperature (Field)	Field Measurement	28.2			C			11/15/06 9:18	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	175			mg/L	0.2	1	12/01/06 23:25	gme
Magnesium, dissolved	M200.7 ICP	40.0			mg/L	0.2	1	12/01/06 23:25	gme
Potassium, dissolved	M200.7 ICP	8.9			mg/L	0.3	1	12/01/06 23:25	gme
Sodium, dissolved	M200.7 ICP	62.1		*	mg/L	0.3	1	12/07/06 1:24	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		139			mg/L	2	20	11/29/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/29/06 0:00	ct
Total Alkalinity		139			mg/L	2	20	11/29/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.0			%			02/02/07 0:00	calc
Sum of Anions		14.7			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		15.0			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	59		*	mg/L	1	5	11/29/06 18:10	jff
Fluoride	SM4500F-C	0.4	B	*	mg/L	0.1	0.5	12/08/06 19:48	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.48		*	mg/L	0.02	0.1	11/30/06 15:20	jff
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	1010			mg/L	10	20	11/21/06 15:04	lcp
Sulfate	SM4500 SO4-D	490			mg/L	10	50	12/05/06 10:57	lcp
TDS (calculated)	Calculation	919			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.10						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

February 02, 2007

Project ID: OJ00XN

ACZ Project ID: L60014

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 7 ground water samples from Phelps Dodge Sierrita on November 17, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L60014. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes. This section has been included as an attachment to the original PDF document.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures.

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

February 12, 2007

Project ID: OJ00XN
ACZ Project ID: L60014

Bill Dorris:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 17, 2006 and reported on December 13, 2006. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L60014. Please reference this number in all future inquiries.

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

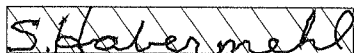
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60014. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Feb/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.





P.O. Box 527, Green Valley, AZ 85622

ANALYTICAL REQUEST SHEET
Chain of Custody PO# - OJ00XN

COC Number: 659979

Page 1 of 1

Lab Use Only	Location	Date	Time	# of Cont.	Preservatives					Field Data			Analysis Requested
					HNO ₃	H ₂ SO ₄	NaOH	HCl	Unpres.	pH	Cond	Temp	
	MH-25A	11/13/2006	14:07	8	1	1	1	2	5	8.09	416	26.5	Ambient Suite
	MH-25B	11/13/2006	13:45	8	1	1	1	2	5	7.64	1658	28.1	Ambient Suite
	MH-25C	11/13/2006	13:12	8	1	1	1	2	5	7.55	1471	29.2	Ambient Suite
	MH-26A	11/13/2006	10:52	8	1	1	1	2	5	8.06	405	26.6	Ambient Suite
	MH-26B	11/13/2006	11:39	8	1	1	1	2	5	7.59	1516	27.9	Ambient Suite
	MH-26C	11/13/2006	10:37	8	1	1	1	2	5	7.87	1223	28.8	Ambient Suite
	MH-12	11/13/2006	14:27	8	1	1	1	2	5	7.04	1517	28.4	Ambient Suite

Sample Submitted By: Billy Dorris Telephone No. 520-648-8873 Fax No. _____

Report Results To: Billy Dorris Telephone No. 520-648-8873 Fax No. 520-648-8608

Samples Submitted on Ice: Yes / No

Surrendered By: Billy A. Dorris Received By: _____ Date: 11/16/06 Time: 11:46

Surrendered By: _____ Received By: _____ Date: _____ Time: _____

Comments/Special Instructions: _____

Laboratory Name and Address: ACZ Laboratory
30400 Downhill Drive
Steamboat Springs, CO 80487
Phone: 8003345493

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L59979
Date Received: 11/16/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L59979-01	MH-25A		Y		Y							<input type="checkbox"/>
L59979-02	MH-25B		Y		Y							<input type="checkbox"/>
L59979-03	MH-25C		Y		Y							<input type="checkbox"/>
L59979-04	MH-26A		Y		Y							<input type="checkbox"/>
L59979-05	MH-26B		Y		Y							<input type="checkbox"/>
L59979-06	MH-26C		Y		Y							<input type="checkbox"/>
L59979-07	MH-12		Y		Y							<input type="checkbox"/>
L59979-08	CYANIDE TRIP BLANK									X		<input type="checkbox"/>
L59979-09	VOA TRIP BLANK									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

Sample Receipt

Phelps Dodge Sierrita
 OJ00XN

ACZ Project ID: L59979
 Date Received: 11/16/2006
 Received By:
 Date Printed: 11/16/2006

Receipt Verification

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

	YES	NO	NA
1)			X
2)	X		
3)			X
4)	X		
5)	X		
6)	X		
7)	X		
8)	X		
9)	X		
10)			X
11)	X		
12)		X	
13)			X

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

Headspace:#5=1 vial, #9=1 vial.

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

The client was not contacted.

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1063	1.2	17

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

Notes

Phelps Dodge Sierrita

ACZ Project ID: **L59979**

No certification qualifiers associated with this analysis

Phelps Dodge Sierrita

ACZ Project ID: **L59979**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59979-05	WG217157	Chloride	M325.2 - Colorimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217483	Fluoride	SM4500F-C	N1	See Case Narrative.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217092	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG217368	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L59979-06	WG217062	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217483	Fluoride	SM4500F-C	N1	See Case Narrative.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217092	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG217368	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L59979-07	WG217174	Lead, dissolved	M200.8 ICP-MS	BE	Target analyte in continuing calibration blank (CCB) at or above the acceptance criteria. Data is useable because analyte concentration in client sample is less than the MDL.
	WG217157	Chloride	M325.2 - Colorimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217483	Fluoride	SM4500F-C	N1	See Case Narrative.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217092	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG217816	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L59979-08	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation M335.4 - Colorimetric w/ distillation	M1 RA	Matrix spike recovery was high, the method control sample recovery was acceptable. Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L59979**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59979-01	WG217174	Lead, dissolved	M200.8 ICP-MS	BE	Target analyte in continuing calibration blank (CCB) at or above the acceptance criteria. Data is useable because analyte concentration in client sample is less than the MDL.
	WG217062	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217628	Fluoride	SM4500F-C	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217092	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218418	Sulfate	SM4500 SO4-D	C4	Confirmatory analysis was past holding time.
SM4500 SO4-D			RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L59979-02	WG217062	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217483	Fluoride	SM4500F-C	N1	See Case Narrative.
	WG217092	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217368	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L59979-03	WG217062	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217483	Fluoride	SM4500F-C	N1	See Case Narrative.
	WG217092	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217368	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L59979-04	WG217062	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217483	Fluoride	SM4500F-C	N1	See Case Narrative.
	WG217410	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217368	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L59979**

Project ID: OJ00XN

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	2		1.931	mg/L	96.6	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.03	0.03			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	.5		.516	mg/L	103.2	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	.5	.13	.654	mg/L	104.8	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	.5	.13	.677	mg/L	109.4	85	115	3.46	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59979**

Project ID: OJ00XN

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	100		99.2	mg/L	99.2	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.9	0.9			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	99.78197		102.05	mg/L	102.3	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	99.78197	35.1	138.99	mg/L	104.1	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	99.78197	35.1	141.23	mg/L	106.4	85	115	1.6	20	
WG218392													
WG218392ICV	ICV	12/19/06 18:55	II061209-1	100		99.52	mg/L	99.5	95	105			
WG218392ICB	ICB	12/19/06 18:59				U	mg/L		-0.9	0.9			
WG218392LFB	LFB	12/19/06 19:15	II061219-2	99.90786		103.22	mg/L	103.3	85	115			
L59979-01AS	AS	12/19/06 19:23	II061219-2	99.90786	35.4	140.96	mg/L	105.7	85	115			
L59979-01ASD	ASD	12/19/06 19:27	II061219-2	99.90786	35.4	138.59	mg/L	103.3	85	115	1.7	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217368													
WG217368PBW	PBW	11/30/06 10:00				U	mg/L		-30	30			
WG217368LCSW	LCSW	11/30/06 10:02	WC060911-2	100		106	mg/L	106	80	120			
L59979-04DUP	DUP	11/30/06 10:31			10	18	mg/L				57.1	20	RA
L59982-03DUP	DUP	11/30/06 11:00			U	U	mg/L				0	20	RA
WG217816													
WG217816PBW	PBW	12/08/06 17:00				U	mg/L		-30	30			
WG217816LCSW	LCSW	12/08/06 17:03	WC061207-2	100		100	mg/L	100	80	120			
L59930-03DUP	DUP	12/08/06 17:17			U	U	mg/L				0	20	RA
WG218418													
WG218418PBW	PBW	12/20/06 17:00				U	mg/L		-30	30			
WG218418LCSW	LCSW	12/20/06 17:03	WC061207-2	100		98	mg/L	98	80	120			
L60325-07DUP	DUP	12/20/06 17:36			20	21	mg/L				4.9	20	RA

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217174													
WG217174ICV	ICV	11/28/06 9:51	MS061106-2	.056		.05864	mg/L	104.7	90	110			
WG217174ICB	ICB	11/28/06 9:57				U	mg/L		-0.0003	0.0003			
WG217174LFB	LFB	11/28/06 10:03	MS061023-3	.05		.04846	mg/L	96.9	85	115			
L59875-01AS	AS	11/28/06 10:15	MS061023-3	.05	U	.05128	mg/L	102.6	70	130			
L59875-01ASD	ASD	11/28/06 10:21	MS061023-3	.05	U	.05147	mg/L	102.9	70	130	0.37	20	
L59979-04AS	AS	11/28/06 11:43	MS061023-3	.05	U	.05067	mg/L	101.3	70	130			
L59979-04ASD	ASD	11/28/06 11:49	MS061023-3	.05	U	.05162	mg/L	103.2	70	130	1.86	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59979**

Project ID: OJ00XN

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217068													
WG217068LCSW3	LCSW	11/24/06 18:33	PCN25442	6		6	units	100	90	110			
WG217068LCSW6	LCSW	11/24/06 20:23	PCN25442	6		6.02	units	100.3	90	110			
L59979-06DUP	DUP	11/24/06 23:21			8	8	units				0	20	
WG217068LCSW9	LCSW	11/24/06 23:36	PCN25442	6		6.03	units	100.5	90	110			
WG217111													
WG217111LCSW3	LCSW	11/27/06 11:10	PCN25442	6		5.98	units	99.7	90	110			
WG217111LCSW6	LCSW	11/27/06 15:06	PCN25442	6		6.01	units	100.2	90	110			
L59989-04DUP	DUP	11/27/06 18:06			8.3	8.15	units				1.8	20	
WG217111LCSW9	LCSW	11/27/06 18:23	PCN25442	6		6.04	units	100.7	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	I1061113-6	20		20.03	mg/L	100.2	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.9	0.9			
WG217209LFB	LFB	11/29/06 1:52	I1061116-2	99.46819		103.04	mg/L	103.6	85	115			
L59979-01AS	AS	11/29/06 3:05	I1061116-2	99.46819	2.7	112.24	mg/L	110.1	85	115			
L59979-01ASD	ASD	11/29/06 3:17	I1061116-2	99.46819	2.7	114.2	mg/L	112.1	85	115	1.73	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216882													
WG216882PBW	PBW	11/20/06 11:30				U	mg/L		-20	20			
WG216882LCSW	LCSW	11/20/06 11:31	PCN25978	260		280	mg/L	107.7	80	120			
L60021-02DUP	DUP	11/20/06 11:53			210	200	mg/L				4.9	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217329													
WG217329ICV	ICV	11/30/06 14:14	MS061106-2	.05		.05211	mg/L	104.2	90	110			
WG217329ICB	ICB	11/30/06 14:20				U	mg/L		-0.0003	0.0003			
WG217329LFB	LFB	11/30/06 14:26	MS061023-3	.05		.05072	mg/L	101.4	85	115			
L59978-02AS	AS	11/30/06 14:38	MS061023-3	.05	.0001	.05718	mg/L	114.2	70	130			
L59978-02ASD	ASD	11/30/06 14:44	MS061023-3	.05	.0001	.0537	mg/L	107.2	70	130	6.28	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L59979

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	2		1.981	mg/L	99.1	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.03	0.03			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	.5		.494	mg/L	98.8	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	.5	U	.53	mg/L	106	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	.5	U	.535	mg/L	107	85	115	0.94	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	2		1.9	mg/L	95	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.03	0.03			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	.5		.486	mg/L	97.2	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	.5	U	.512	mg/L	102.4	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	.5	U	.521	mg/L	104.2	85	115	1.74	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217087													
WG217087ICV	ICV	11/25/06 17:26	WI060906-3	2.416		2.343	mg/L	97	90	110			
WG217087ICB	ICB	11/25/06 17:27				U	mg/L		-0.06	0.06			
WG217092													
WG217092ICV	ICV	11/25/06 20:59	WI060906-3	2.416		2.373	mg/L	98.2	90	110			
WG217092ICB	ICB	11/25/06 21:00				U	mg/L		-0.06	0.06			
WG217092LFB1	LFB	11/25/06 21:02	WI060906-4	2		2.032	mg/L	101.6	90	110			
WG217092LFB2	LFB	11/25/06 22:00	WI060906-4	2		1.972	mg/L	98.6	90	110			
L59951-04AS	AS	11/25/06 22:02	WI060906-4	2	U	2.078	mg/L	103.9	90	110			
L59951-05DUP	DUP	11/25/06 22:05			.08	.022	mg/L				113.7	20	RA
WG217410													
WG217410ICV	ICV	11/30/06 14:43	WI060906-3	2.416		2.385	mg/L	98.7	90	110			
WG217410ICB	ICB	11/30/06 14:45				U	mg/L		-0.06	0.06			
WG217410LFB1	LFB	11/30/06 15:08	WI060906-4	2		1.971	mg/L	98.6	90	110			
L59903-04AS	AS	11/30/06 15:10	WI060906-4	2	.07	2.481	mg/L	120.6	90	110			M1
L59979-04DUP	DUP	11/30/06 15:15			.85	.847	mg/L				0.4	20	
WG217410LFB2	LFB	11/30/06 15:26	WI060906-4	2		2.055	mg/L	102.8	90	110			

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L59979

Magnesium, dissolved		M200.7 ICP											
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	100		95.01	mg/L	95	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.6	0.6			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	54.94443		54.93	mg/L	100	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	54.94443	8.4	65.48	mg/L	103.9	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	54.94443	8.4	66.48	mg/L	105.7	85	115	1.52	20	
WG218392													
WG218392ICV	ICV	12/19/06 18:55	II061209-1	100		96.01	mg/L	96	95	105			
WG218392ICB	ICB	12/19/06 18:59				U	mg/L		-0.6	0.6			
WG218392LFB	LFB	12/19/06 19:15	II061219-2	54.98614		55.12	mg/L	100.2	85	115			
L59979-01AS	AS	12/19/06 19:23	II061219-2	54.98614	8.3	65.71	mg/L	104.4	85	115			
L59979-01ASD	ASD	12/19/06 19:27	II061219-2	54.98614	8.3	65.58	mg/L	104.2	85	115	0.2	20	
Manganese, dissolved		M200.7 ICP											
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	2		1.9214	mg/L	96.1	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.015	0.015			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	.5		.5216	mg/L	104.3	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	.5	U	.5313	mg/L	106.3	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	.5	U	.5385	mg/L	107.7	85	115	1.35	20	
Mercury, dissolved		M245.1 CVAA											
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216843													
WG216843ICV	ICV	11/20/06 16:24	II061110-4	.00498		.005	mg/L	100.4	95	105			
WG216843ICB	ICB	11/20/06 16:26				U	mg/L		-0.0002	0.0002			
WG216843LRB	LRB	11/20/06 16:40				U	mg/L		-0.00044	0.00044			
WG216843LFB	LFB	11/20/06 16:42	II061121-2	.002		.00216	mg/L	108	85	115			
L59977-01LFM	LFM	11/20/06 17:20	II061121-2	.002	U	.00189	mg/L	94.5	85	115			
L59977-01LFMD	LFMD	11/20/06 17:22	II061121-2	.002	U	.00191	mg/L	95.5	85	115	1.05	20	
WG216633													
WG216633ICV	ICV	11/20/06 18:29	II061110-4	.00498		.00501	mg/L	100.6	95	105			
WG216633ICB	ICB	11/20/06 18:31				U	mg/L		-0.0002	0.0002			
WG216844													
WG216844LRB	LRB	11/21/06 13:21				U	mg/L		-0.00044	0.00044			
WG216844LFB	LFB	11/21/06 13:24	II061109-3	.002		.00223	mg/L	111.5	85	115			
L59979-05LFM	LFM	11/21/06 13:30	II061109-3	.002	U	.00227	mg/L	113.5	85	115			
L59979-05LFMD	LFMD	11/21/06 13:32	II061109-3	.002	U	.00225	mg/L	112.5	85	115	0.88	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59979**

Project ID: OJ00XN

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217483													
WG217483ICV	ICV	12/01/06 18:33	WC061128-6	1.996		2.07	mg/L	103.7	95	105			
WG217483ICB	ICB	12/01/06 18:38				U	mg/L		-0.3	0.3			
WG217483LFB1	LFB	12/01/06 18:44	WC061021-1	4.99902		5.35	mg/L	107	90	110			
L59869-01AS	AS	12/01/06 20:09	WC061021-1	4.99902	4.8	10.57	mg/L	115.4	85	115			
L59869-01DUP	DUP	12/01/06 20:16			4.8	4.19	mg/L				13.6	20	
WG217483LFB2	LFB	12/01/06 21:16	WC061021-1	4.99902		5.49	mg/L	109.8	90	110			
L59979-05AS	AS	12/01/06 21:23	WC061021-1	4.99902	.2	5.54	mg/L	106.8	85	115			
L59979-05DUP	DUP	12/01/06 21:27			.2	.25	mg/L				22.2	20	RA
WG217628													
WG217628ICV	ICV	12/05/06 15:30	WC061128-6	1.996		2.06	mg/L	103.2	95	105			
WG217628ICB	ICB	12/05/06 15:34				U	mg/L		-0.3	0.3			
WG217628LFB	LFB	12/05/06 15:43	WC061021-1	4.99902		4.94	mg/L	98.8	90	110			
L59979-01AS	AS	12/05/06 17:46	WC061021-1	4.99902	.6	6.5	mg/L	118	85	115			M1
L59979-01DUP	DUP	12/05/06 17:51			.6	.61	mg/L				1.7	20	RA

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	2		1.951	mg/L	97.6	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.06	0.06			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	1		1.084	mg/L	108.4	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	1	U	1.069	mg/L	106.9	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	1	U	1.083	mg/L	108.3	85	115	1.3	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217174													
WG217174ICV	ICV	11/28/06 9:51	MS061106-2	.05		.05196	mg/L	103.9	90	110			
WG217174ICB	ICB	11/28/06 9:57				.00014	mg/L		-0.0003	0.0003			
WG217174LFB	LFB	11/28/06 10:03	MS061023-3	.05		.04616	mg/L	92.3	85	115			
L59875-01AS	AS	11/28/06 10:15	MS061023-3	.05	U	.0474	mg/L	94.8	70	130			
L59875-01ASD	ASD	11/28/06 10:21	MS061023-3	.05	U	.04751	mg/L	95	70	130	0.23	20	
L59979-04AS	AS	11/28/06 11:43	MS061023-3	.05	.0001	.04784	mg/L	95.5	70	130			
L59979-04ASD	ASD	11/28/06 11:49	MS061023-3	.05	.0001	.04857	mg/L	96.9	70	130	1.51	20	
WG217329													
WG217329ICV	ICV	11/30/06 14:14	MS061106-2	.05		.05188	mg/L	103.8	90	110			
WG217329ICB	ICB	11/30/06 14:20				U	mg/L		-0.0003	0.0003			
WG217329LFB	LFB	11/30/06 14:26	MS061023-3	.05		.05138	mg/L	102.8	85	115			
L59978-02AS	AS	11/30/06 14:38	MS061023-3	.05	U	.04736	mg/L	94.7	70	130			
L59978-02ASD	ASD	11/30/06 14:44	MS061023-3	.05	U	.04619	mg/L	92.4	70	130	2.5	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L59979**

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217068													
WG217068PBW1	PBW	11/24/06 18:17				U	µmhos/cm		-10	10			
WG217068LCSW1	LCSW	11/24/06 18:18	PCN25329	1408.8		1417	µmhos/cm	100.6	80	120			
WG217068PBW2	PBW	11/24/06 20:08				U	µmhos/cm		-10	10			
WG217068LCSW4	LCSW	11/24/06 20:09	PCN25329	1408.8		1414	µmhos/cm	100.4	80	120			
L59979-06DUP	DUP	11/24/06 23:21			1720	1722	µmhos/cm				0.1	20	
WG217068LCSW7	LCSW	11/24/06 23:22	PCN25329	1408.8		1430	µmhos/cm	101.5	80	120			
WG217111													
WG217111PBW1	PBW	11/27/06 10:54				U	µmhos/cm		-10	10			
WG217111LCSW1	LCSW	11/27/06 10:56	PCN25329	1408.8		1492	µmhos/cm	105.9	80	120			
WG217111PBW2	PBW	11/27/06 14:51				U	µmhos/cm		-10	10			
WG217111LCSW4	LCSW	11/27/06 14:53	PCN25329	1408.8		1499	µmhos/cm	106.4	80	120			
L59989-04DUP	DUP	11/27/06 18:06			1230	1241	µmhos/cm				0.9	20	
WG217111LCSW7	LCSW	11/27/06 18:08	PCN25329	1408.8		1511	µmhos/cm	107.3	80	120			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	2		1.922	mg/L	96.1	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.03	0.03			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	.5		.496	mg/L	99.2	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	.5	U	.518	mg/L	103.6	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	.5	U	.528	mg/L	105.6	85	115	1.91	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217053													
WG217053ICV	ICV	11/22/06 16:30	WI061122-3	.3		.283	mg/L	94.3	90	110			
WG217053ICB	ICB	11/22/06 16:31				U	mg/L		-0.03	0.03			
WG217057													
WG217057ICV	ICV	11/22/06 16:57	WI061122-3	.3		.3034	mg/L	101.1	90	110			
WG217057ICB	ICB	11/22/06 16:58				U	mg/L		-0.015	0.015			
WG216985LRB	LRB	11/22/06 16:59				U	mg/L		-0.015	0.015			
WG216985LFB	LFB	11/22/06 17:00	WI061107-7	.2		.2146	mg/L	107.3	90	110			
L59931-01DUP	DUP	11/22/06 17:01			.008	.0071	mg/L				11.9	20	RA
L59935-05LFM	LFM	11/22/06 17:03	WI061107-7	.2	.021	.2403	mg/L	109.7	90	110			
L59979-02DUP	DUP	11/22/06 17:13			.018	.0236	mg/L				26.9	20	RA
L59979-03LFM	LFM	11/22/06 17:15	WI061107-7	.2	U	.2304	mg/L	115.2	90	110			M1

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L59979

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217058													
WG217058ICV	ICV	11/22/06 18:21	WI061113-3	55		57.7	mg/L	104.9	90	110			
WG217058ICB	ICB	11/22/06 18:22				1.2	mg/L		-3	3			
WG217062													
WG217062ICV	ICV	11/22/06 19:43	WI061113-3	55		60.5	mg/L	110	90	110			
WG217062ICB	ICB	11/22/06 19:44				1.2	mg/L		-3	3			
WG217062LFB	LFB	11/22/06 19:45	WI061127-1	30		31.8	mg/L	106	90	110			
L59978-04DUP	DUP	11/22/06 20:02			59	58.8	mg/L				0.3	20	
L59978-03AS	AS	11/22/06 20:15	WI061127-1	60	80	146.4	mg/L	110.7	90	110			M1
WG217157													
WG217157ICV	ICV	11/27/06 16:36	WI061113-3	55		52.3	mg/L	95.1	90	110			
WG217157ICB	ICB	11/27/06 16:37				U	mg/L		-3	3			
WG217157LFB1	LFB	11/27/06 16:38	WI061127-1	30		31.6	mg/L	105.3	90	110			
WG217157LFB2	LFB	11/27/06 17:23	WI061127-1	30		31.3	mg/L	104.3	90	110			
L59932-01AS	AS	11/27/06 17:25	WI061127-1	30	U	31.5	mg/L	105	90	110			
L59932-02DUP	DUP	11/27/06 17:27			U	U	mg/L				0	20	RA

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	2		1.913	mg/L	95.7	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.03	0.03			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	.5		.489	mg/L	97.8	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	.5	U	.523	mg/L	104.6	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	.5	U	.527	mg/L	105.4	85	115	0.76	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217307													
WG217307ICV	ICV	11/30/06 3:35	II061128-2	2		1.928	mg/L	96.4	95	105			
WG217307ICB	ICB	11/30/06 3:39				U	mg/L		-0.03	0.03			
WG217307LFB	LFB	11/30/06 3:55	II061116-2	.5		.482	mg/L	96.4	85	115			
L59979-01AS	AS	11/30/06 5:03	II061116-2	.5	U	.536	mg/L	107.2	85	115			
L59979-01ASD	ASD	11/30/06 5:07	II061116-2	.5	U	.529	mg/L	105.8	85	115	1.31	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59979**

Project ID: OJ00XN

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	2		2.0774	mg/L	103.9	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.009	0.009			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	.5		.5122	mg/L	102.4	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	.5	.016	.563	mg/L	109.4	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	.5	.016	.5702	mg/L	110.8	85	115	1.27	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217174													
WG217174ICV	ICV	11/28/06 9:51	MS061106-2	.05		.04759	mg/L	95.2	90	110			
WG217174ICB	ICB	11/28/06 9:57				U	mg/L		-0.0003	0.0003			
WG217174LFB	LFB	11/28/06 10:03	MS061023-3	.05		.047	mg/L	94	85	115			
L59875-01AS	AS	11/28/06 10:15	MS061023-3	.05	U	.04848	mg/L	97	70	130			
L59875-01ASD	ASD	11/28/06 10:21	MS061023-3	.05	U	.04926	mg/L	98.5	70	130	1.6	20	
L59979-04AS	AS	11/28/06 11:43	MS061023-3	.05	U	.04922	mg/L	98.4	70	130			
L59979-04ASD	ASD	11/28/06 11:49	MS061023-3	.05	U	.05041	mg/L	100.8	70	130	2.39	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217174													
WG217174ICV	ICV	11/28/06 9:51	MS061106-2	.05		.05124	mg/L	102.5	90	110			
WG217174ICB	ICB	11/28/06 9:57				U	mg/L		-0.0003	0.0003			
WG217174LFB	LFB	11/28/06 10:03	MS061023-3	.05		.0479	mg/L	95.8	85	115			
L59875-01AS	AS	11/28/06 10:15	MS061023-3	.05	U	.04853	mg/L	97.1	70	130			
L59875-01ASD	ASD	11/28/06 10:21	MS061023-3	.05	U	.04896	mg/L	97.9	70	130	0.88	20	
L59979-04AS	AS	11/28/06 11:43	MS061023-3	.05	U	.04929	mg/L	98.6	70	130			
L59979-04ASD	ASD	11/28/06 11:49	MS061023-3	.05	U	.05001	mg/L	100	70	130	1.45	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	100		98.14	mg/L	98.1	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.6	0.6			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	67.93192		69.56	mg/L	102.4	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	67.93192	32.5	103.41	mg/L	104.4	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	67.93192	32.5	105.31	mg/L	107.2	85	115	1.82	20	
WG218392													
WG218392ICV	ICV	12/19/06 18:55	II061209-1	100		97.66	mg/L	97.7	95	105			
WG218392ICB	ICB	12/19/06 18:59				U	mg/L		-0.6	0.6			
WG218392LFB	LFB	12/19/06 19:15	II061219-2	67.95918		68.47	mg/L	100.8	85	115			
L59979-01AS	AS	12/19/06 19:23	II061219-2	67.95918	32.4	102.55	mg/L	103.2	85	115			
L59979-01ASD	ASD	12/19/06 19:27	II061219-2	67.95918	32.4	102.33	mg/L	102.9	85	115	0.21	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L59979

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217068													
WG217068LCSW2	LCSW	11/24/06 18:29	WC061113-1	820		735.4	mg/L	89.7	80	120			
WG217068LCSW5	LCSW	11/24/06 20:19	WC061113-1	820		743.2	mg/L	90.6	80	120			
L59979-06DUP	DUP	11/24/06 23:21			81	81.2	mg/L				0.2	20	
WG217068LCSW8	LCSW	11/24/06 23:33	WC061113-1	820		740.2	mg/L	90.3	80	120			
WG217111													
WG217111LCSW2	LCSW	11/27/06 11:07	WC061113-1	820		746.5	mg/L	91	80	120			
WG217111LCSW5	LCSW	11/27/06 15:03	WC061113-1	820		737.6	mg/L	90	80	120			
L59989-04DUP	DUP	11/27/06 18:06			420	414.2	mg/L				1.4	20	
WG217111LCSW8	LCSW	11/27/06 18:19	WC061113-1	820		744.1	mg/L	90.7	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217209													
WG217209ICV	ICV	11/29/06 1:32	II061113-6	2		1.937	mg/L	96.9	95	105			
WG217209ICB	ICB	11/29/06 1:36				U	mg/L		-0.09	0.09			
WG217209LFB	LFB	11/29/06 1:52	II061116-2	1		1.125	mg/L	112.5	85	115			
L59979-01AS	AS	11/29/06 3:05	II061116-2	1	U	1.106	mg/L	110.6	85	115			
L59979-01ASD	ASD	11/29/06 3:17	II061116-2	1	U	1.121	mg/L	112.1	85	115	1.35	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217174													
WG217174ICV	ICV	11/28/06 9:51	MS061106-2	.02008		.02038	mg/L	101.5	90	110			
WG217174ICB	ICB	11/28/06 9:57				U	mg/L		-0.0012	0.0012			
WG217174LFB	LFB	11/28/06 10:03	MS061023-3	.00625		.00626	mg/L	100.2	85	115			
L59875-01AS	AS	11/28/06 10:15	MS061023-3	.00625	U	.00614	mg/L	98.2	70	130			
L59875-01ASD	ASD	11/28/06 10:21	MS061023-3	.00625	U	.00637	mg/L	101.9	70	130	3.68	20	
L59979-04AS	AS	11/28/06 11:43	MS061023-3	.00625	U	.00627	mg/L	100.3	70	130			
L59979-04ASD	ASD	11/28/06 11:49	MS061023-3	.00625	U	.00645	mg/L	103.2	70	130	2.83	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217174													
WG217174ICV	ICV	11/28/06 9:51	MS061106-2	.05		.05437	mg/L	108.7	90	110			
WG217174ICB	ICB	11/28/06 9:57				U	mg/L		-0.0015	0.0015			
WG217174LFB	LFB	11/28/06 10:03	MS061023-3	.05		.05056	mg/L	101.1	85	115			
L59875-01AS	AS	11/28/06 10:15	MS061023-3	.05	.0357	.08882	mg/L	106.2	70	130			
L59875-01ASD	ASD	11/28/06 10:21	MS061023-3	.05	.0357	.08958	mg/L	107.8	70	130	0.85	20	
L59979-04AS	AS	11/28/06 11:43	MS061023-3	.05	.0055	.05596	mg/L	100.9	70	130			
L59979-04ASD	ASD	11/28/06 11:49	MS061023-3	.05	.0055	.05708	mg/L	103.2	70	130	1.98	20	

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: MH-26C

ACZ Sample ID: **L59979-06**
Date Sampled: 11/13/06 10:37
Date Received: 11/16/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1223			mS/cm			11/13/06 10:37	bd
pH (Field)	Field Measurement	7.9			units			11/13/06 10:37	bd
Temperature (Field)	Field Measurement	28.8			C			11/13/06 10:37	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	222			mg/L	0.2	1	11/29/06 3:37	msh
Magnesium, dissolved	M200.7 ICP	47.8			mg/L	0.2	1	11/29/06 3:37	msh
Potassium, dissolved	M200.7 ICP	11.2			mg/L	0.3	1	11/29/06 3:37	msh
Sodium, dissolved	M200.7 ICP	96.9			mg/L	0.3	1	11/29/06 3:37	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		81			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		81			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.8			%			02/02/07 0:00	calc
Sum of Anions		19.3			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		19.6			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	84		*	mg/L	1	5	11/22/06 20:11	nps
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	12/01/06 21:40	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.00		*	mg/L	0.02	0.1	11/25/06 22:15	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	1300			mg/L	10	20	11/20/06 11:43	lcp
Sulfate	SM4500 SO4-D	730		*	mg/L	10	50	11/30/06 10:36	lcp
TDS (calculated)	Calculation	1240			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.05						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: MH-26B

ACZ Sample ID: **L59979-05**
 Date Sampled: 11/13/06 11:39
 Date Received: 11/16/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1516			mS/cm			11/13/06 11:39	bd
pH (Field)	Field Measurement	7.6			units			11/13/06 11:39	bd
Temperature (Field)	Field Measurement	27.9			C			11/13/06 11:39	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	494			mg/L	0.4	2	11/29/06 3:33	msh
Magnesium, dissolved	M200.7 ICP	108			mg/L	0.4	2	11/29/06 3:33	msh
Potassium, dissolved	M200.7 ICP	11.5			mg/L	0.6	2	11/29/06 3:33	msh
Sodium, dissolved	M200.7 ICP	94.9			mg/L	0.6	2	11/29/06 3:33	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		91			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		91			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-0.3			%			02/02/07 0:00	calc
Sum of Anions		38.2			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		38.0			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	129		*	mg/L	2	10	11/27/06 17:35	nps
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	12/01/06 21:19	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.01		*	mg/L	0.02	0.1	11/25/06 22:13	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2620			mg/L	10	20	11/20/06 11:41	lcp
Sulfate	SM4500 SO4-D	1560		*	mg/L	10	50	11/30/06 10:34	lcp
TDS (calculated)	Calculation	2450			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.07						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: MH-26A

ACZ Sample ID: **L59979-04**
Date Sampled: 11/13/06 10:52
Date Received: 11/16/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	405			mS/cm			11/13/06 10:52	bd
pH (Field)	Field Measurement	8.1			units			11/13/06 10:52	bd
Temperature (Field)	Field Measurement	26.6			C			11/13/06 10:52	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	31.6			mg/L	0.2	1	11/29/06 3:29	msh
Magnesium, dissolved	M200.7 ICP	7.9			mg/L	0.2	1	11/29/06 3:29	msh
Potassium, dissolved	M200.7 ICP	3.5			mg/L	0.3	1	11/29/06 3:29	msh
Sodium, dissolved	M200.7 ICP	33.2			mg/L	0.3	1	11/29/06 3:29	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		144			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		144			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		5.7			%			02/02/07 0:00	calc
Sum of Anions		3.3			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		3.7			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	9		*	mg/L	1	5	11/22/06 20:09	nps
Fluoride	SM4500F-C	0.5		*	mg/L	0.1	0.5	12/01/06 21:13	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.85		*	mg/L	0.02	0.1	11/30/06 15:12	jif
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	230			mg/L	10	20	11/20/06 11:39	lcp
Sulfate	SM4500 SO4-D	10	B	*	mg/L	10	50	11/30/06 10:28	lcp
TDS (calculated)	Calculation	182			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.26						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: MH-25C

ACZ Sample ID: **L59979-03**
 Date Sampled: 11/13/06 13:12
 Date Received: 11/16/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1471			mS/cm			11/13/06 13:12	bd
pH (Field)	Field Measurement	7.6			units			11/13/06 13:12	bd
Temperature (Field)	Field Measurement	29.2			C			11/13/06 13:12	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	404			mg/L	0.4	2	11/29/06 3:25	msh
Magnesium, dissolved	M200.7 ICP	90.3			mg/L	0.4	2	11/29/06 3:25	msh
Potassium, dissolved	M200.7 ICP	12.2			mg/L	0.6	2	11/29/06 3:25	msh
Sodium, dissolved	M200.7 ICP	94.1			mg/L	0.6	2	11/29/06 3:25	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		89			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		89			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-0.5			%			02/02/07 0:00	calc
Sum of Anions		32.4			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		32.1			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	124		*	mg/L	2	10	11/22/06 20:17	nps
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	12/01/06 21:08	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.74		*	mg/L	0.02	0.1	11/25/06 22:12	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2220			mg/L	10	20	11/20/06 11:37	lcp
Sulfate	SM4500 SO4-D	1290		*	mg/L	10	50	11/30/06 10:26	lcp
TDS (calculated)	Calculation	2070			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.07						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: MH-25B

ACZ Sample ID: **L59979-02**
 Date Sampled: 11/13/06 13:45
 Date Received: 11/16/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1658			mS/cm			11/13/06 13:45	bd
pH (Field)	Field Measurement	7.6			units			11/13/06 13:45	bd
Temperature (Field)	Field Measurement	28.1			C			11/13/06 13:45	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	518			mg/L	0.4	2	11/29/06 3:21	msh
Magnesium, dissolved	M200.7 ICP	112			mg/L	0.4	2	11/29/06 3:21	msh
Potassium, dissolved	M200.7 ICP	11.5			mg/L	0.6	2	11/29/06 3:21	msh
Sodium, dissolved	M200.7 ICP	98.8			mg/L	0.6	2	11/29/06 3:21	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		86			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		86			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-0.7			%			02/02/07 0:00	calc
Sum of Anions		40.3			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		39.7			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	132		*	mg/L	2	10	11/22/06 20:16	nps
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	12/01/06 21:06	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.95		*	mg/L	0.02	0.1	11/25/06 22:11	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2770			mg/L	10	20	11/20/06 11:35	lcp
Sulfate	SM4500 SO4-D	1660		*	mg/L	10	50	11/30/06 10:23	lcp
TDS (calculated)	Calculation	2580			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.07						02/02/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: MH-25A

ACZ Sample ID: **L59979-01**
Date Sampled: 11/13/06 14:07
Date Received: 11/16/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	416			mS/cm			11/13/06 14:07	bd
pH (Field)	Field Measurement	8.1			units			11/13/06 14:07	bd
Temperature (Field)	Field Measurement	26.5			C			11/13/06 14:07	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	32.4			mg/L	0.2	1	12/19/06 19:19	gme
Magnesium, dissolved	M200.7 ICP	8.3			mg/L	0.2	1	12/19/06 19:19	gme
Potassium, dissolved	M200.7 ICP	2.7			mg/L	0.3	1	11/29/06 3:01	msh
Sodium, dissolved	M200.7 ICP	35.4			mg/L	0.3	1	12/19/06 19:19	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		143			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		143			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-27.8			%			02/02/07 0:00	calc
Sum of Anions		6.9			meq/L	0.1	0.5	02/02/07 0:00	calc
Sum of Cations		3.9			meq/L	0.1	0.5	02/02/07 0:00	calc
Chloride	M325.2 - Colorimetric	25		*	mg/L	1	5	11/22/06 20:04	nps
Fluoride	SM4500F-C	0.6		*	mg/L	0.1	0.5	12/05/06 17:41	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.05		*	mg/L	0.02	0.1	11/25/06 22:10	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	560			mg/L	10	20	11/20/06 11:33	lcp
Sulfate	SM4500 SO4-D	160	H	*	mg/L	10	50	12/20/06 17:06	seb
TDS (calculated)	Calculation	350			mg/L	10	50	02/02/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.60						02/02/07 0:00	calc

Note: Suspected analytes were retested to verify the Cation-Anion Balance.

Arizona license number: AZ0102

Phelps Dodge Sierrita

February 02, 2007

Project ID: OJ00XN

ACZ Project ID: L59979

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 9 ground water samples from Phelps Dodge Sierrita on November 16, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59979. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes. This section has been included as an attachment to the original PDF document.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

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

1. Some of the Fluoride results were qualified with the N1 flag on the extended qualifier report. The chemist noted a high biased ccv due to carryover from sxs. Samples were run multiple times to reduce the potential effect.

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

February 12, 2007

Project ID: OJ00XN
ACZ Project ID: L59979

Bill Dorris:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 16, 2006 and reported on December 29, 2006. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L59979. Please reference this number in all future inquiries.

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

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59979. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Feb/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



L59935

COC Number: _____

Page 7 of 7



ANALYTICAL REQUEST SHEET
Chain of Custody PO# - OJ00XN

Lab Use Only	Location	Date	Time	# of Cont.	Preservatives					Field Data			Analysis Requested
					HNO ₃	H ₂ SO ₄	NaOH	HCL	Unpres.	pH	Cond	Temp	
					1	1	1	2	5				
	MH-13A	11/10/2006	12:13	8	1	1	1	2	5	7.53	1848	27.3	Ambient Suite
	MH-13B	11/10/2006	13:13	8	1	1	1	2	5	7.87	1643	29.2	Ambient Suite
	MH-13C	11/10/2006	11:36	8	1	1	1	2	5	8.91	562	30.7	Ambient Suite
	MH-11	11/10/2006	15:42	8	1	1	1	2	5	7.04	1359	27.9	Ambient Suite
	MH-30	11/10/2006	15:07	8	1	1	1	2	5	7.22	1535	28.3	Ambient Suite

Sample Submitted By: Billy Dorris
 Telephone No. 520-648-8873
 Fax No. _____

Report Results To: Billy Dorris
 Telephone No. 520-648-8873
 Fax No. 520-648-8608

Samples Submitted on Ice: Yes / No
 Surrendered By: *Billy Z Dorris* MDS
 Received By: _____
 Date: 11/10/2006 Time: 12:00

Surrendered By: _____
 Received By: _____
 Date: _____ Time: _____

Laboratory Name and Address:
 ACZ Laboratory
 30400 Downhill Drive
 Steamboat Springs, CO 80487
 Phone: 8003345493

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L59935
Date Received: 11/14/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L59935-01	MH-13A		Y		Y							<input type="checkbox"/>
L59935-02	MH-13B		Y		Y							<input type="checkbox"/>
L59935-03	MH-13C		Y		Y							<input type="checkbox"/>
L59935-04	MH-11		Y		Y							<input type="checkbox"/>
L59935-05	MH-30		Y		Y							<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

Sample Receipt

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L59935
Date Received: 11/14/2006
Received By:
Date Printed: 11/14/2006

Receipt Verification

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

	YES	NO	NA
			X
X			
			X
X			
X			
X			
X			
X			
			X
		X	
		X	
			X

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

All vials for sample #1, 2, and 5 contain headspace.

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
615	1.6	13

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

Notes

Phelps Dodge Sierrita

ACZ Project ID: **L59935**

No certification qualifiers associated with this analysis

Phelps Dodge Sierrita

ACZ Project ID: **L59935**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59935-01	WG217056	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217009	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217252	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG216814	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.	
L59935-02	WG217009	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217252	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
L59935-03	WG217123	Iron, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217009	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
L59935-04	WG217123	Iron, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217009	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
L59935-05	WG217123	Iron, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG217057	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.

Phelps Dodge Sierrita

ACZ Project ID: **L59935**

Project ID: OJ00XN

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217279													
WG217279PBW	PBW	11/29/06 7:45				U	mg/L		-30	30			
WG217279LCSW	LCSW	11/29/06 7:48	WC060911-2	100		102	mg/L	102	80	120			
L59935-05DUP	DUP	11/29/06 9:00			1690	1734	mg/L				2.6	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.056		.05394	mg/L	96.3	90	110			
WG216836ICB	ICB	11/20/06 13:33				U	mg/L		-0.0003	0.0003			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.04756	mg/L	95.1	85	115			
L59869-04AS	AS	11/20/06 13:51	MS061023-3	.05	U	.0441	mg/L	88.2	70	130			
L59869-04ASD	ASD	11/20/06 13:58	MS061023-3	.05	U	.04429	mg/L	88.6	70	130	0.43	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.94	mg/L	97	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.531	mg/L	106.2	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	.5	.05	.622	mg/L	114.4	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	.5	.05	.577	mg/L	105.4	85	115	7.51	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	1.17	2.11	mg/L	94	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	1.17	2.125	mg/L	95.5	85	115	0.71	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59935**

Project ID: OJ00XN

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217066													
WG217066LCSW3	LCSW	11/24/06 10:06	PCN25442	6		6.09	units	101.5	90	110			
WG217066LCSW6	LCSW	11/24/06 13:07	PCN25442	6		6.06	units	101	90	110			
L59951-05DUP	DUP	11/24/06 17:49			8.4	8.42	units				0.2	20	
WG217066LCSW9	LCSW	11/24/06 18:05	PCN25442	6		6.04	units	100.7	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	20		20.62	mg/L	103.1	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.9	0.9			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	99.46819		105.39	mg/L	106	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	99.46819	4.1	122.8	mg/L	119.3	85	115			M1
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	99.46819	4.1	119.73	mg/L	116.2	85	115	2.53	20	M1
L59935-02AS	AS	11/25/06 18:02	II061116-2	198.93638	11.3	227.42	mg/L	108.6	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	198.93638	11.3	228.51	mg/L	109.2	85	115	0.48	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216782													
WG216782PBW	PBW	11/17/06 14:30				U	mg/L		-20	20			
WG216782LCSW	LCSW	11/17/06 14:31	PCN25978	260		290	mg/L	111.5	80	120			
L59936-05DUP	DUP	11/17/06 14:50			350	350	mg/L				0	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216970													
WG216970ICV	ICV	11/21/06 21:23	MS061106-2	.05		.05287	mg/L	105.7	90	110			
WG216970ICB	ICB	11/21/06 21:29				.00012	mg/L		-0.0003	0.0003			
WG216970LFB	LFB	11/21/06 21:35	MS061023-3	.05		.05028	mg/L	100.6	85	115			
L59948-02AS	AS	11/21/06 22:23	MS061023-3	.05	.0002	.05089	mg/L	101.4	70	130			
L59948-02ASD	ASD	11/21/06 22:29	MS061023-3	.05	.0002	.04967	mg/L	98.9	70	130	2.43	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	100		101.68	mg/L	101.7	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.9	0.9			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	99.78197		104.72	mg/L	104.9	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	99.78197	139	245.44	mg/L	106.7	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	99.78197	139	239.5	mg/L	100.7	85	115	2.45	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	199.56394	127	329.61	mg/L	101.5	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	199.56394	127	331.33	mg/L	102.4	85	115	0.52	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59935**

Project ID: OJ00XN

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		2.01	mg/L	100.5	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.506	mg/L	101.2	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	.5	.03	.551	mg/L	104.2	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	.5	.03	.546	mg/L	103.2	85	115	0.91	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	U	1.022	mg/L	102.2	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	U	1.016	mg/L	101.6	85	115	0.59	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.922	mg/L	96.1	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.501	mg/L	100.2	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	.5	U	.516	mg/L	103.2	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	.5	U	.509	mg/L	101.8	85	115	1.37	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	U	1.025	mg/L	102.5	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	U	1.095	mg/L	109.5	85	115	6.6	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216809													
WG216809ICV	ICV	11/17/06 18:01	WI060906-3	2.416		2.286	mg/L	94.6	90	110			
WG216809ICB	ICB	11/17/06 18:02				U	mg/L		-0.06	0.06			
WG216814													
WG216814ICV	ICV	11/17/06 20:43	WI060906-3	2.416		2.378	mg/L	98.4	90	110			
WG216814ICB	ICB	11/17/06 20:45				U	mg/L		-0.06	0.06			
WG216814LFB1	LFB	11/17/06 20:46	WI060906-4	2		2.059	mg/L	103	90	110			
WG216814LFB2	LFB	11/17/06 21:24	WI060906-4	2		2.021	mg/L	101.1	90	110			
L59929-04AS	AS	11/17/06 21:54	WI060906-4	30	19.6	53.11	mg/L	111.7	90	110			M1
L59929-05DUP	DUP	11/17/06 21:57			24.6	24.94	mg/L				1.4	20	
WG217087													
WG217087ICV	ICV	11/25/06 17:26	WI060906-3	2.416		2.343	mg/L	97	90	110			
WG217087ICB	ICB	11/25/06 17:27				U	mg/L		-0.06	0.06			
WG217091													
WG217091ICV	ICV	11/25/06 18:52	WI060906-3	2.416		2.42	mg/L	100.2	90	110			
WG217091ICB	ICB	11/25/06 18:53				U	mg/L		-0.06	0.06			
WG217091LFB1	LFB	11/25/06 18:54	WI060906-4	2		2.116	mg/L	105.8	90	110			
L59908-04AS	AS	11/25/06 18:57	WI060906-4	10	3.9	15.09	mg/L	111.9	90	110			M1
WG217091LFB2	LFB	11/25/06 19:32	WI060906-4	2		2.062	mg/L	103.1	90	110			
L59909-04DUP	DUP	11/25/06 20:40			9.1	8.26	mg/L				9.7	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L59935

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216725													
WG216725ICV	ICV	11/18/06 0:43	MS061106-2	.05		.05191	mg/L	103.8	90	110			
WG216725ICB	ICB	11/18/06 0:49				U	mg/L		-0.0003	0.0003			
WG216725LFB	LFB	11/18/06 0:56	MS061023-3	.05		.05355	mg/L	107.1	85	115			
L59927-01AS	AS	11/18/06 1:05	MS061023-3	.05	.943	.9895	mg/L	93	70	130			
L59927-01ASD	ASD	11/18/06 1:11	MS061023-3	.05	.943	1.001	mg/L	116	70	130	1.16	20	
L59935-04AS	AS	11/18/06 2:25	MS061023-3	.05	.0012	.04605	mg/L	89.7	70	130			
L59935-04ASD	ASD	11/18/06 2:31	MS061023-3	.05	.0012	.04841	mg/L	94.4	70	130	5	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	100		96.97	mg/L	97	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.6	0.6			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	54.94443		56.25	mg/L	102.4	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	54.94443	54.2	113.1	mg/L	107.2	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	54.94443	54.2	110.56	mg/L	102.6	85	115	2.27	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	109.88886	55.1	164.44	mg/L	99.5	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	109.88886	55.1	164.92	mg/L	99.9	85	115	0.29	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.9413	mg/L	97.1	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.015	0.015			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.5516	mg/L	110.3	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	.5	U	.548	mg/L	109.6	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	.5	U	.534	mg/L	106.8	85	115	2.59	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	.05	1.079	mg/L	102.9	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	.05	1.104	mg/L	105.4	85	115	2.29	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216843													
WG216843ICV	ICV	11/20/06 16:24	II061110-4	.00498		.005	mg/L	100.4	95	105			
WG216843ICB	ICB	11/20/06 16:26				U	mg/L		-0.0002	0.0002			
WG216843LRB	LRB	11/20/06 16:40				U	mg/L		-0.00044	0.00044			
WG216843LFB	LFB	11/20/06 16:42	II061121-2	.002		.00216	mg/L	108	85	115			
L59924-10LFM	LFM	11/20/06 16:49	II061121-2	.002	U	.00208	mg/L	104	85	115			
L59924-10LFMD	LFMD	11/20/06 16:52	II061121-2	.002	U	.00206	mg/L	103	85	115	0.97	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L59935**

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217009													
WG217009ICV	ICV	11/21/06 19:49	WI061107-3	.3		.296	mg/L	98.7	90	110			
WG217009ICB	ICB	11/21/06 19:50				U	mg/L		-0.015	0.015			
WG216946LRB	LRB	11/21/06 19:51				U	mg/L		-0.015	0.015			
WG216946LFB	LFB	11/21/06 19:52	WI061107-7	.2		.2007	mg/L	100.4	90	110			
L59909-01DUP	DUP	11/21/06 20:07			U	U	mg/L				0	20	RA
L59909-02LFM	LFM	11/21/06 20:08	WI061107-7	.2	.006	.2365	mg/L	115.3	90	110			M1
WG217053													
WG217053ICV	ICV	11/22/06 16:30	WI061122-3	.3		.283	mg/L	94.3	90	110			
WG217053ICB	ICB	11/22/06 16:31				U	mg/L		-0.03	0.03			
WG217057													
WG217057ICV	ICV	11/22/06 16:57	WI061122-3	.3		.3034	mg/L	101.1	90	110			
WG217057ICB	ICB	11/22/06 16:58				U	mg/L		-0.015	0.015			
WG216985LRB	LRB	11/22/06 16:59				U	mg/L		-0.015	0.015			
WG216985LFB	LFB	11/22/06 17:00	WI061107-7	.2		.2146	mg/L	107.3	90	110			
L59931-01DUP	DUP	11/22/06 17:01			.008	.0071	mg/L				11.9	20	RA
L59935-05LFM	LFM	11/22/06 17:03	WI061107-7	.2	.021	.2403	mg/L	109.7	90	110			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217252													
WG217252ICV	ICV	11/28/06 17:33	WC061117-1	1.996		2	mg/L	100.2	95	105			
WG217252ICB	ICB	11/28/06 17:38				U	mg/L		-0.3	0.3			
WG217252LFB1	LFB	11/28/06 17:44	WC061021-1	4.99902		5.26	mg/L	105.2	90	110			
WG217252LFB2	LFB	11/28/06 20:04	WC061021-1	4.99902		5.28	mg/L	105.6	90	110			
L59910-08AS	AS	11/28/06 20:14	WC061021-1	4.99902	.4	5.5	mg/L	102	85	115			
L59910-08DUP	DUP	11/28/06 20:16			.4	.36	mg/L				10.5	20	RA
L59935-03AS	AS	11/28/06 21:32	WC061021-1	4.99902	1.5	6.76	mg/L	105.2	85	115			
L59935-03DUP	DUP	11/28/06 21:34			1.5	1.57	mg/L				4.6	20	

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217123													
WG217123ICV	ICV	11/27/06 21:57	II061113-6	2		1.943	mg/L	97.2	95	105			
WG217123ICB	ICB	11/27/06 22:00				.021	mg/L		-0.06	0.06			
WG217123LFB	LFB	11/27/06 22:13	II061116-2	1		1.093	mg/L	109.3	85	115			
L59909-01AS	AS	11/27/06 22:23	II061116-2	1	.38	1.382	mg/L	100.2	85	115			
L59909-01ASD	ASD	11/27/06 22:26	II061116-2	1	.38	1.408	mg/L	102.8	85	115	1.86	20	
L59935-03AS	AS	11/27/06 23:09	II061116-2	1	.11	1.245	mg/L	113.5	85	115			
L59935-03ASD	ASD	11/27/06 23:13	II061116-2	1	.11	1.267	mg/L	115.7	85	115	1.75	20	MA

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L59935

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.937	mg/L	96.9	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.509	mg/L	101.8	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	.5	U	.534	mg/L	106.8	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	.5	U	.515	mg/L	103	85	115	3.62	20	
WG217123													
WG217123ICV	ICV	11/27/06 21:57	II061113-6	2		1.974	mg/L	98.7	95	105			
WG217123ICB	ICB	11/27/06 22:00				U	mg/L		-0.03	0.03			
WG217123LFB	LFB	11/27/06 22:13	II061116-2	.5		.53	mg/L	106	85	115			
L59909-01AS	AS	11/27/06 22:23	II061116-2	.5	U	.517	mg/L	103.4	85	115			
L59909-01ASD	ASD	11/27/06 22:26	II061116-2	.5	U	.523	mg/L	104.6	85	115	1.15	20	
L59935-03AS	AS	11/27/06 23:09	II061116-2	.5	U	.561	mg/L	112.2	85	115			
L59935-03ASD	ASD	11/27/06 23:13	II061116-2	.5	U	.573	mg/L	114.6	85	115	2.12	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.896	mg/L	94.8	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.5	mg/L	100	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	.5	U	.522	mg/L	104.4	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	.5	U	.511	mg/L	102.2	85	115	2.13	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	U	.988	mg/L	98.8	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	U	.99	mg/L	99	85	115	0.2	20	

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217066													
WG217066PBW1	PBW	11/24/06 9:51				U	µmhos/cm		-10	10			
WG217066LCSW1	LCSW	11/24/06 9:52	PCN25329	1408.8		1440	µmhos/cm	102.2	80	120			
WG217066PBW2	PBW	11/24/06 12:52				U	µmhos/cm		-10	10			
WG217066LCSW4	LCSW	11/24/06 12:54	PCN25329	1408.8		1424	µmhos/cm	101.1	80	120			
L59951-05DUP	DUP	11/24/06 17:49			1720	1707	µmhos/cm				0.8	20	
WG217066LCSW7	LCSW	11/24/06 17:51	PCN25329	1408.8		1415	µmhos/cm	100.4	80	120			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.932	mg/L	96.6	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.51	mg/L	102	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	.5	U	.542	mg/L	108.4	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	.5	U	.527	mg/L	105.4	85	115	2.81	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	U	1.015	mg/L	101.5	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	U	1.02	mg/L	102	85	115	0.49	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59935**

Project ID: OJ00XN

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.05		.0451	mg/L	90.2	90	110			
WG216836ICB	ICB	11/20/06 13:33				U	mg/L		-0.0003	0.0003			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.0433	mg/L	86.6	85	115			
L59869-04AS	AS	11/20/06 13:51	MS061023-3	.05	U	.0401	mg/L	80.2	70	130			
L59869-04ASD	ASD	11/20/06 13:58	MS061023-3	.05	U	.04065	mg/L	81.3	70	130	1.36	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216725													
WG216725ICV	ICV	11/18/06 0:43	MS061106-2	.05		.05083	mg/L	101.7	90	110			
WG216725ICB	ICB	11/18/06 0:49				U	mg/L		-0.0003	0.0003			
WG216725LFB	LFB	11/18/06 0:55	MS061023-3	.05		.05411	mg/L	108.2	85	115			
L59927-01AS	AS	11/18/06 1:06	MS061023-3	.05	.621	.6629	mg/L	83.8	70	130			
L59927-01ASD	ASD	11/18/06 1:11	MS061023-3	.05	.621	.6693	mg/L	96.6	70	130	0.96	20	
L59935-04AS	AS	11/18/06 2:25	MS061023-3	.05	.0002	.0473	mg/L	94.2	70	130			
L59935-04ASD	ASD	11/18/06 2:31	MS061023-3	.05	.0002	.0478	mg/L	95.2	70	130	1.05	20	

WG216836

WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.05		.04838	mg/L	96.8	90	110			
WG216836ICB	ICB	11/20/06 13:33				U	mg/L		-0.0003	0.0003			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.04721	mg/L	94.4	85	115			
L59869-04AS	AS	11/20/06 13:51	MS061023-3	.05	U	.04534	mg/L	90.7	70	130			
L59869-04ASD	ASD	11/20/06 13:58	MS061023-3	.05	U	.04499	mg/L	90	70	130	0.77	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	100		99.96	mg/L	100	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.6	0.6			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	67.93192		70.76	mg/L	104.2	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	67.93192	274	340.13	mg/L	97.3	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	67.93192	274	332.93	mg/L	86.7	85	115	2.14	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	135.86384	388	503.73	mg/L	85.2	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	135.86384	388	506.43	mg/L	87.2	85	115	0.53	20	

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217058													
WG217058ICV	ICV	11/22/06 18:21	WI061113-3	55		57.7	mg/L	104.9	90	110			
WG217058ICB	ICB	11/22/06 18:22				1.2	mg/L		-3	3			
WG217058LFB1	LFB	11/22/06 18:23	WI061127-1	30		30.2	mg/L	100.7	90	110			
WG217058LFB2	LFB	11/22/06 18:51	WI061127-1	30		31.2	mg/L	104	90	110			
L59928-02AS	AS	11/22/06 19:22	WI061127-1	60	81	146	mg/L	108.3	90	110			
L59935-01DUP	DUP	11/22/06 19:24			179	177.6	mg/L				0.8	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L59935

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217066													
WG217066LCSW2	LCSW	11/24/06 10:02	WC061113-1	820		735	mg/L	89.6	80	120			
WG217066LCSW5	LCSW	11/24/06 13:04	WC061113-1	820		737.3	mg/L	89.9	80	120			
L59951-05DUP	DUP	11/24/06 17:49			601	586.8	mg/L				2.4	20	
WG217066LCSW8	LCSW	11/24/06 18:02	WC061113-1	820		746.1	mg/L	91	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217123													
WG217123ICV	ICV	11/27/06 21:57	II061113-6	2		1.941	mg/L	97.1	95	105			
WG217123ICB	ICB	11/27/06 22:00				U	mg/L		-0.09	0.09			
WG217123LFB	LFB	11/27/06 22:13	II061116-2	1		1.022	mg/L	102.2	85	115			
L59909-01AS	AS	11/27/06 22:23	II061116-2	1	U	1.02	mg/L	102	85	115			
L59909-01ASD	ASD	11/27/06 22:26	II061116-2	1	U	.989	mg/L	98.9	85	115	3.09	20	
L59935-03AS	AS	11/27/06 23:09	II061116-2	1	.18	1.292	mg/L	111.2	85	115			
L59935-03ASD	ASD	11/27/06 23:13	II061116-2	1	.18	1.306	mg/L	112.6	85	115	1.08	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.02008		.01928	mg/L	96	90	110			
WG216836ICB	ICB	11/20/06 13:33				.00044	mg/L		-0.0012	0.0012			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.00625		.00606	mg/L	97	85	115			
L59869-04AS	AS	11/20/06 13:51	MS061023-3	.00625	U	.00568	mg/L	90.9	70	130			
L59869-04ASD	ASD	11/20/06 13:58	MS061023-3	.00625	U	.00572	mg/L	91.5	70	130	0.7	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216836													
WG216836ICV	ICV	11/20/06 13:27	MS061106-2	.05		.05063	mg/L	101.3	90	110			
WG216836ICB	ICB	11/20/06 13:33				U	mg/L		-0.0015	0.0015			
WG216836LFB	LFB	11/20/06 13:39	MS061023-3	.05		.04855	mg/L	97.1	85	115			
L59869-04AS	AS	11/20/06 13:51	MS061023-3	.05	U	.05048	mg/L	101	70	130			
L59869-04ASD	ASD	11/20/06 13:58	MS061023-3	.05	U	.05109	mg/L	102.2	70	130	1.2	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		2.0851	mg/L	104.3	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.009	0.009			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.5222	mg/L	104.4	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	.5	.014	.5732	mg/L	111.8	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	.5	.014	.5591	mg/L	109	85	115	2.49	20	
L59935-02AS	AS	11/25/06 18:02	II061116-2	1	.086	1.1293	mg/L	104.3	85	115			
L59935-02ASD	ASD	11/25/06 18:06	II061116-2	1	.086	1.1315	mg/L	104.6	85	115	0.19	20	



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL.
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: MH-30

ACZ Sample ID: **L59935-05**
Date Sampled: 11/10/06 15:07
Date Received: 11/14/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1535			mS/cm			11/10/06 15:07	bd
pH (Field)	Field Measurement	7.2			units			11/10/06 15:07	bd
Temperature (Field)	Field Measurement	28.3			C			11/10/06 15:07	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	332			mg/L	0.4	2	11/25/06 18:26	gme
Magnesium, dissolved	M200.7 ICP	83.2			mg/L	0.4	2	11/25/06 18:26	gme
Potassium, dissolved	M200.7 ICP	8.2			mg/L	0.6	2	11/25/06 18:26	gme
Sodium, dissolved	M200.7 ICP	163			mg/L	0.6	2	11/25/06 18:26	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		109			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO ₃			U		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO ₃			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		109			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-15.0			%			02/01/07 0:00	calc
Sum of Anions		41.7			meq/L	0.1	0.5	02/01/07 0:00	calc
Sum of Cations		30.8			meq/L	0.1	0.5	02/01/07 0:00	calc
Chloride	M325.2 - Colorimetric	142			mg/L	2	10	11/22/06 19:27	nps
Fluoride	SM4500F-C	0.4	B		mg/L	0.1	0.5	11/28/06 21:41	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.12		*	mg/L	0.02	0.1	11/25/06 19:04	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2790			mg/L	10	20	11/17/06 14:40	icp
Sulfate	SM4500 SO4-D	1690			mg/L	10	50	11/29/06 8:56	mhm
TDS (calculated)	Calculation	2480			mg/L	10	50	02/01/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.13						02/01/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: MH-13C

ACZ Sample ID: **L59935-03**
Date Sampled: 11/10/06 11:36
Date Received: 11/14/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	562			mS/cm			11/10/06 11:36	bd
pH (Field)	Field Measurement	8.9			units			11/10/06 11:36	bd
Temperature (Field)	Field Measurement	30.7			C			11/10/06 11:36	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	15.1			mg/L	0.2	1	11/25/06 18:10	gme
Magnesium, dissolved	M200.7 ICP	1.1			mg/L	0.2	1	11/25/06 18:10	gme
Potassium, dissolved	M200.7 ICP	2.7			mg/L	0.3	1	11/25/06 18:10	gme
Sodium, dissolved	M200.7 ICP	97.3			mg/L	0.3	1	11/25/06 18:10	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		111			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO3		15	B		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		126			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		5.1			%			02/01/07 0:00	calc
Sum of Anions		4.7			meq/L	0.1	0.5	02/01/07 0:00	calc
Sum of Cations		5.2			meq/L	0.1	0.5	02/01/07 0:00	calc
Chloride	M325.2 - Colorimetric	10			mg/L	1	5	11/22/06 18:42	nps
Fluoride	SM4500F-C	1.5			mg/L	0.1	0.5	11/28/06 21:28	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.51		*	mg/L	0.02	0.1	11/25/06 19:02	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	310			mg/L	10	20	11/17/06 14:36	lcp
Sulfate	SM4500 SO4-D	90			mg/L	10	50	11/29/06 8:50	mhmm
TDS (calculated)	Calculation	299			mg/L	10	50	02/01/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.04						02/01/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: MH-13B

ACZ Sample ID: **L59935-02**
 Date Sampled: 11/10/06 13:13
 Date Received: 11/14/06
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1643			mS/cm			11/10/06 13:13	bd
pH (Field)	Field Measurement	7.9			units			11/10/06 13:13	bd
Temperature (Field)	Field Measurement	29.2			C			11/10/06 13:13	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	388			mg/L	0.4	2	11/25/06 17:58	gme
Magnesium, dissolved	M200.7 ICP	55.1			mg/L	0.4	2	11/25/06 17:58	gme
Potassium, dissolved	M200.7 ICP	11.3			mg/L	0.6	2	11/25/06 17:58	gme
Sodium, dissolved	M200.7 ICP	127			mg/L	0.6	2	11/25/06 17:58	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		87			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		87			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.2			%			02/01/07 0:00	calc
Sum of Anions		29.1			meq/L	0.1	0.5	02/01/07 0:00	calc
Sum of Cations		29.8			meq/L	0.1	0.5	02/01/07 0:00	calc
Chloride	M325.2 - Colorimetric	165			mg/L	5	30	11/22/06 19:25	nps
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	11/28/06 21:26	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.59		*	mg/L	0.02	0.1	11/25/06 19:01	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2030			mg/L	10	20	11/17/06 14:35	lcp
Sulfate	SM4500 SO4-D	1080			mg/L	10	50	11/29/06 8:47	mhm
TDS (calculated)	Calculation	1880			mg/L	10	50	02/01/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.08						02/01/07 0:00	calc

Arizona license number: AZ0102

ACZ Laboratories, Inc.

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

Inorganic Analytical Results

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: MH-13A

ACZ Sample ID: **L59935-01**
Date Sampled: 11/10/06 12:13
Date Received: 11/14/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1848			mS/cm			11/10/06 12:13	bd
pH (Field)	Field Measurement	7.5			units			11/10/06 12:13	bd
Temperature (Field)	Field Measurement	27.3			C			11/10/06 12:13	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	536			mg/L	0.4	2	11/25/06 17:54	gme
Magnesium, dissolved	M200.7 ICP	103			mg/L	0.4	2	11/25/06 17:54	gme
Potassium, dissolved	M200.7 ICP	14.7		*	mg/L	0.6	2	11/25/06 17:54	gme
Sodium, dissolved	M200.7 ICP	177			mg/L	0.6	2	11/25/06 17:54	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		103			mg/L	2	20	11/24/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/24/06 0:00	ct
Total Alkalinity		103			mg/L	2	20	11/24/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.2			%			02/01/07 0:00	calc
Sum of Anions		42.4			meq/L	0.1	0.5	02/01/07 0:00	calc
Sum of Cations		43.4			meq/L	0.1	0.5	02/01/07 0:00	calc
Chloride	M325.2 - Colorimetric	179			mg/L	5	30	11/22/06 19:23	nps
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	11/28/06 21:10	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.91		*	mg/L	0.02	0.1	11/17/06 21:38	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2970			mg/L	10	20	11/17/06 14:33	lcp
Sulfate	SM4500 SO4-D	1680			mg/L	10	50	11/29/06 8:43	mhm
TDS (calculated)	Calculation	2750			mg/L	10	50	02/01/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.08						02/01/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

February 02, 2007

Project ID: OJ00XN

ACZ Project ID: L59935

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 5 ground water samples from Phelps Dodge Sierrita on November 14, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59935. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes. This section has been included as an attachment to the original PDF document.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures.

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

February 12, 2007

Project ID: OJ00XN
ACZ Project ID: L59935

Bill Dorris:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 14, 2006 and reported on December 20, 2006. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L59935. Please reference this number in all future inquiries.

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

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59935. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Feb/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.





P.O. Box 527, Green Valley, AZ 85622

ANALYTICAL REQUEST SHEET
Chain of Custody PO# - OJ00XN

COC Number: _____

L59908

Lab Use Only	Location	Date	Time	# of Cont.	Preservatives					Field Data			Analysis Requested
					HNO ₃	H ₂ SO ₄	NaOH	HCl	Unpres.	pH	Cond	Temp	
	MH-10	11/8/2006	14:15	8	1	1	1	2	5	6.95	1297	29.4	Ambient Suite
	MH-15W	11/8/2006	12:58	8	1	1	1	2	5	7.17	1635	24.3	Ambient Suite
	MH-17	11/6/2006	9:47	8	1	1	1	2	5	6.94	1334	23.6	Ambient Suite
	MH-18	11/6/2006	11:17	8	1	1	1	2	5	7.31	1606	24.6	Ambient Suite
	MH-21	11/8/2006	11:05	8	1	1	1	2	5	7.03	1947	22.9	Ambient Suite
	MH-23	11/9/2006	12:00	8	1	1	1	2	5	6.87	1848	23.4	Ambient Suite
	MH-22	11/9/2006	14:10	8	1	1	1	2	5	6.69	3020	24.1	Ambient Suite

Sample Submitted By: Billy Dorris Telephone No. 520-648-8873
 Report Results To: Billy Dorris Telephone No. 520-648-8873
 Samples Submitted on Ice: *Billy F. Dorris* Date: 11/08/06 Time: 10:55
 Surrendered By: *Billy F. Dorris* Received By: _____
 Surrendered By: _____ Received By: _____
 Comments/Special Instructions: _____

Laboratory Name and Address:
 ACZ Laboratory
 30400 Downhill Drive
 Steamboat Springs, CO 80487
 Phone: 8003345493

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L59908
Date Received: 11/10/2006
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L59908-01	MH-10		Y		Y							<input type="checkbox"/>
L59908-02	MH-15W		Y		Y							<input type="checkbox"/>
L59908-03	MH-17		Y		Y							<input type="checkbox"/>
L59908-04	MH-18		Y		Y							<input type="checkbox"/>
L59908-05	MH-21		Y		Y							<input type="checkbox"/>
L59908-06	MH-23		Y		Y							<input type="checkbox"/>
L59908-07	MH-22		Y		Y							<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L59908
Date Received: 11/10/2006
Received By:
Date Printed: 11/10/2006

Receipt Verification

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

	YES	NO	NA
			X
X			
			X
X			
X			
X			
X			
X			
			X
		X	
X			
			X

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
1222		5.2	20

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

Notes

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

No certification qualifiers associated with this analysis

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59908-07	WG216914	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217009	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217252	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216814	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217292	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			M160.1 - Gravimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M160.1 - Gravimetric	ZO	TDS concentration is based on a final residue greater than 200 mg.
	WG217241	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217011	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59908-04	WG216767	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Manganese, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG216914	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG216822	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217252	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217091	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
L59908-05	WG216914	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217009	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217252	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216814	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217241	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217011	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L59908-06	WG216914	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217009	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217252	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216814	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217241	Sulfate	SM4500 SO4-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217011	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L59908-01	WG216767	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG216914	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217252	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L59908-02	WG216767	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Manganese, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG216914	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG217009	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217252	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216814	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217011	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L59908-03	WG216767	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Manganese, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG216914	Chloride	M325.2 - Colorimetric	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG216822	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG217252	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG216814	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	2		1.913	mg/L	95.7	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.03	0.03			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	.5		.513	mg/L	102.6	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	.5	.01	.529	mg/L	103.8	85	115			
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	.5	.01	.543	mg/L	106.6	85	115	2.61	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	2		1.927	mg/L	96.4	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.03	0.03			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	.5		.497	mg/L	99.4	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	.5	U	.513	mg/L	102.6	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	.5	U	.507	mg/L	101.4	85	115	1.18	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	100		100.74	mg/L	100.7	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.9	0.9			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	99.78197		105.55	mg/L	105.8	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	99.78197	62.2	163.13	mg/L	101.2	85	115			
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	99.78197	62.2	171.74	mg/L	109.8	85	115	5.14	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	100		98.98	mg/L	99	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.9	0.9			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	99.78197		99.33	mg/L	99.5	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	99.78197	206	305.47	mg/L	99.7	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	99.78197	206	305.56	mg/L	99.8	85	115	0.03	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217241													
WG217241PBW	PBW	11/28/06 15:15				U	mg/L		-30	30			
WG217241LCSW	LCSW	11/28/06 15:17	WC060911-2	100		92	mg/L	92	80	120			
L59908-04DUP	DUP	11/28/06 15:43			740	737	mg/L				0.4	20	
L59927-04DUP	DUP	11/28/06 16:09			30	26	mg/L				14.3	20	RA

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216561													
WG216561ICV	ICV	11/16/06 1:42	MS061106-2	.056		.05687	mg/L	101.6	90	110			
WG216561ICB	ICB	11/16/06 1:48				U	mg/L		-0.0003	0.0003			
WG216561LFB	LFB	11/16/06 1:54	MS061023-3	.05		.04927	mg/L	98.5	85	115			
L59833-03AS	AS	11/16/06 3:29	MS061023-3	.05	.0002	.05067	mg/L	100.9	70	130			
L59833-03ASD	ASD	11/16/06 3:35	MS061023-3	.05	.0002	.05159	mg/L	102.8	70	130	1.8	20	
WG216491													
WG216491ICV	ICV	11/16/06 8:20	MS061106-2	.056		.05383	mg/L	96.1	90	110			
WG216491ICB	ICB	11/16/06 8:26				U	mg/L		-0.0003	0.0003			
WG216491LFB	LFB	11/16/06 8:32	MS061023-3	.05		.04854	mg/L	97.1	85	115			
L59908-01AS	AS	11/16/06 8:43	MS061023-3	.05	U	.05153	mg/L	103.1	70	130			
L59908-01ASD	ASD	11/16/06 8:50	MS061023-3	.05	U	.05301	mg/L	106	70	130	2.83	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	20		20.34	mg/L	101.7	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.9	0.9			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	99.46819		105.58	mg/L	106.1	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	99.46819	3.4	110.06	mg/L	107.2	85	115			
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	99.46819	3.4	114.94	mg/L	112.1	85	115	4.34	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	20		20.06	mg/L	100.3	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.9	0.9			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	99.46819		99.69	mg/L	100.2	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	99.46819	.5	106.22	mg/L	106.3	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	99.46819	.5	107.27	mg/L	107.3	85	115	0.98	20	

Residue, Filterable (TDS) @180C

M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216413													
WG216413PBW	PBW	11/11/06 13:00				U	mg/L		-20	20			
WG216413LCSW	LCSW	11/11/06 13:02	PCN25932	334		326	mg/L	97.6	80	120			
L59908-06DUP	DUP	11/11/06 14:00			3860	3862	mg/L				0.1	20	
WG217292													
WG217292PBW	PBW	11/29/06 11:00				U	mg/L		-20	20			
WG217292LCSW	LCSW	11/29/06 11:01	PCN25973	260		262	mg/L	100.8	80	120			
L59910-07DUP	DUP	11/29/06 11:15			60	40	mg/L				40	20	RA

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216561													
WG216561ICV	ICV	11/16/06 1:42	MS061106-2	.05		.05377	mg/L	107.5	90	110			
WG216561ICB	ICB	11/16/06 1:48				.00013	mg/L		-0.0003	0.0003			
WG216561LFB	LFB	11/16/06 1:54	MS061023-3	.05		.0487	mg/L	97.4	85	115			
L59833-03AS	AS	11/16/06 3:29	MS061023-3	.05	.0006	.05573	mg/L	110.3	70	130			
L59833-03ASD	ASD	11/16/06 3:35	MS061023-3	.05	.0006	.05684	mg/L	112.5	70	130	1.97	20	
WG216491													
WG216491ICV	ICV	11/16/06 8:20	MS061106-2	.05		.05344	mg/L	106.9	90	110			
WG216491ICB	ICB	11/16/06 8:26				U	mg/L		-0.0003	0.0003			
WG216491LFB	LFB	11/16/06 8:32	MS061023-3	.05		.05051	mg/L	101	85	115			
L59908-01AS	AS	11/16/06 8:43	MS061023-3	.05	.0013	.05319	mg/L	103.8	70	130			
L59908-01ASD	ASD	11/16/06 8:50	MS061023-3	.05	.0013	.05019	mg/L	97.8	70	130	5.8	20	
WG216835													
WG216835ICV	ICV	11/20/06 6:30	MS061106-2	.05		.05446	mg/L	108.9	90	110			
WG216835ICB	ICB	11/20/06 6:36				U	mg/L		-0.0003	0.0003			
WG216835LFB	LFB	11/20/06 6:42	MS061023-3	.05		.04913	mg/L	98.3	85	115			
L59908-06AS	AS	11/20/06 6:54	MS061023-3	.1	.0016	.09494	mg/L	93.3	70	130			
L59908-06ASD	ASD	11/20/06 7:00	MS061023-3	.1	.0016	.09644	mg/L	94.8	70	130	1.57	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216662													
WG216662ICV	ICV	11/15/06 19:18	WI060906-3	2.416		2.322	mg/L	96.1	90	110			
WG216662ICB	ICB	11/15/06 19:19				U	mg/L		-0.06	0.06			
WG216664													
WG216664ICV	ICV	11/15/06 21:11	WI060906-3	2.416		2.469	mg/L	102.2	90	110			
WG216664ICB	ICB	11/15/06 21:12				U	mg/L		-0.06	0.06			
WG216664LFB	LFB	11/15/06 21:14	WI060906-4	2		2.084	mg/L	104.2	90	110			
L59907-05AS	AS	11/15/06 21:34	WI060906-4	2	1.91	3.953	mg/L	102.2	90	110			
L59907-06DUP	DUP	11/15/06 21:53			.5	.498	mg/L				0.4	20	
WG216809													
WG216809ICV	ICV	11/17/06 18:01	WI060906-3	2.416		2.286	mg/L	94.6	90	110			
WG216809ICB	ICB	11/17/06 18:02				U	mg/L		-0.06	0.06			
WG216814													
WG216814ICV	ICV	11/17/06 20:43	WI060906-3	2.416		2.378	mg/L	98.4	90	110			
WG216814ICB	ICB	11/17/06 20:45				U	mg/L		-0.06	0.06			
WG216814LFB1	LFB	11/17/06 20:46	WI060906-4	2		2.059	mg/L	103	90	110			
L59895-01AS	AS	11/17/06 20:48	WI060906-4	2	.02	2.127	mg/L	105.4	90	110			
L59895-02DUP	DUP	11/17/06 20:51			.09	.032	mg/L				95.1	20	RA
L59908-07AS	AS	11/17/06 21:07	WI060906-4	2	.21	2.31	mg/L	105	90	110			
L59909-01DUP	DUP	11/17/06 21:09			.11	.103	mg/L				6.6	20	RA
WG216814LFB2	LFB	11/17/06 21:24	WI060906-4	2		2.021	mg/L	101.1	90	110			
WG217087													
WG217087ICV	ICV	11/25/06 17:26	WI060906-3	2.416		2.343	mg/L	97	90	110			
WG217087ICB	ICB	11/25/06 17:27				U	mg/L		-0.06	0.06			
WG217091													
WG217091ICV	ICV	11/25/06 18:52	WI060906-3	2.416		2.42	mg/L	100.2	90	110			
WG217091ICB	ICB	11/25/06 18:53				U	mg/L		-0.06	0.06			
WG217091LFB1	LFB	11/25/06 18:54	WI060906-4	2		2.116	mg/L	105.8	90	110			
L59908-04AS	AS	11/25/06 18:57	WI060906-4	10	3.9	15.09	mg/L	111.9	90	110			M1
WG217091LFB2	LFB	11/25/06 19:32	WI060906-4	2		2.062	mg/L	103.1	90	110			
L59909-04DUP	DUP	11/25/06 20:40			9.1	8.26	mg/L				9.7	20	

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216830													
WG216830LCSW3	LCSW	11/19/06 10:24	PCN25442	6		6.08	units	101.3	90	110			
WG216830LCSW6	LCSW	11/19/06 12:25	PCN25442	6		6.08	units	101.3	90	110			
L59908-03DUP	DUP	11/19/06 14:36			7.3	7.28	units				0.3	20	
WG216830LCSW9	LCSW	11/19/06 15:56	PCN25442	6		6.02	units	100.3	90	110			
WG217011													
WG217011LCSW3	LCSW	11/22/06 9:14	PCN25442	6		6.04	units	100.7	90	110			
L59908-01DUP	DUP	11/22/06 13:02			7.9	7.93	units				0.4	20	
WG217011LCSW6	LCSW	11/22/06 13:20	PCN25442	6		6.07	units	101.2	90	110			
L59910-01DUP	DUP	11/22/06 14:46			7.5	7.57	units				0.9	20	
WG217011LCSW9-1	LCSW	11/22/06 16:15	PCN25442	6		6.03	units	100.5	90	110			
WG217011LCSW12	LCSW	11/22/06 17:13	PCN25442	6		6.02	units	100.3	90	110			

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L59908

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	2		1.931	mg/L	96.6	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.03	0.03			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	.5		.526	mg/L	105.2	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	.5	.04	.516	mg/L	95.2	85	115			
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	.5	.04	.529	mg/L	97.8	85	115	2.49	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	2		1.977	mg/L	98.9	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.03	0.03			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	.5		.522	mg/L	104.4	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	.5	.1	.612	mg/L	102.4	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	.5	.1	.612	mg/L	102.4	85	115	0	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	2		1.896	mg/L	94.8	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.03	0.03			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	.5		.498	mg/L	99.6	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	.5	.02	.51	mg/L	98	85	115			
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	.5	.02	.525	mg/L	101	85	115	2.9	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	2		1.916	mg/L	95.8	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.03	0.03			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	.5		.498	mg/L	99.6	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	.5	U	.49	mg/L	98	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	.5	U	.499	mg/L	99.8	85	115	1.82	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	100		95.45	mg/L	95.5	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.6	0.6			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	54.94443		56.35	mg/L	102.6	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	54.94443	63.4	115.97	mg/L	95.7	85	115			
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	54.94443	63.4	120.51	mg/L	103.9	85	115	3.84	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	100		95.55	mg/L	95.6	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.6	0.6			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	54.94443		54.24	mg/L	98.7	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	54.94443	48.4	103.82	mg/L	100.9	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	54.94443	48.4	103.99	mg/L	101.2	85	115	0.16	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	2		1.9126	mg/L	95.6	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.015	0.015			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	.5		.5294	mg/L	105.9	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	.5	19.5	18.4756	mg/L	-204.9	85	115			M3
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	.5	19.5	19.1732	mg/L	-65.4	85	115	3.71	20	M3
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	2		1.9233	mg/L	96.2	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.015	0.015			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	.5		.5163	mg/L	103.3	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	.5	U	.5138	mg/L	102.8	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	.5	U	.5208	mg/L	104.2	85	115	1.35	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216633													
WG216633ICV	ICV	11/20/06 18:29	II061110-4	.00498		.00501	mg/L	100.6	95	105			
WG216633ICB	ICB	11/20/06 18:31				U	mg/L		-0.0002	0.0002			
WG216633LRB	LRB	11/20/06 18:33				U	mg/L		-0.00044	0.00044			
WG216633LFB	LFB	11/20/06 18:35	II061121-2	.002		.00224	mg/L	112	85	115			
L59844-02LFM	LFM	11/20/06 19:16	II061121-2	.002	.0002	.00223	mg/L	101.5	85	115			
L59844-02LFMD	LFMD	11/20/06 19:19	II061121-2	.002	.0002	.00223	mg/L	101.5	85	115	0	20	
WG216634													
WG216634LRB	LRB	11/20/06 19:47				U	mg/L		-0.00044	0.00044			
WG216634LFB	LFB	11/20/06 19:49	II061121-2	.002		.00229	mg/L	114.5	85	115			
L59908-07LFM	LFM	11/20/06 19:56	II061121-2	.002	U	.00201	mg/L	100.5	85	115			
L59908-07LFMD	LFMD	11/20/06 19:58	II061121-2	.002	U	.00227	mg/L	113.5	85	115	12.15	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217032													
WG217032ICV	ICV	11/22/06 17:55	II061113-6	2		1.943	mg/L	97.2	95	105			
WG217032ICB	ICB	11/22/06 17:59				U	mg/L		-0.06	0.06			
WG217032LFB	LFB	11/22/06 18:15	II061116-2	1		1.081	mg/L	108.1	85	115			
L59876-02AS	AS	11/22/06 19:20	II061116-2	1	U	1.032	mg/L	103.2	85	115			
L59876-02ASD	ASD	11/22/06 19:24	II061116-2	1	U	1.014	mg/L	101.4	85	115	1.76	20	
WG217126													
WG217126ICV	ICV	11/27/06 19:49	II061113-6	2		1.923	mg/L	96.2	95	105			
WG217126ICB	ICB	11/27/06 19:53				U	mg/L		-0.06	0.06			
WG217126LFB	LFB	11/27/06 20:05	II061116-2	1		1.072	mg/L	107.2	85	115			
L59869-05AS	AS	11/27/06 20:58	II061116-2	1	U	.997	mg/L	99.7	85	115			
L59869-05ASD	ASD	11/27/06 21:01	II061116-2	1	U	.993	mg/L	99.3	85	115	0.4	20	
WG217472													
WG217472ICV	ICV	12/01/06 18:18	II061128-2	2		2.024	mg/L	101.2	95	105			
WG217472ICB	ICB	12/01/06 18:22				U	mg/L		-0.06	0.06			
WG217472LFB	LFB	12/01/06 18:34	II061116-2	1		1.063	mg/L	106.3	85	115			
L59832-09AS	AS	12/01/06 18:41	II061116-2	1	U	.545	mg/L		85	115			
L59832-09ASD	ASD	12/01/06 18:44	II061116-2	1	U	.443	mg/L		85	115		20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216491													
WG216491ICV	ICV	11/16/06 8:20	MS061106-2	.05		.0515	mg/L	103	90	110			
WG216491ICB	ICB	11/16/06 8:26				U	mg/L		-0.0003	0.0003			
WG216491LFB	LFB	11/16/06 8:32	MS061023-3	.05		.04961	mg/L	99.2	85	115			
L59908-01AS	AS	11/16/06 8:43	MS061023-3	.05	.0006	.05156	mg/L	101.9	70	130			
L59908-01ASD	ASD	11/16/06 8:50	MS061023-3	.05	.0006	.05304	mg/L	104.9	70	130	2.83	20	
WG216835													
WG216835ICV	ICV	11/20/06 6:30	MS061106-2	.05		.05178	mg/L	103.6	90	110			
WG216835ICB	ICB	11/20/06 6:36				U	mg/L		-0.0003	0.0003			
WG216835LFB	LFB	11/20/06 6:42	MS061023-3	.05		.04721	mg/L	94.4	85	115			
L59908-06AS	AS	11/20/06 6:54	MS061023-3	.1	.001	.09588	mg/L	94.9	70	130			
L59908-06ASD	ASD	11/20/06 7:00	MS061023-3	.1	.001	.09602	mg/L	95	70	130	0.15	20	
WG216834													
WG216834ICV	ICV	11/20/06 14:31	MS061106-2	.05		.05291	mg/L	105.8	90	110			
WG216834ICB	ICB	11/20/06 14:36				U	mg/L		-0.0003	0.0003			
WG216834LFB	LFB	11/20/06 14:41	MS061023-3	.05		.04723	mg/L	94.5	85	115			
L59903-01AS	AS	11/20/06 14:51	MS061023-3	1	.002	.9814	mg/L	97.9	70	130			
L59903-01ASD	ASD	11/20/06 14:56	MS061023-3	1	.002	.9564	mg/L	95.4	70	130	2.58	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	2		1.942	mg/L	97.1	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.03	0.03			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	.5		.506	mg/L	101.2	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	.5	U	.505	mg/L	101	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	.5	U	.513	mg/L	102.6	85	115	1.57	20	
WG217032													
WG217032ICV	ICV	11/22/06 17:55	II061113-6	2		1.907	mg/L	95.4	95	105			
WG217032ICB	ICB	11/22/06 17:59				U	mg/L		-0.03	0.03			
WG217032LFB	LFB	11/22/06 18:15	II061116-2	.5		.499	mg/L	99.8	85	115			
L59876-02AS	AS	11/22/06 19:20	II061116-2	.5	U	.507	mg/L	101.4	85	115			
L59876-02ASD	ASD	11/22/06 19:24	II061116-2	.5	U	.505	mg/L	101	85	115	0.4	20	
WG217056													
WG217056ICV	ICV	11/25/06 16:37	II061113-6	2		1.932	mg/L	96.6	95	105			
WG217056ICB	ICB	11/25/06 16:41				U	mg/L		-0.03	0.03			
WG217056LFB	LFB	11/25/06 16:57	II061116-2	.5		.51	mg/L	102	85	115			
L59908-04AS	AS	11/25/06 17:13	II061116-2	.5	U	.542	mg/L	108.4	85	115			
L59908-04ASD	ASD	11/25/06 17:17	II061116-2	.5	U	.527	mg/L	105.4	85	115	2.81	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216822													
WG216822ICV	ICV	11/18/06 17:30	WI061107-3	.3		.2965	mg/L	98.8	90	110			
WG216822ICB	ICB	11/18/06 17:31				U	mg/L		-0.015	0.015			
WG216693LRB	LRB	11/18/06 17:32				U	mg/L		-0.015	0.015			
WG216693LFB	LFB	11/18/06 17:33	WI061107-7	.2		.2034	mg/L	101.7	90	110			
L59907-09DUP	DUP	11/18/06 17:47			U	U	mg/L				0	20	RA
L59907-10LFM	LFM	11/18/06 17:49	WI061107-7	.2	U	.2196	mg/L	109.8	90	110			
WG217009													
WG217009ICV	ICV	11/21/06 19:49	WI061107-3	.3		.296	mg/L	98.7	90	110			
WG217009ICB	ICB	11/21/06 19:50				U	mg/L		-0.015	0.015			
WG216946LRB	LRB	11/21/06 19:51				U	mg/L		-0.015	0.015			
WG216946LFB	LFB	11/21/06 19:52	WI061107-7	.2		.2007	mg/L	100.4	90	110			
L59873-01DUP	DUP	11/21/06 19:54			.008	U	mg/L				200	20	RA
L59903-01LFM	LFM	11/21/06 19:56	WI061107-7	.2	U	.2127	mg/L	106.4	90	110			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG217252													
WG217252ICV	ICV	11/28/06 17:33	WC061117-1	1.996		2	mg/L	100.2	95	105			
WG217252ICB	ICB	11/28/06 17:38				U	mg/L		-0.3	0.3			
WG217252LFB1	LFB	11/28/06 17:44	WC061021-1	4.99902		5.26	mg/L	105.2	90	110			
L59908-01AS	AS	11/28/06 17:54	WC061021-1	4.99902	.3	5.28	mg/L	99.6	85	115			
L59908-01DUP	DUP	11/28/06 17:59			.3	.32	mg/L				6.5	20	RA
WG217252LFB2	LFB	11/28/06 20:04	WC061021-1	4.99902		5.28	mg/L	105.6	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	2		1.908	mg/L	95.4	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.03	0.03			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	.5		.507	mg/L	101.4	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	.5	U	.494	mg/L	98.8	85	115			
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	.5	U	.512	mg/L	102.4	85	115	3.58	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	2		1.9	mg/L	95	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.03	0.03			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	.5		.498	mg/L	99.6	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	.5	U	.485	mg/L	97	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	.5	U	.494	mg/L	98.8	85	115	1.84	20	

Conductivity @25C

M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216830													
WG216830PBW1	PBW	11/19/06 10:08				1.2	µmhos/cm		-10	10			
WG216830LCSW1	LCSW	11/19/06 10:10	PCN25329	1408.8		1622	µmhos/cm	115.1	80	120			
WG216830PBW2	PBW	11/19/06 12:09				U	µmhos/cm		-10	10			
WG216830LCSW4	LCSW	11/19/06 12:10	PCN25329	1408.8		1414	µmhos/cm	100.4	80	120			
L59908-03DUP	DUP	11/19/06 14:36			1290	1292	µmhos/cm				0.2	20	
WG216830LCSW7	LCSW	11/19/06 15:42	PCN25329	1408.8		1387	µmhos/cm	98.5	80	120			
WG217011													
WG217011PBW1	PBW	11/22/06 8:58				7.3	µmhos/cm		-10	10			
WG217011LCSW1	LCSW	11/22/06 8:59	PCN25329	1408.8		1463	µmhos/cm	103.8	80	120			
L59908-01DUP	DUP	11/22/06 13:02			2780	2770	µmhos/cm				0.4	20	
WG217011PBW2	PBW	11/22/06 13:04				7.8	µmhos/cm		-10	10			
WG217011LCSW4	LCSW	11/22/06 13:05	PCN25329	1408.8		1474	µmhos/cm	104.6	80	120			
L59910-01DUP	DUP	11/22/06 14:46			1120	1116	µmhos/cm				0.4	20	
WG217011LCSW7	LCSW	11/22/06 16:02	PCN25329	1408.8		1464	µmhos/cm	103.9	80	120			
WG217011LCSW10	LCSW	11/22/06 16:59	PCN25329	1408.8		1445	µmhos/cm	102.6	80	120			

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	100		98.56	mg/L	98.6	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.6	0.6			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	67.93192		71	mg/L	104.5	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	67.93192	297	344.78	mg/L	70.3	85	115			M3
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	67.93192	297	355.44	mg/L	86	85	115	3.04	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	100		97.97	mg/L	98	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.6	0.6			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	67.93192		67.47	mg/L	99.3	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	67.93192	16.8	85.32	mg/L	100.9	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	67.93192	16.8	85.82	mg/L	101.6	85	115	0.58	20	

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216903													
WG216903ICV	ICV	11/20/06 13:52	WI061113-3	55		56.5	mg/L	102.7	90	110			
WG216903ICB	ICB	11/20/06 13:53				1.2	mg/L		-3	3			
WG216914													
WG216914ICV	ICV	11/20/06 16:20	WI061113-3	55		58.6	mg/L	106.5	90	110			
WG216914ICB	ICB	11/20/06 16:21				1.3	mg/L		-3	3			
WG216914LFB1	LFB	11/20/06 16:22	WI060623-1	30		28.5	mg/L	95	90	110			
WG216914LFB2	LFB	11/20/06 16:51	WI060623-1	30		28.4	mg/L	94.7	90	110			
L59908-01AS	AS	11/20/06 17:07	WI060623-1	150	114	298.2	mg/L	122.8	90	110			M1
L59908-02DUP	DUP	11/20/06 17:11			154	165.1	mg/L				7	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	2		1.902	mg/L	95.1	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.03	0.03			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	.5		.509	mg/L	101.8	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	.5	U	.506	mg/L	101.2	85	115			
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	.5	U	.517	mg/L	103.4	85	115	2.15	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	2		1.922	mg/L	96.1	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.03	0.03			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	.5		.491	mg/L	98.2	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	.5	U	.486	mg/L	97.2	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	.5	U	.486	mg/L	97.2	85	115	0	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216561													
WG216561ICV	ICV	11/16/06 1:42	MS061106-2	.05		.04945	mg/L	98.9	90	110			
WG216561ICB	ICB	11/16/06 1:48				U	mg/L		-0.0003	0.0003			
WG216561LFB	LFB	11/16/06 1:54	MS061023-3	.05		.04604	mg/L	92.1	85	115			
L59833-03AS	AS	11/16/06 3:29	MS061023-3	.05	.0089	.05306	mg/L	88.3	70	130			
L59833-03ASD	ASD	11/16/06 3:35	MS061023-3	.05	.0089	.05419	mg/L	90.6	70	130	2.11	20	
WG216722													
WG216722LFB	LFB	11/17/06 16:43	MS061023-3	.05		.05232	mg/L	104.6	85	115			
WG216722ICV	ICV	11/17/06 16:55	MS061106-2	.05		.04872	mg/L	97.4	90	110			
WG216722ICB	ICB	11/17/06 17:01				U	mg/L		-0.0003	0.0003			
L59908-03AS	AS	11/17/06 17:25	MS061023-3	.05	.0001	.04841	mg/L	96.6	70	130			
L59908-03ASD	ASD	11/17/06 17:31	MS061023-3	.05	.0001	.04715	mg/L	94.1	70	130	2.64	20	
WG216834													
WG216834ICV	ICV	11/20/06 14:31	MS061106-2	.05		.05001	mg/L	100	90	110			
WG216834ICB	ICB	11/20/06 14:36				U	mg/L		-0.0003	0.0003			
WG216834LFB	LFB	11/20/06 14:41	MS061023-3	.05		.04726	mg/L	94.5	85	115			
L59903-01AS	AS	11/20/06 14:51	MS061023-3	1	U	1.0058	mg/L	100.6	70	130			
L59903-01ASD	ASD	11/20/06 14:56	MS061023-3	1	U	.9822	mg/L	98.2	70	130	2.37	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216561													
WG216561ICV	ICV	11/16/06 1:42	MS061106-2	.05		.05044	mg/L	100.9	90	110			
WG216561ICB	ICB	11/16/06 1:48				U	mg/L		-0.0003	0.0003			
WG216561LFB	LFB	11/16/06 1:54	MS061023-3	.05		.04837	mg/L	96.7	85	115			
L59833-03AS	AS	11/16/06 3:29	MS061023-3	.05	.012	.05903	mg/L	94.1	70	130			
L59833-03ASD	ASD	11/16/06 3:35	MS061023-3	.05	.012	.06004	mg/L	96.1	70	130	1.7	20	
WG216491													
WG216491ICV	ICV	11/16/06 8:20	MS061106-2	.05		.0498	mg/L	99.6	90	110			
WG216491ICB	ICB	11/16/06 8:26				U	mg/L		-0.0003	0.0003			
WG216491LFB	LFB	11/16/06 8:32	MS061023-3	.05		.05054	mg/L	101.1	85	115			
L59908-01AS	AS	11/16/06 8:43	MS061023-3	.05	.0003	.04416	mg/L	87.7	70	130			
L59908-01ASD	ASD	11/16/06 8:50	MS061023-3	.05	.0003	.04563	mg/L	90.7	70	130	3.27	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L59908

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216561													
WG216561ICV	ICV	11/16/06 1:42	MS061106-2	.05		.05169	mg/L	103.4	90	110			
WG216561ICB	ICB	11/16/06 1:48				U	mg/L		-0.0015	0.0015			
WG216561LFB	LFB	11/16/06 1:54	MS061023-3	.05		.04951	mg/L	99	85	115			
L59833-03AS	AS	11/16/06 3:29	MS061023-3	.05	U	.05208	mg/L	104.2	70	130			
L59833-03ASD	ASD	11/16/06 3:35	MS061023-3	.05	U	.05273	mg/L	105.5	70	130	1.24	20	
WG216491													
WG216491ICV	ICV	11/16/06 8:20	MS061106-2	.05		.05314	mg/L	106.3	90	110			
WG216491ICB	ICB	11/16/06 8:26				U	mg/L		-0.0015	0.0015			
WG216491LFB	LFB	11/16/06 8:32	MS061023-3	.05		.05278	mg/L	105.6	85	115			
L59908-01AS	AS	11/16/06 8:43	MS061023-3	.05	.0026	.05328	mg/L	101.4	70	130			
L59908-01ASD	ASD	11/16/06 8:50	MS061023-3	.05	.0026	.05603	mg/L	106.9	70	130	5.03	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	I1061113-6	2		2.0138	mg/L	100.7	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.009	0.009			
WG216767LFB	LFB	11/17/06 17:23	I1061116-2	.5		.511	mg/L	102.2	85	115			
L59874-02AS	AS	11/17/06 18:28	I1061116-2	.5	.015	.5183	mg/L	100.7	85	115			
L59874-02ASD	ASD	11/17/06 18:32	I1061116-2	.5	.015	.5414	mg/L	105.3	85	115	4.36	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	I1061113-6	2		2.0187	mg/L	100.9	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.009	0.009			
WG216794LFB	LFB	11/17/06 22:56	I1061116-2	.5		.5065	mg/L	101.3	85	115			
L59832-06AS	AS	11/17/06 23:53	I1061116-2	.5	.025	.5288	mg/L	100.8	85	115			
L59832-06ASD	ASD	11/17/06 23:57	I1061116-2	.5	.025	.5358	mg/L	102.2	85	115	1.32	20	

Phelps Dodge Sierrita

ACZ Project ID: **L59908**

Project ID: OJ00XN

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216830													
WG216830LCSW2	LCSW	11/19/06 10:20	WC061113-1	820		700	mg/L	85.4	80	120			
WG216830LCSW5	LCSW	11/19/06 12:21	WC061113-1	820		717.7	mg/L	87.5	80	120			
L59908-03DUP	DUP	11/19/06 14:36			413	418.7	mg/L				1.4	20	
WG216830LCSW8	LCSW	11/19/06 15:53	WC061113-1	820		729.3	mg/L	88.9	80	120			
WG217011													
WG217011LCSW2	LCSW	11/22/06 9:10	WC061113-1	820		738	mg/L	90	80	120			
L59908-01DUP	DUP	11/22/06 13:02			122	123.5	mg/L				1.2	20	
WG217011LCSW5	LCSW	11/22/06 13:16	WC061113-1	820		737.3	mg/L	89.9	80	120			
L59910-01DUP	DUP	11/22/06 14:46			12	12	mg/L				0	20	RA
WG217011LCSW8	LCSW	11/22/06 16:12	WC061113-1	820		737	mg/L	89.9	80	120			
WG217011LCSW11	LCSW	11/22/06 17:10	WC061113-1	820		735.2	mg/L	89.7	80	120			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216767													
WG216767ICV	ICV	11/17/06 17:03	II061113-6	2		1.969	mg/L	98.5	95	105			
WG216767ICB	ICB	11/17/06 17:07				U	mg/L		-0.09	0.09			
WG216767LFB	LFB	11/17/06 17:23	II061116-2	1		1.087	mg/L	108.7	85	115			
L59874-02AS	AS	11/17/06 18:28	II061116-2	1	U	1.043	mg/L	104.3	85	115			
L59874-02ASD	ASD	11/17/06 18:32	II061116-2	1	U	1.048	mg/L	104.8	85	115	0.48	20	
WG216794													
WG216794ICV	ICV	11/17/06 22:36	II061113-6	2		1.959	mg/L	98	95	105			
WG216794ICB	ICB	11/17/06 22:40				U	mg/L		-0.09	0.09			
WG216794LFB	LFB	11/17/06 22:56	II061116-2	1		1.019	mg/L	101.9	85	115			
L59832-06AS	AS	11/17/06 23:53	II061116-2	1	U	1.024	mg/L	102.4	85	115			
L59832-06ASD	ASD	11/17/06 23:57	II061116-2	1	U	1.056	mg/L	105.6	85	115	3.08	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG216561													
WG216561ICV	ICV	11/16/06 1:42	MS061106-2	.02008		.02042	mg/L	101.7	90	110			
WG216561ICB	ICB	11/16/06 1:48				U	mg/L		-0.0012	0.0012			
WG216561LFB	LFB	11/16/06 1:54	MS061023-3	.00625		.00627	mg/L	100.3	85	115			
L59833-03AS	AS	11/16/06 3:29	MS061023-3	.00625	U	.00603	mg/L	96.5	70	130			
L59833-03ASD	ASD	11/16/06 3:35	MS061023-3	.00625	U	.00614	mg/L	98.2	70	130	1.81	20	
WG216491													
WG216491ICV	ICV	11/16/06 8:20	MS061106-2	.02008		.01992	mg/L	99.2	90	110			
WG216491ICB	ICB	11/16/06 8:26				.00046	mg/L		-0.0012	0.0012			
WG216491LFB	LFB	11/16/06 8:32	MS061023-3	.00625		.00685	mg/L	109.6	85	115			
L59908-01AS	AS	11/16/06 8:43	MS061023-3	.00625	.0013	.00715	mg/L	93.6	70	130			
L59908-01ASD	ASD	11/16/06 8:50	MS061023-3	.00625	.0013	.00739	mg/L	97.4	70	130	3.3	20	



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater. 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

ACZ Laboratories, Inc.

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

Inorganic Analytical Results

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: MH-10

ACZ Sample ID: **L59908-01**
Date Sampled: 11/08/06 14:15
Date Received: 11/10/06
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1297			mS/cm			11/08/06 14:15	bd
pH (Field)	Field Measurement	7.0			units			11/08/06 14:15	bd
Temperature (Field)	Field Measurement	29.4			C			11/08/06 14:15	bd

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	485		*	mg/L	0.4	2	11/17/06 19:04	gme
Magnesium, dissolved	M200.7 ICP	78.4			mg/L	0.4	2	11/17/06 19:04	gme
Potassium, dissolved	M200.7 ICP	6.6			mg/L	0.6	2	11/17/06 19:04	gme
Sodium, dissolved	M200.7 ICP	72.7			mg/L	0.6	2	11/17/06 19:04	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		122			mg/L	2	20	11/22/06 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	11/22/06 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	11/22/06 0:00	ct
Total Alkalinity		122			mg/L	2	20	11/22/06 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.6			%			02/01/07 0:00	calc
Sum of Anions		33.6			meq/L	0.1	0.5	02/01/07 0:00	calc
Sum of Cations		34.0			meq/L	0.1	0.5	02/01/07 0:00	calc
Chloride	M325.2 - Colorimetric	114		*	mg/L	5	30	11/20/06 17:06	jif
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	11/28/06 17:47	ct
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.82			mg/L	0.02	0.1	11/15/06 21:50	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2350			mg/L	10	20	11/11/06 13:44	cas
Sulfate	SM4500 SO4-D	1330			mg/L	10	50	11/28/06 15:34	mhm
TDS (calculated)	Calculation	2160			mg/L	10	50	02/01/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.09						02/01/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

February 02, 2007

Project ID: OJ00XN

ACZ Project ID: L59908

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 7 ground water samples from Phelps Dodge Sierrita on November 10, 2006. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L59908. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

This project has been revised to include a separate abbreviated list of analytes. This section has been included as an attachment to the original PDF document.

Holding Times

Any analyses not performed within EPA recommended holding times have been qualified with an "H" flag.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures.

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

February 12, 2007

Project ID: OJ00XN
ACZ Project ID: L59908

Bill Dorris:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 10, 2006 and reported on December 08, 2006. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L59908. Please reference this number in all future inquiries.

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

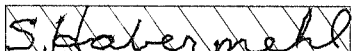
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L59908. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.



12/Feb/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



**FIRST QUARTER 2007
HGC SAMPLE ANALYTICAL DATA REPORTS FROM ACZ**

January 30, 2007

Report to:
Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
Green Valley, AZ 85622-0527

Bill to:
Accounts Payable
Phelps Dodge Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Jim Norris

Project ID: OJ00XN
ACZ Project ID: L60647

Bill Dorris:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 10, 2007. This project has been assigned to ACZ's project number, L60647. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60647. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 28, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



30/Jan/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: GV-1-603428-010907

ACZ Sample ID: **L60647-01**
 Date Sampled: 01/09/07 09:11
 Date Received: 01/10/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	46.0			mg/L	0.2	1	01/11/07 20:22	gme
Magnesium, dissolved	M200.7 ICP	6.6			mg/L	0.2	1	01/11/07 20:22	gme
Potassium, dissolved	M200.7 ICP	2.7		*	mg/L	0.3	2	01/11/07 20:22	gme
Sodium, dissolved	M200.7 ICP	31.6		*	mg/L	0.3	2	01/11/07 20:22	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		157			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		157			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.1			%			01/30/07 15:46	calc
Sum of Anions		4.4			meq/L	0.1	0.5	01/30/07 15:46	calc
Sum of Cations		4.3			meq/L	0.1	0.5	01/30/07 15:46	calc
Chloride	M300.0 - Ion Chromatography	12.1			mg/L	0.5	3	01/18/07 16:46	nps
Fluoride	M300.0 - Ion Chromatography	0.5	B	*	mg/L	0.1	0.5	01/18/07 16:46	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	1.48			mg/L	0.02	0.1	01/30/07 15:46	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.48		*	mg/L	0.02	0.1	01/10/07 18:50	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/10/07 18:50	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	270			mg/L	10	20	01/12/07 9:37	lcp
Sulfate	300.0 - Ion Chromatography	40.9		*	mg/L	0.5	3	01/18/07 16:46	nps
TDS (calculated)	Calculation	241			mg/L	10	50	01/30/07 15:46	calc
TDS (ratio - measured/calculated)	Calculation	1.12						01/30/07 15:46	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: GV-2-603429-010907

ACZ Sample ID: **L60647-02**
 Date Sampled: 01/09/07 10:07
 Date Received: 01/10/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	76.3			mg/L	0.2	1	01/11/07 20:26	gme
Magnesium, dissolved	M200.7 ICP	12.1			mg/L	0.2	1	01/11/07 20:26	gme
Potassium, dissolved	M200.7 ICP	3.5		*	mg/L	0.3	2	01/11/07 20:26	gme
Sodium, dissolved	M200.7 ICP	36.5		*	mg/L	0.3	2	01/11/07 20:26	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		192			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		192			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-2.3			%			01/30/07 15:46	calc
Sum of Anions		6.8			meq/L	0.1	0.5	01/30/07 15:46	calc
Sum of Cations		6.5			meq/L	0.1	0.5	01/30/07 15:46	calc
Chloride	M300.0 - Ion Chromatography	22.4			mg/L	0.5	3	01/18/07 17:41	nps
Fluoride	M300.0 - Ion Chromatography	0.4	B	*	mg/L	0.1	0.5	01/18/07 17:41	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	2.82			mg/L	0.02	0.1	01/30/07 15:46	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	2.82		*	mg/L	0.02	0.1	01/10/07 18:51	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/10/07 18:51	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	410			mg/L	10	20	01/12/07 9:38	lcp
Sulfate	300.0 - Ion Chromatography	103			mg/L	1	5	01/29/07 13:58	nps
TDS (calculated)	Calculation	382			mg/L	10	50	01/30/07 15:46	calc
TDS (ratio - measured/calculated)	Calculation	1.07						01/30/07 15:46	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: SIWELL-208825-010907

ACZ Sample ID: **L60647-03**
 Date Sampled: 01/09/07 11:56
 Date Received: 01/10/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	39.4			mg/L	0.2	1	01/11/07 20:30	gme
Magnesium, dissolved	M200.7 ICP	5.7			mg/L	0.2	1	01/11/07 20:30	gme
Potassium, dissolved	M200.7 ICP	3.0		*	mg/L	0.3	2	01/11/07 20:30	gme
Sodium, dissolved	M200.7 ICP	28.5		*	mg/L	0.3	2	01/11/07 20:30	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		178			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		178			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-2.6			%			01/30/07 15:46	calc
Sum of Anions		3.9			meq/L	0.1	0.5	01/30/07 15:46	calc
Sum of Cations		3.7			meq/L	0.1	0.5	01/30/07 15:46	calc
Chloride	M300.0 - Ion Chromatography	7.9			mg/L	0.5	3	01/18/07 17:59	nps
Fluoride	M300.0 - Ion Chromatography	0.3	B	*	mg/L	0.1	0.5	01/18/07 17:59	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.55			mg/L	0.02	0.1	01/30/07 15:46	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.55			mg/L	0.02	0.1	01/10/07 18:52	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/10/07 18:52	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	220			mg/L	10	20	01/12/07 9:40	lcp
Sulfate	300.0 - Ion Chromatography	5.7		*	mg/L	0.5	3	01/18/07 17:59	nps
TDS (calculated)	Calculation	200			mg/L	10	50	01/30/07 15:46	calc
TDS (ratio - measured/calculated)	Calculation	1.10						01/30/07 15:46	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: CANOARANCH-586729-01

ACZ Sample ID: **L60647-04**
 Date Sampled: 01/09/07 14:01
 Date Received: 01/10/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	69.9			mg/L	0.2	1	01/11/07 20:34	gme
Magnesium, dissolved	M200.7 ICP	11.7			mg/L	0.2	1	01/11/07 20:34	gme
Potassium, dissolved	M200.7 ICP	3.7		*	mg/L	0.3	2	01/11/07 20:34	gme
Sodium, dissolved	M200.7 ICP	37.1		*	mg/L	0.3	2	01/11/07 20:34	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		180			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		180			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-3.9			%			01/30/07 15:46	calc
Sum of Anions		6.6			meq/L	0.1	0.5	01/30/07 15:46	calc
Sum of Cations		6.1			meq/L	0.1	0.5	01/30/07 15:46	calc
Chloride	M300.0 - Ion Chromatography	18.5			mg/L	0.5	3	01/18/07 18:17	nps
Fluoride	M300.0 - Ion Chromatography	0.3	B	*	mg/L	0.1	0.5	01/18/07 18:17	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	1.90			mg/L	0.02	0.1	01/30/07 15:46	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.90			mg/L	0.02	0.1	01/10/07 18:55	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/10/07 18:55	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	400			mg/L	10	20	01/12/07 9:41	lcp
Sulfate	300.0 - Ion Chromatography	111		*	mg/L	1	5	01/19/07 13:27	nps
TDS (calculated)	Calculation	369			mg/L	10	50	01/30/07 15:46	calc
TDS (ratio - measured/calculated)	Calculation	1.08						01/30/07 15:46	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita

ACZ Project ID: **L60647**

Project ID: OJ00XN

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Dial
WG219332													
WG219332LCSW2	LCSW	01/17/07 13:20	WC061230-1	820		823.9	mg/L	100.5	80	120			
WG219332LCSW5	LCSW	01/17/07 16:05	WC061230-1	820		828.1	mg/L	101	80	120			
L60660-02DUP	DUP	01/17/07 17:19			225	225.6	mg/L				0.3	20	
WG219332LCSW8	LCSW	01/17/07 18:24	WC061230-1	820		831.7	mg/L	101.4	80	120			

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219103													
WG219103ICV	ICV	01/11/07 18:21	II061230-1	100		99.93	mg/L	99.9	95	105			
WG219103ICB	ICB	01/11/07 18:25				U	mg/L		-0.6	0.6			
WG219103LFB	LFB	01/11/07 18:41	II070102-4	67.95918		70.16	mg/L	103.2	85	115			
L60629-02AS	AS	01/11/07 19:45	II070102-4	67.95918	66.1	131.75	mg/L	96.6	85	115			
L60629-02ASD	ASD	01/11/07 19:49	II070102-4	67.95918	66.1	131.68	mg/L	96.5	85	115	0.05	20	

Chloride

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	20		20.21	mg/L	101.1	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	20		20.17	mg/L	100.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	20		20.21	mg/L	101.1	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	20		20.27	mg/L	101.4	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-1.5	1.5			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	30		30.14	mg/L	100.5	90	110			
L60625-01DUP	DUP	01/18/07 14:40			8.4	7.6	mg/L				10	20	
L60625-02AS	AS	01/18/07 15:16	IC061106-1	30	5.3	34.67	mg/L	97.9	90	110			
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	30		29.99	mg/L	100	90	110			
L60693-01DUP	DUP	01/18/07 23:25			43.4	43.33	mg/L				0.2	20	
L60693-02AS	AS	01/19/07 0:01	IC061106-1	30	7.3	36.79	mg/L	98.3	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L60647**

Project ID: OJ00XN

Fluoride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-0.3	0.3			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	3.992		3.99	mg/L	99.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-0.3	0.3			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-0.3	0.3			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	3.992		4.12	mg/L	103.2	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-0.3	0.3			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	1.5		1.55	mg/L	103.3	90	110			
L60625-01DUP	DUP	01/18/07 14:40			.3	.28	mg/L				6.9	20	RA
L60625-02AS	AS	01/18/07 15:16	IC061106-1	1.5	.3	1.81	mg/L	100.7	90	110			
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	1.5		1.53	mg/L	102	90	110			
L60693-01DUP	DUP	01/18/07 23:25			.5	.46	mg/L				8.3	20	RA
L60693-02AS	AS	01/19/07 0:01	IC061106-1	1.5	.3	1.84	mg/L	102.7	90	110			

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219103													
WG219103ICV	ICV	01/11/07 18:21	II061230-1	100		97.37	mg/L	97.4	95	105			
WG219103ICB	ICB	01/11/07 18:25				U	mg/L		-0.6	0.6			
WG219103LFB	LFB	01/11/07 18:41	II070102-4	54.98614		55.83	mg/L	101.5	85	115			
L60629-02AS	AS	01/11/07 19:45	II070102-4	54.98614	7.1	57.77	mg/L	92.2	85	115			
L60629-02ASD	ASD	01/11/07 19:49	II070102-4	54.98614	7.1	57.79	mg/L	92.2	85	115	0.03	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219104													
WG219104ICV	ICV	01/10/07 18:28	WI061207-1	2.416		2.363	mg/L	97.8	90	110			
WG219104ICB	ICB	01/10/07 18:29				U	mg/L		-0.06	0.06			
WG219104LFB	LFB	01/10/07 18:33	WI060906-4	2		1.99	mg/L	99.5	90	110			
L60636-01AS	AS	01/10/07 18:35	WI060906-4	40	9.1	40.14	mg/L	77.6	90	110			M2
L60647-03AS	AS	01/10/07 18:54	WI060906-4	2	.55	2.482	mg/L	96.6	90	110			
L60647-04DUP	DUP	01/10/07 18:56			1.9	1.934	mg/L				1.8	20	
L60646-01DUP	DUP	01/10/07 19:02			21.2	21.23	mg/L				0.1	20	

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219104													
WG219104ICV	ICV	01/10/07 18:28	WI061207-1	.609		.618	mg/L	101.5	90	110			
WG219104ICB	ICB	01/10/07 18:29				U	mg/L		-0.03	0.03			
WG219104LFB	LFB	01/10/07 18:33	WI060906-4	1		1.036	mg/L	103.6	90	110			
L60636-01AS	AS	01/10/07 18:35	WI060906-4	20	1.9	19.56	mg/L	88.3	90	110			M2
L60646-01DUP	DUP	01/10/07 18:38			U	U	mg/L				0	20	RA
L60647-03AS	AS	01/10/07 18:54	WI060906-4	1	U	1.005	mg/L	100.5	90	110			
L60647-04DUP	DUP	01/10/07 18:56			U	U	mg/L				0	20	RA

Phelps Dodge Sierrita

ACZ Project ID: **L60647**

Project ID: OJ00XN

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219103													
WG219103ICV	ICV	01/11/07 18:21	II061230-1	20		20.5	mg/L	102.5	95	105			
WG219103ICB	ICB	01/11/07 18:25				U	mg/L		-0.9	0.9			
WG219103LFB	LFB	01/11/07 18:41	II070102-4	99.51014		103.79	mg/L	104.3	85	115			
L60629-02AS	AS	01/11/07 19:45	II070102-4	99.51014	5.8	129.26	mg/L	124.1	85	115			M1
L60629-02ASD	ASD	01/11/07 19:49	II070102-4	99.51014	5.8	128.48	mg/L	123.3	85	115	0.61	20	M1

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219160													
WG219160PBW	PBW	01/12/07 9:35				U	mg/L		-20	20			
WG219160LCSW	LCSW	01/12/07 9:36	PCN26278	261		272	mg/L	104.2	80	120			
L60663-07DUP	DUP	01/12/07 9:50			380	386	mg/L				1.6	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219103													
WG219103ICV	ICV	01/11/07 18:21	II061230-1	100		100.13	mg/L	100.1	95	105			
WG219103ICB	ICB	01/11/07 18:25				U	mg/L		-0.9	0.9			
WG219103LFB	LFB	01/11/07 18:41	II070102-4	99.90786		102.86	mg/L	103	85	115			
L60629-02AS	AS	01/11/07 19:45	II070102-4	99.90786	2640	2786.55	mg/L	146.7	85	115			M3
L60629-02ASD	ASD	01/11/07 19:49	II070102-4	99.90786	2640	2747.03	mg/L	107.1	85	115	1.43	20	

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	50		50.79	mg/L	101.6	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	50		51.49	mg/L	103	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-1.5	1.5			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	30		30.25	mg/L	100.8	90	110			
L60625-01DUP	DUP	01/18/07 14:40			3.2	3.26	mg/L				1.9	20	RA
L60625-02AS	AS	01/18/07 15:16	IC061106-1	30	18	46.84	mg/L	96.1	90	110			
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	30		29.58	mg/L	98.6	90	110			
L60693-02AS	AS	01/19/07 0:01	IC061106-1	30	3.6	33.3	mg/L	99	90	110			
L60693-01DUP	DUP	01/22/07 13:41			189	189.5	mg/L				0.3	20	
WG219654													
WG219654ICV	ICV	01/29/07 13:03	IC070104-1	50		50.87	mg/L	101.7	90	110			
WG219654ICB	ICB	01/29/07 13:21				U	mg/L		-1.5	1.5			
WG219654LFB	LFB	01/29/07 13:40	IC061106-1	30		29.6	mg/L	98.7	90	110			
L60647-02DUP	DUP	01/29/07 14:16			103	103.3	mg/L				0.3	20	
L60766-01AS	AS	01/29/07 14:52	IC061106-1	30	64.8	93.06	mg/L	94.2	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L60647**

ACZ ID	WGRVNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60647-01	WG219103	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
		Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219104	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M353.2 - Automated Cadmium Reduction	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60647-02	WG219103	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
		Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219104	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M353.2 - Automated Cadmium Reduction	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60647-03	WG219103	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
		Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219104	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L60647**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60647-04	WG219103	Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
		Sodium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219104	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L60647**

No certification qualifiers associated with this analysis

Sample Receipt

Phelps Dodge Sierrita
 OJ00XN

ACZ Project ID: L60647
 Date Received: 1/10/2007
 Received By:
 Date Printed: 1/29/2007

Receipt Verification

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

YES	NO	NA
		X
		X
		X
X		
X		
X		
X		
X		
X		
		X
		X
		X
		X

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA2794	5	13

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

Notes

Phelps Dodge Sierrita

ACZ Project ID: L60647
 Date Received: 1/10/2007
 Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60647-01	GV-1-603426-010907		Y									<input type="checkbox"/>
L60647-02	GV-2-603429-010907		Y									<input type="checkbox"/>
L60647-03	SIWELL-208825-010907		Y									<input type="checkbox"/>
L60647-04	CANOARANCH-586729-01		Y									<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparatiior

Sample IDs Reviewed By: _____



HYDRO GEO CHEM, INC.
Environmental Science & Technology

L60647

Chain of Custody

DATE: 1/9/07 PAGE 2 OF 2

PROJ. MGR.		ANALYSIS REQUEST		RECEIVED BY		RECEIVED BY (LABORATORY)	
Sally Haber Mend		TOTAL ORGANIC CARBON 415/9060		[Signature]		[Signature]	
Sally Haber Mend		TOTAL ORGANIC HALIDES 9020		[Signature]		[Signature]	
Sally Haber Mend		TOTAL ORGANIC AROMATIC VOLATILES		[Signature]		[Signature]	
Sally Haber Mend		TOTAL ORGANIC HALOGENATED VOLATILES 801/8010		[Signature]		[Signature]	
Sally Haber Mend		PHENOLS SUB PHENOLS 604/8040		[Signature]		[Signature]	
Sally Haber Mend		AROMATIC POLYNUCLEAR 610/8310		[Signature]		[Signature]	
Sally Haber Mend		PESTICIDES/PCB 608/8080		[Signature]		[Signature]	
Sally Haber Mend		VOLATILE CMPDS GC/MS/ 624/8240		[Signature]		[Signature]	
Sally Haber Mend		BASE/NEU/ACID CMPDS GC/MS/ 625/8270		[Signature]		[Signature]	
Sally Haber Mend		PRIORITY POLLUTANT METALS (13)		[Signature]		[Signature]	
Sally Haber Mend		CAM METALS (18) TLC/STLC		[Signature]		[Signature]	
Sally Haber Mend		EP TOX METALS (8)		[Signature]		[Signature]	
Sally Haber Mend		SDWA INORGANICS PRIMARY/SECONDARY		[Signature]		[Signature]	
Sally Haber Mend		NUMBER OF CONTAINERS		[Signature]		[Signature]	

PROJECT INFORMATION	SAMPLE RECEIPT
PROJECT: Santa Short	TOTAL NO. OF CONTAINERS
PQ NO.	CHAIN OF CUSTODY SEALS
SHIPPING ID. NO.	REC'D GOOD CONDITION/COLD
VIA:	CONFORMS TO RECORD
	LAB NO.
SPECIAL INSTRUCTIONS/COMMENTS:	

INVOICE TO:	RECEIVED BY	RECEIVED BY (LABORATORY)
	[Signature]	[Signature]
	[Printed Name]	[Printed Name]
	[Company]	[Company]
	[Signature]	[Signature]
	[Printed Name]	[Printed Name]
	[Company]	[Company]

January 23, 2007

Report to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd.
Tucson, AZ 85705-1678

Bill to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Project ID:

ACZ Project ID: L60648

Kimberly Garcia:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 10, 2007. This project has been assigned to ACZ's project number, L60648. Please reference this number in all future inquiries.

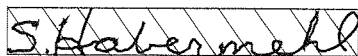
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60648. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 23, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



23/Jan/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Hydro Geo Chem, Inc.

Project ID:

Sample ID: GV-1-603428-010907

ACZ Sample ID: **L60648-01**

Date Sampled: 01/09/07 09:10

Date Received: 01/10/07

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	40.8			mg/L	0.5	3	01/18/07 18:35	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID:

Sample ID: GV-2-603429-010907

ACZ Sample ID: **L60648-02**

Date Sampled: 01/09/07 10:06

Date Received: 01/10/07

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	105			mg/L	1	5	01/19/07 13:45	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID:

Sample ID: STWELL-208825-010907

ACZ Sample ID: **L60648-03**

Date Sampled: 01/09/07 11:55

Date Received: 01/10/07

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	5.7			mg/L	0.5	3	01/18/07 19:47	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID:

Sample ID: CANOARANCH-586729-01

ACZ Sample ID: **L60648-04**

Date Sampled: 01/09/07 14:01

Date Received: 01/10/07

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	110			mg/L	1	5	01/19/07 14:22	nps

Arizona license number: AZ0102



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Hydro Geo Chem, Inc.

ACZ Project ID: **L60648**

Project ID:

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	50		50.79	mg/L	101.6	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	50		51.49	mg/L	103	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-1.5	1.5			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	30		30.25	mg/L	100.8	90	110			
L60648-01DUP	DUP	01/18/07 18:53			40.8	40.95	mg/L				0.4	20	
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	30		29.58	mg/L	98.6	90	110			
L60693-02AS	AS	01/19/07 0:01	IC061106-1	30	3.6	33.3	mg/L	99	90	110			
L60648-02AS	AS	01/19/07 14:03	IC061106-1	60	105	159.9	mg/L	91.5	90	110			
L60693-01DUP	DUP	01/22/07 13:41			189	189.5	mg/L				0.3	20	

Hydro Geo Chem, Inc.

ACZ Project ID: **L60648**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
--------	---------	-----------	--------	------	-------------

No extended qualifiers associated with this analysis

Hydro Geo Chem, Inc.

ACZ Project ID: **L60648**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.

ACZ Project ID: L60648
 Date Received: 1/10/2007
 Received By:
 Date Printed: 1/10/2007

Receipt Verification

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

	YES	NO	NA
			X
			X
			X
X			
X			
X			
X			
X			
			X
			X
			X
			X

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

N/A

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

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
NA2794		5	13

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

Notes

Hydro Geo Chem, Inc.

ACZ Project ID: L60648
 Date Received: 1/10/2007
 Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60648-01	GV-1-603428-010907									X		<input type="checkbox"/>
L60648-02	GV-2-603429-010907									X		<input type="checkbox"/>
L60648-03	STWELL-208825-010907									X		<input type="checkbox"/>
L60648-04	CANOARANCH-586729-01									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

January 17, 2007

Report to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Bill to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Project ID: 78306.2

ACZ Project ID: L60585

Kimberly Garcia:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 04, 2007. This project has been assigned to ACZ's project number, L60585. Please reference this number in all future inquiries.


All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60585. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 17, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



17/Jan/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Hydro Geo Chem, Inc.

Project ID: 78306.2
Sample ID: ESP-3-010307

ACZ Sample ID: **L60585-01**
Date Sampled: 01/03/07 13:10
Date Received: 01/04/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	37.2		*	mg/L	0.5	3	01/12/07 18:22	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 78306.2
Sample ID: ESP-2-010307

ACZ Sample ID: **L60585-02**
Date Sampled: 01/03/07 13:35
Date Received: 01/04/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	30.9		*	mg/L	0.5	3	01/12/07 18:58	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 78306.2
Sample ID: ESP-1-010307

ACZ Sample ID: **L60585-03**
Date Sampled: 01/03/07 13:55
Date Received: 01/04/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	245		*	mg/L	3	10	01/15/07 15:20	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 78306.2
Sample ID: CW-7-010307

ACZ Sample ID: **L60585-04**
Date Sampled: 01/03/07 14:10
Date Received: 01/04/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	812		*	mg/L	5	30	01/15/07 15:38	nps

Arizona license number: AZ0102

ACZ Laboratories, Inc.

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.

Project ID: 78306.2
Sample ID: CW-9-010307

ACZ Sample ID: **L60585-05**
Date Sampled: 01/03/07 14:40
Date Received: 01/04/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	44.9		*	mg/L	0.5	3	01/12/07 20:29	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 78306.2
Sample ID: CW-6-010307

ACZ Sample ID: **L60585-06**
Date Sampled: 01/03/07 15:00
Date Received: 01/04/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	49.2		*	mg/L	0.5	3	01/12/07 20:47	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 78306.2
Sample ID: GW-DUP-010307A

ACZ Sample ID: **L60585-07**
Date Sampled: 01/03/07 00:00
Date Received: 01/04/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	49.8		*	mg/L	0.5	3	01/12/07 21:05	nps

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Hydro Geo Chem, Inc.

ACZ Project ID: **L60585**

Project ID: 78306.2

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	50		50.79	mg/L	101.6	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219171LFB1	LFB	01/12/07 13:14	IC061106-1	30		31	mg/L	103.3	90	110			
L60584-01DUP	DUP	01/12/07 18:04			4	3.99	mg/L				0.3	20	RA
L60585-01AS	AS	01/12/07 18:40	IC061106-1	30	37.2	66.14	mg/L	96.5	90	110			
WG219171LFB2	LFB	01/12/07 21:59	IC061106-1	30		30.1	mg/L	100.3	90	110			

Hydro Geo Chem, Inc.

ACZ Project ID: **L60585**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60585-01	WG219171	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60585-02	WG219171	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60585-03	WG219171	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60585-04	WG219171	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60585-05	WG219171	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60585-06	WG219171	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60585-07	WG219171	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Hydro Geo Chem, Inc.

ACZ Project ID: **L60585**

No certification qualifiers associated with this analysis

Sample Receipt

Hydro Geo Chem, Inc.
78306.2

ACZ Project ID: L60585
Date Received: 1/4/2007
Received By:
Date Printed: 1/5/2007

Receipt Verification

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

YES	NO	NA
		X
		X
		X
X		
X		
	X	
X		
X		
X		
		X
		X
		X
		X

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

The following items were not in agreement: sampleid. The containers for sample #2 have an ID of ESP-1, but the time matches with ESP-2 on the chain of custody. The sample ID was entered according to the COC. The sulfate analysis will be run off of the raw sample.

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
na2763	5.2	14

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

Notes

Hydro Geo Chem, Inc.
78306.2

ACZ Project ID: L60585
Date Received: 1/4/2007
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60585-01	ESP-3-010307									X		<input type="checkbox"/>
L60585-02	ESP-2-010307									X		<input type="checkbox"/>
L60585-03	ESP-1-010307									X		<input type="checkbox"/>
L60585-04	CW-7-010307									X		<input type="checkbox"/>
L60585-05	CW-9-010307									X		<input type="checkbox"/>
L60585-06	CW-6-010307									X		<input type="checkbox"/>
L60585-07	GW-DUP-010307A									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

~~L60554~~ L60585

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: Kimberly A. Garcia
 Company: Hydro Geo Chem, Inc.
 E-mail: KimGA@HGCinc.com

Address: 51 W. Wetmore Rd. #101
Tucson AZ 85705
 Telephone: 520-293-1500 x. 123

Copy of Report to:

Name: None
 Company:

E-mail:
 Telephone:

Invoice to:

Name: Kimberly A. Garcia
 Company: Hydro Geo Chem, Inc.
 E-mail: KimGA@HGCinc.com

Address: Same as above
 Telephone:

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

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

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Sierrita - Short
 Project/PO #: M8006.2
 Reporting state for compliance testing: AZ
 Sampler's Name: Mark Arneson / Kim Garcia
 Are any samples NRC licensable material? NO

# of Containers	Metals:	Field EC
	Ca Mg Na K	
	Alk, TDS, Anions	
	CO4 only	

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Metals:	Field EC
ESP-3-010307	1/3/07 1315	GW	2	X X	393
ESP-3-010307	1/3/07 1310	GW	1		293
ESP-2-010307	1/3/07 1330	GW	2	X X	377
ESP-2-010307	1/3/07 1355	GW	1		377
ESP-1-010307	1/3/07 1350	GW	2	X X	869
ESP-1-010307	1/3/07 1355	GW	1		869
CW-7-010307	1/3/07 1410	GW	1		1799
CW-7-010307	1/3/07 1415	GW	2	X X	1799
CW-9-010307	1/3/07 1440	GW	1		387
CW-9-010307	1/3/07 1445	GW	2	X X	387

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

REMARKS

COPY

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<u>[Signature]</u>	<u>1/3/07 1055</u>	<u>[Signature]</u>	<u>14:57:10:44</u>

L60557 L60585
L6014.07

ACZ Laboratories, Inc.

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

pg. 2 of 2

CHAIN of CUSTODY

Report to:

Name: Kimberly A. Garcia
Company: Phoenix Geo Chem Inc
E-mail: KimG@HGInc.com

Address: 51W. Wetmore Rd #10
Tucson AZ 85705
Telephone: 520.297.1500 x.125

Copy of Report to:

Name: None
Company: None

E-mail: /
Telephone: /

Invoice to:

Name: Same as above
Company: Same as above
E-mail: Same as above

Address: Same as above
Telephone: Same as above

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES NO
If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Sierra Short
Project/PO #: 78326.2
Reporting state for compliance testing: AZ
Sampler's Name: Mark Arneson / Kim Garcia
Are any samples NRC licensable material? No

of Containers

Metal
Cadmium
Pb
As
Cu
Mn
Ni
V
Zn
Soil only

Field EC

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Metal	Cadmium	Pb	As	Cu	Mn	Ni	V	Zn	Soil only	Field EC
SW-6-010307	1/3/07 1500	GW	1										X	HR
SW-6-010307	1/3/07 1505	GW	2	X	X									HR
GW-Dup-010307A	1.3.07		2	2	2	2	2	2	2	2	2	2	2	per sample
GW-Dup-010307A	1.3.07		1	5	5	5	5	5	5	5	5	5	5	containers

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

REMARKS

COPY

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
	1/3/07 1655		1.4.07 10:40

January 23, 2007

Report to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Bill to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Project ID:

ACZ Project ID: L60625

Kimberly Garcia:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 09, 2007. This project has been assigned to ACZ's project number, L60625. Please reference this number in all future inquiries.

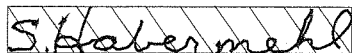
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60625. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 23, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



23/Jan/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Hydro Geo Chem, Inc.

Project ID:
Sample ID: GW-639055-010807

ACZ Sample ID: **L60625-01**
Date Sampled: 01/08/07 13:25
Date Received: 01/09/07
Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	41.9		*	mg/L	0.2	1	01/10/07 15:04	gme
Magnesium, dissolved	M200.7 ICP	8.2			mg/L	0.2	1	01/11/07 18:49	gme
Potassium, dissolved	M200.7 ICP	2.9		*	mg/L	0.3	2	01/10/07 15:04	gme
Sodium, dissolved	M200.7 ICP	29.1		*	mg/L	0.3	2	01/10/07 15:04	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		184			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3		2	B		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		187			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.0			%			01/23/07 13:25	calc
Sum of Anions		4.1			meq/L	0.1	0.5	01/23/07 13:25	calc
Sum of Cations		4.1			meq/L	0.1	0.5	01/23/07 13:25	calc
Chloride	M300.0 - Ion Chromatography	8.4			mg/L	0.5	3	01/18/07 14:22	nps
Fluoride	M300.0 - Ion Chromatography	0.3	B	*	mg/L	0.1	0.5	01/18/07 14:22	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.93			mg/L	0.02	0.1	01/23/07 13:25	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.93			mg/L	0.02	0.1	01/09/07 15:56	jag
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/09/07 15:56	jag
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	250			mg/L	10	20	01/10/07 9:25	lcp
Sulfate	300.0 - Ion Chromatography	3.2		*	mg/L	0.5	3	01/18/07 14:22	nps
TDS (calculated)	Calculation	211			mg/L	10	50	01/23/07 13:25	calc
TDS (ratio - measured/calculated)	Calculation	1.18						01/23/07 13:25	calc

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID:

Sample ID: GW-634037-010807

ACZ Sample ID: **L60625-02**

Date Sampled: 01/08/07 10:45

Date Received: 01/09/07

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	27.2		*	mg/L	0.2	1	01/10/07 15:14	gme
Magnesium, dissolved	M200.7 ICP	7.2			mg/L	0.2	1	01/11/07 19:01	gme
Potassium, dissolved	M200.7 ICP	1.1	B	*	mg/L	0.3	2	01/10/07 15:14	gme
Sodium, dissolved	M200.7 ICP	19.2		*	mg/L	0.3	2	01/10/07 15:14	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		111			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		111			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.0			%			01/23/07 13:26	calc
Sum of Anions		2.8			meq/L	0.1	0.5	01/23/07 13:26	calc
Sum of Cations		2.8			meq/L	0.1	0.5	01/23/07 13:26	calc
Chloride	M300.0 - Ion Chromatography	5.3			mg/L	0.5	3	01/18/07 14:58	nps
Fluoride	M300.0 - Ion Chromatography	0.3	B	*	mg/L	0.1	0.5	01/18/07 14:58	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.63			mg/L	0.02	0.1	01/23/07 13:26	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.63			mg/L	0.02	0.1	01/09/07 15:59	jag
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/09/07 15:59	jag
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	160			mg/L	10	20	01/10/07 9:27	lcp
Sulfate	300.0 - Ion Chromatography	18.0		*	mg/L	0.5	3	01/18/07 14:58	nps
TDS (calculated)	Calculation	148			mg/L	10	50	01/23/07 13:26	calc
TDS (ratio - measured/calculated)	Calculation	1.08						01/23/07 13:26	calc

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID:
Sample ID: GW-206214-010807

ACZ Sample ID: **L60625-03**
Date Sampled: 01/08/07 14:55
Date Received: 01/09/07
Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	47.7		*	mg/L	0.2	1	01/10/07 15:18	gme
Magnesium, dissolved	M200.7 ICP	7.3			mg/L	0.2	1	01/11/07 19:05	gme
Potassium, dissolved	M200.7 ICP	3.1		*	mg/L	0.3	2	01/10/07 15:18	gme
Sodium, dissolved	M200.7 ICP	27.5		*	mg/L	0.3	2	01/10/07 15:18	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		189			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		191			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.2			%			01/23/07 13:26	calc
Sum of Anions		4.1			meq/L	0.1	0.5	01/23/07 13:26	calc
Sum of Cations		4.2			meq/L	0.1	0.5	01/23/07 13:26	calc
Chloride	M300.0 - Ion Chromatography	7.9			mg/L	0.5	3	01/18/07 15:34	nps
Fluoride	M300.0 - Ion Chromatography	0.2	B	*	mg/L	0.1	0.5	01/18/07 15:34	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.69			mg/L	0.02	0.1	01/23/07 13:26	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.69			mg/L	0.02	0.1	01/09/07 16:00	jag
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/09/07 16:00	jag
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	250			mg/L	10	20	01/10/07 9:29	lcp
Sulfate	300.0 - Ion Chromatography	4.1		*	mg/L	0.5	3	01/18/07 15:34	nps
TDS (calculated)	Calculation	214			mg/L	10	50	01/23/07 13:26	calc
TDS (ratio - measured/calculated)	Calculation	1.17						01/23/07 13:26	calc

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID:

Sample ID: GW-639055-010807

ACZ Sample ID: **L60625-04**

Date Sampled: 01/08/07 13:20

Date Received: 01/09/07

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	3.2		*	mg/L	0.5	3	01/18/07 15:52	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID:

Sample ID: GW-634037-010807

ACZ Sample ID: **L60625-05**

Date Sampled: 01/08/07 10:40

Date Received: 01/09/07

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	17.7		*	mg/L	0.5	3	01/18/07 16:10	nps

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID:

Sample ID: GW-206214-010807

ACZ Sample ID: **L60625-06**

Date Sampled: 01/08/07 14:50

Date Received: 01/09/07

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	4.1		*	mg/L	0.5	3	01/18/07 16:28	nps

Arizona license number: AZ0102



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

<i>B</i>	Analyte concentration detected at a value between MDL and PQL.
<i>H</i>	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
<i>R</i>	Poor spike recovery accepted because the other spike in the set fell within the given limits.
<i>T</i>	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
<i>U</i>	Analyte was analyzed for but not detected at the indicated MDL
<i>V</i>	High blank data accepted because sample concentration is 10 times higher than blank concentration
<i>W</i>	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
<i>X</i>	Quality control sample is out of control.
<i>Z</i>	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Hydro Geo Chem, Inc.

ACZ Project ID: **L60625**

Project ID:

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219332													
WG219332LCSW2	LCSW	01/17/07 13:20	WC061230-1	820		823.9	mg/L	100.5	80	120			
L60625-03DUP	DUP	01/17/07 15:52			191	193.7	mg/L				1.4	20	
WG219332LCSW5	LCSW	01/17/07 16:05	WC061230-1	820		828.1	mg/L	101	80	120			
WG219332LCSW8	LCSW	01/17/07 18:24	WC061230-1	820		831.7	mg/L	101.4	80	120			

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219052													
WG219052ICV	ICV	01/10/07 14:27	II061230-1	100		96.61	mg/L	96.6	95	105			
WG219052ICB	ICB	01/10/07 14:31				U	mg/L		-0.6	0.6			
WG219052LFB	LFB	01/10/07 14:44	II070102-4	67.95918		72.15	mg/L	106.2	85	115			
L60624-01AS	AS	01/10/07 14:54	II070102-4	67.95918	422	503.65	mg/L	120.1	85	115			M3
L60624-01ASD	ASD	01/10/07 14:58	II070102-4	67.95918	422	492.76	mg/L	104.1	85	115	2.19	20	

Chloride

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	20		20.21	mg/L	101.1	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	20		20.17	mg/L	100.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	20		20.21	mg/L	101.1	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	20		20.27	mg/L	101.4	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-1.5	1.5			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	30		30.14	mg/L	100.5	90	110			
L60625-01DUP	DUP	01/18/07 14:40			8.4	7.6	mg/L				10	20	
L60625-02AS	AS	01/18/07 15:16	IC061106-1	30	5.3	34.67	mg/L	97.9	90	110			
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	30		29.99	mg/L	100	90	110			

Hydro Geo Chem, Inc.

ACZ Project ID: **L60625**

Project ID:

Fluoride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-0.3	0.3			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	3.992		3.99	mg/L	99.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-0.3	0.3			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-0.3	0.3			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	3.992		4.12	mg/L	103.2	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-0.3	0.3			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	1.5		1.55	mg/L	103.3	90	110			
L60625-01DUP	DUP	01/18/07 14:40			.3	.28	mg/L				6.9	20	RA
L60625-02AS	AS	01/18/07 15:16	IC061106-1	1.5	.3	1.81	mg/L	100.7	90	110			
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	1.5		1.53	mg/L	102	90	110			

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219103													
WG219103ICV	ICV	01/11/07 18:21	II061230-1	100		97.37	mg/L	97.4	95	105			
WG219103ICB	ICB	01/11/07 18:25				U	mg/L		-0.6	0.6			
WG219103LFB	LFB	01/11/07 18:41	II070102-4	54.98614		55.83	mg/L	101.5	85	115			
L60625-01AS	AS	01/11/07 18:53	II070102-4	54.98614	8.2	65.05	mg/L	103.4	85	115			
L60625-01ASD	ASD	01/11/07 18:57	II070102-4	54.98614	8.2	65.15	mg/L	103.6	85	115	0.15	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219046													
WG219046ICV	ICV	01/09/07 15:43	WI061207-1	2.416		2.402	mg/L	99.4	90	110			
WG219046ICB	ICB	01/09/07 15:44				U	mg/L		-0.06	0.06			
WG219046ICV1	ICV	01/09/07 15:50	WI061207-1	2.416		2.35	mg/L	97.3	90	110			
WG219046ICB1	ICB	01/09/07 15:52				U	mg/L		-0.06	0.06			
WG219046LFB	LFB	01/09/07 15:53	WI060906-4	2		1.92	mg/L	96	90	110			
L60617-01AS	AS	01/09/07 15:55	WI060906-4	100	U	92.5	mg/L	92.5	90	110			
L60625-01DUP	DUP	01/09/07 15:58			.93	.916	mg/L				1.5	20	

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219046													
WG219046ICV	ICV	01/09/07 15:43	WI061207-1	.609		.604	mg/L	99.2	90	110			
WG219046ICB	ICB	01/09/07 15:44				U	mg/L		-0.03	0.03			
WG219046ICV1	ICV	01/09/07 15:50	WI061207-1	.609		.625	mg/L	102.6	90	110			
WG219046ICB1	ICB	01/09/07 15:52				U	mg/L		-0.03	0.03			
WG219046LFB	LFB	01/09/07 15:53	WI060906-4	1		1.008	mg/L	100.8	90	110			
L60617-01AS	AS	01/09/07 15:55	WI060906-4	50	.6	48.54	mg/L	95.9	90	110			
L60625-01DUP	DUP	01/09/07 15:58			U	U	mg/L				0	20	RA

Hydro Geo Chem, Inc.

ACZ Project ID: **L60625**

Project ID:

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219052													
WG219052ICV	ICV	01/10/07 14:27	II061230-1	20		19.82	mg/L	99.1	95	105			
WG219052ICB	ICB	01/10/07 14:31				U	mg/L		-0.9	0.9			
WG219052LFB	LFB	01/10/07 14:44	II070102-4	99.51014		108.59	mg/L	109.1	85	115			
L60624-01AS	AS	01/10/07 14:54	II070102-4	99.51014	11.4	139.35	mg/L	128.6	85	115			M1
L60624-01ASD	ASD	01/10/07 14:58	II070102-4	99.51014	11.4	134.48	mg/L	123.7	85	115	3.56	20	M1

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219066													
WG219066PBW	PBW	01/10/07 9:10				U	mg/L		-20	20			
WG219066LCSW	LCSW	01/10/07 9:11	PCN26278	261		260	mg/L	99.6	80	120			
L60625-01DUP	DUP	01/10/07 9:26			250	218	mg/L				13.7	20	
L60633-06DUP	DUP	01/10/07 9:40			4110	4110	mg/L				0	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219052													
WG219052ICV	ICV	01/10/07 14:27	II061230-1	100		98.23	mg/L	98.2	95	105			
WG219052ICB	ICB	01/10/07 14:31				U	mg/L		-0.9	0.9			
WG219052LFB	LFB	01/10/07 14:44	II070102-4	99.90786		106.74	mg/L	106.8	85	115			
L60624-01AS	AS	01/10/07 14:54	II070102-4	99.90786	48.2	169.14	mg/L	121.1	85	115			M1
L60624-01ASD	ASD	01/10/07 14:58	II070102-4	99.90786	48.2	164.24	mg/L	116.1	85	115	2.94	20	M1

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	50		50.79	mg/L	101.6	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	50		51.49	mg/L	103	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-1.5	1.5			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	30		30.25	mg/L	100.8	90	110			
L60625-01DUP	DUP	01/18/07 14:40			3.2	3.26	mg/L				1.9	20	RA
L60625-02AS	AS	01/18/07 15:16	IC061106-1	30	18	46.84	mg/L	96.1	90	110			
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	30		29.58	mg/L	98.6	90	110			

Hydro Geo Chem, Inc.

ACZ Project ID: **L60625**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60625-01	WG219052	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
		Sodium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219046	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60625-02	WG219052	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
		Sodium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219046	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60625-03	WG219052	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Potassium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
		Sodium, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219046	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60625-04	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60625-05	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60625-06	WG219373	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Hydro Geo Chem, Inc.

ACZ Project ID: **L60625**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.

ACZ Project ID: L60625
 Date Received: 1/9/2007
 Received By:
 Date Printed: 1/9/2007

Receipt Verification

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

YES	NO	NA
		X
		X
		X
X		
X		
X		
X		
X		
X		
		X
		X
		X
		X

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA2785	5.3	13

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

Notes

Hydro Geo Chem, Inc.

ACZ Project ID: L60625
 Date Received: 1/9/2007
 Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60625-01	GW-639055-010807		Y									<input type="checkbox"/>
L60625-02	GW-634037-010807		Y									<input type="checkbox"/>
L60625-03	GW-206214-010807		Y									<input type="checkbox"/>
L60625-04	GW-639055-010807									X		<input type="checkbox"/>
L60625-05	GW-634037-010807									X		<input type="checkbox"/>
L60625-06	GW-206214-010807									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L60625

CHAIN of CUSTODY

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

Report to:

Name: Kim Garcia
 Company: HydroGeo Chem Inc.
 E-mail: kimc@HGC inc. com

Address: 51 W. Wetmore, Suite 101
Tucson, AZ 85705
 Telephone: 520-293-1500 x. 123

Copy of Report to:

Name: /
 Company: /

E-mail: /
 Telephone: /

Invoice to:

Name: /
 Company: Same as Above
 E-mail: /

Address: Same as Above
 Telephone: /

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

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Siemita Chart
 Project/PO #: /
 Reporting state for compliance testing: AZ
 Sampler's Name: Kim Garcia
 Are any samples NRC licensable material? /

of Containers

Metals:
 Ca Mg Na K
 Wet Chem:
 Alk, TDS, Ammonia
 sulfate only

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Ca	Mg	Na	K	Alk	TDS	Ammonia	SO4
GW-039055-010807	1/8/07 1325	GW	2	X	X						
GW-034037-010807	1/8/07 1045	GW	2	X	X						
GW-0206214-010807	1/8/07 1455	GW	2	X	X						
GW-039055-010807	1/8/07 1320	GW	1							X	
GW-034037-010807	1/8/07 1040	GW	1							X	
GW-0206214-010807	1/8/07 1450	GW	1							X	

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

REMARKS

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

[Signature]

1/8/07 8:00

[Signature]

1.9.07 10:28

January 17, 2007

Report to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Bill to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Project ID:

ACZ Project ID: L60584

Kimberly Garcia:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 04, 2007. This project has been assigned to ACZ's project number, L60584. Please reference this number in all future inquiries.

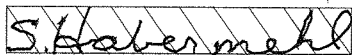
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60584. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 17, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



17/Jan/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Hydro Geo Chem, Inc.

Project ID:

Sample ID: GW-640358-010207

ACZ Sample ID: **L60584-01**

Date Sampled: 01/02/07 16:25

Date Received: 01/04/07

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XD	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	4.0		*	mg/L	0.5	3	01/12/07 17:46	nps

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

Hydro Geo Chem, Inc.
 Project ID:

ACZ Project ID: **L60584**

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	50		50.79	mg/L	101.6	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219171LFB1	LFB	01/12/07 13:14	IC061106-1	30		31	mg/L	103.3	90	110			
L60584-01DUP	DUP	01/12/07 18:04			4	3.99	mg/L				0.3	20	RA
L60585-01AS	AS	01/12/07 18:40	IC061106-1	30	37.2	66.14	mg/L	96.5	90	110			
WG219171LFB2	LFB	01/12/07 21:59	IC061106-1	30		30.1	mg/L	100.3	90	110			

Hydro Geo Chem, Inc.

ACZ Project ID: **L60584**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60584-01	WG219171	Sulfate	300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Hydro Geo Chem, Inc.

ACZ Project ID: **L60584**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.

ACZ Project ID: L60584
 Date Received: 1/4/2007
 Received By:
 Date Printed: 1/5/2007

Receipt Verification

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

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

The sulfate analysis will be run off of a raw sample.

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
na2761	5.5	14

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

Notes

Hydro Geo Chem, Inc.

ACZ Project ID: L60584
Date Received: 1/4/2007
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60584-01	GW-640358-010207									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

January 18, 2007

Report to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Bill to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Project ID: 78306.2

ACZ Project ID: L60568

Kimberly Garcia:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 04, 2007. This project has been assigned to ACZ's project number, L60568. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60568. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 18, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



18/Jan/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Hydro Geo Chem, Inc.

Project ID: 78306.2
 Sample ID: ESP-3-010307

ACZ Sample ID: **L60568-01**
 Date Sampled: 01/03/07 13:15
 Date Received: 01/04/07
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	393			mS/cm			01/03/07 13:15	kg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	36.0			mg/L	0.2	1	01/06/07 18:51	gme
Magnesium, dissolved	M200.7 ICP	3.6			mg/L	0.2	1	01/05/07 22:01	gme
Potassium, dissolved	M200.7 ICP	2.9			mg/L	0.3	2	01/05/07 22:01	gme
Sodium, dissolved	M200.7 ICP	40.1			mg/L	0.3	2	01/05/07 22:01	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		138			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		138			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.3			%			01/18/07 12:04	calc
Sum of Anions		3.8			meq/L	0.1	0.5	01/18/07 12:04	calc
Sum of Cations		3.9			meq/L	0.1	0.5	01/18/07 12:04	calc
Chloride	M300.0 - Ion Chromatography	8.3			mg/L	0.5	3	01/12/07 15:03	nps
Fluoride	M300.0 - Ion Chromatography	0.9		*	mg/L	0.1	0.5	01/12/07 15:03	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.50			mg/L	0.02	0.1	01/18/07 12:04	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.52			mg/L	0.02	0.1	01/04/07 20:52	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.02	B	*	mg/L	0.01	0.05	01/04/07 20:52	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	230			mg/L	10	20	01/05/07 13:03	lcp
Sulfate	300.0 - Ion Chromatography	37.5			mg/L	0.5	3	01/12/07 15:03	nps
TDS (calculated)	Calculation	214			mg/L	10	50	01/18/07 12:04	calc
TDS (ratio - measured/calculated)	Calculation	1.07						01/18/07 12:04	calc

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 78306.2
 Sample ID: ESP-2-010307

ACZ Sample ID: **L60568-02**
 Date Sampled: 01/03/07 13:30
 Date Received: 01/04/07
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	377			mS/cm			01/03/07 13:30	kg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	35.5			mg/L	0.2	1	01/06/07 18:55	gme
Magnesium, dissolved	M200.7 ICP	3.3			mg/L	0.2	1	01/05/07 22:05	gme
Potassium, dissolved	M200.7 ICP	2.8			mg/L	0.3	2	01/05/07 22:05	gme
Sodium, dissolved	M200.7 ICP	38.5			mg/L	0.3	2	01/05/07 22:05	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		139			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		139			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.3			%			01/18/07 12:04	calc
Sum of Anions		3.7			meq/L	0.1	0.5	01/18/07 12:04	calc
Sum of Cations		3.8			meq/L	0.1	0.5	01/18/07 12:04	calc
Chloride	M300.0 - Ion Chromatography	8.2			mg/L	0.5	3	01/12/07 15:21	nps
Fluoride	M300.0 - Ion Chromatography	0.8		*	mg/L	0.1	0.5	01/12/07 15:21	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.50			mg/L	0.02	0.1	01/18/07 12:04	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.51			mg/L	0.02	0.1	01/04/07 20:54	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.01	B	*	mg/L	0.01	0.05	01/04/07 20:54	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	160			mg/L	10	20	01/05/07 13:05	lcp
Sulfate	300.0 - Ion Chromatography	31.3			mg/L	0.5	3	01/12/07 15:21	nps
TDS (calculated)	Calculation	206			mg/L	10	50	01/18/07 12:04	calc
TDS (ratio - measured/calculated)	Calculation	0.78						01/18/07 12:04	calc

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 78306.2
 Sample ID: ESP-1-010307

ACZ Sample ID: **L60568-03**
 Date Sampled: 01/03/07 13:50
 Date Received: 01/04/07
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	869			mS/cm			01/03/07 13:50	kg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	120			mg/L	0.2	1	01/06/07 19:07	gme
Magnesium, dissolved	M200.7 ICP	11.2			mg/L	0.2	1	01/05/07 22:17	gme
Potassium, dissolved	M200.7 ICP	4.1			mg/L	0.3	2	01/05/07 22:17	gme
Sodium, dissolved	M200.7 ICP	50.2			mg/L	0.3	2	01/05/07 22:17	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		122			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		122			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		2.8			%			01/18/07 12:04	calc
Sum of Anions		8.7			meq/L	0.1	0.5	01/18/07 12:04	calc
Sum of Cations		9.2			meq/L	0.1	0.5	01/18/07 12:04	calc
Chloride	M300.0 - Ion Chromatography	38.7			mg/L	0.5	3	01/12/07 15:39	nps
Fluoride	M300.0 - Ion Chromatography	0.4	B	*	mg/L	0.1	0.5	01/12/07 15:39	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	1.34			mg/L	0.02	0.1	01/18/07 12:04	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.36			mg/L	0.02	0.1	01/04/07 20:58	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.02	B	*	mg/L	0.01	0.05	01/04/07 20:58	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	590			mg/L	10	20	01/05/07 13:06	lcp
Sulfate	300.0 - Ion Chromatography	242			mg/L	3	10	01/15/07 14:44	nps
TDS (calculated)	Calculation	546			mg/L	10	50	01/18/07 12:04	calc
TDS (ratio - measured/calculated)	Calculation	1.08						01/18/07 12:04	calc

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 78306.2
 Sample ID: CW-7-010307

ACZ Sample ID: **L60568-04**
 Date Sampled: 01/03/07 14:15
 Date Received: 01/04/07
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1799			mS/cm			01/03/07 14:15	kg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	304			mg/L	0.2	1	01/06/07 19:11	gme
Magnesium, dissolved	M200.7 ICP	33.1			mg/L	0.2	1	01/05/07 22:29	gme
Potassium, dissolved	M200.7 ICP	6.7			mg/L	0.3	2	01/05/07 22:29	gme
Sodium, dissolved	M200.7 ICP	75.4			mg/L	0.3	2	01/05/07 22:29	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		95			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		95			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.9			%			01/18/07 12:04	calc
Sum of Anions		21.0			meq/L	0.1	0.5	01/18/07 12:04	calc
Sum of Cations		21.4			meq/L	0.1	0.5	01/18/07 12:04	calc
Chloride	M300.0 - Ion Chromatography	71.4			mg/L	0.5	3	01/12/07 15:57	nps
Fluoride	M300.0 - Ion Chromatography	0.3	B	*	mg/L	0.1	0.5	01/12/07 15:57	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	1.91			mg/L	0.02	0.1	01/18/07 12:04	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.93			mg/L	0.02	0.1	01/04/07 21:00	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.02	B	*	mg/L	0.01	0.05	01/04/07 21:00	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	1420			mg/L	10	20	01/05/07 13:07	lcp
Sulfate	300.0 - Ion Chromatography	807			mg/L	5	30	01/15/07 15:02	nps
TDS (calculated)	Calculation	1360			mg/L	10	50	01/18/07 12:04	calc
TDS (ratio - measured/calculated)	Calculation	1.04						01/18/07 12:04	calc

Arizona license number: AZ0102

ACZ Laboratories, Inc.

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.

Project ID: 78306.2
Sample ID: CW-9-010307

ACZ Sample ID: **L60568-05**
Date Sampled: 01/03/07 14:45
Date Received: 01/04/07
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	387			mS/cm			01/03/07 14:45	kg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	39.3			mg/L	0.2	1	01/06/07 19:23	gme
Magnesium, dissolved	M200.7 ICP	4.1			mg/L	0.2	1	01/05/07 22:33	gme
Potassium, dissolved	M200.7 ICP	2.7			mg/L	0.3	2	01/05/07 22:33	gme
Sodium, dissolved	M200.7 ICP	36.9			mg/L	0.3	2	01/05/07 22:33	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		137			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		137			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.3			%			01/18/07 12:04	calc
Sum of Anions		4.0			meq/L	0.1	0.5	01/18/07 12:04	calc
Sum of Cations		3.9			meq/L	0.1	0.5	01/18/07 12:04	calc
Chloride	M300.0 - Ion Chromatography	8.3			mg/L	0.5	3	01/12/07 16:51	nps
Fluoride	M300.0 - Ion Chromatography	0.5		*	mg/L	0.1	0.5	01/12/07 16:51	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.85			mg/L	0.02	0.1	01/18/07 12:04	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.87			mg/L	0.02	0.1	01/04/07 21:01	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.02	B	*	mg/L	0.01	0.05	01/04/07 21:01	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	240			mg/L	10	20	01/05/07 13:09	lcp
Sulfate	300.0 - Ion Chromatography	44.9			mg/L	0.5	3	01/12/07 16:51	nps
TDS (calculated)	Calculation	223			mg/L	10	50	01/18/07 12:04	calc
TDS (ratio - measured/calculated)	Calculation	1.08						01/18/07 12:04	calc

Arizona license number: AZ0102

Hydro Geo Chem, Inc.

Project ID: 78306.2
 Sample ID: CW-6-010307

ACZ Sample ID: **L60568-06**
 Date Sampled: 01/03/07 15:05
 Date Received: 01/04/07
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	418			mS/cm			01/03/07 15:05	kg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	42.9			mg/L	0.2	1	01/06/07 19:27	gme
Magnesium, dissolved	M200.7 ICP	4.8			mg/L	0.2	1	01/05/07 22:37	gme
Potassium, dissolved	M200.7 ICP	2.8			mg/L	0.3	2	01/05/07 22:37	gme
Sodium, dissolved	M200.7 ICP	37.3			mg/L	0.3	2	01/05/07 22:37	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		134			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		134			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.0			%			01/18/07 12:04	calc
Sum of Anions		4.2			meq/L	0.1	0.5	01/18/07 12:04	calc
Sum of Cations		4.2			meq/L	0.1	0.5	01/18/07 12:04	calc
Chloride	M300.0 - Ion Chromatography	11.8			mg/L	0.5	3	01/12/07 17:09	nps
Fluoride	M300.0 - Ion Chromatography	0.6		*	mg/L	0.1	0.5	01/12/07 17:09	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	1.80			mg/L	0.02	0.1	01/18/07 12:04	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.82			mg/L	0.02	0.1	01/04/07 21:02	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.02	B	*	mg/L	0.01	0.05	01/04/07 21:02	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	260			mg/L	10	20	01/05/07 13:10	lcp
Sulfate	300.0 - Ion Chromatography	49.2			mg/L	0.5	3	01/12/07 17:09	nps
TDS (calculated)	Calculation	238			mg/L	10	50	01/18/07 12:04	calc
TDS (ratio - measured/calculated)	Calculation	1.09						01/18/07 12:04	calc

Arizona license number: AZ0102

ACZ Laboratories, Inc.

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

Inorganic Analytical Results

Hydro Geo Chem, Inc.

Project ID: 78306.2
Sample ID: GW-DUP-010307A

ACZ Sample ID: **L60568-07**
Date Sampled: 01/03/07 00:00
Date Received: 01/04/07
Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	43.0			mg/L	0.2	1	01/06/07 19:31	gme
Magnesium, dissolved	M200.7 ICP	4.9			mg/L	0.2	1	01/05/07 22:41	gme
Potassium, dissolved	M200.7 ICP	2.8			mg/L	0.3	2	01/05/07 22:41	gme
Sodium, dissolved	M200.7 ICP	37.3			mg/L	0.3	2	01/05/07 22:41	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		135			mg/L	2	20	01/17/07 0:00	ct
Carbonate as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Hydroxide as CaCO3			U		mg/L	2	20	01/17/07 0:00	ct
Total Alkalinity		135			mg/L	2	20	01/17/07 0:00	ct
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.0			%			01/18/07 12:04	calc
Sum of Anions		4.2			meq/L	0.1	0.5	01/18/07 12:04	calc
Sum of Cations		4.2			meq/L	0.1	0.5	01/18/07 12:04	calc
Chloride	M300.0 - Ion Chromatography	11.9			mg/L	0.5	3	01/12/07 17:27	nps
Fluoride	M300.0 - Ion Chromatography	0.6		*	mg/L	0.1	0.5	01/12/07 17:27	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	1.87			mg/L	0.02	0.1	01/18/07 12:04	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.88			mg/L	0.02	0.1	01/04/07 21:03	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.01	B	*	mg/L	0.01	0.05	01/04/07 21:03	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	250			mg/L	10	20	01/05/07 13:11	lcp
Sulfate	300.0 - Ion Chromatography	49.5			mg/L	0.5	3	01/12/07 17:27	nps
TDS (calculated)	Calculation	239			mg/L	10	50	01/18/07 12:04	calc
TDS (ratio - measured/calculated)	Calculation	1.05						01/18/07 12:04	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Hydro Geo Chem, Inc.

ACZ Project ID: **L60568**

Project ID: 78306.2

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219332													
WG219332LCSW2	LCSW	01/17/07 13:20	WC061230-1	820		823.9	mg/L	100.5	80	120			
L60615-02DUP	DUP	01/17/07 14:36			135	136	mg/L				0.7	20	
WG219332LCSW5	LCSW	01/17/07 16:05	WC061230-1	820		828.1	mg/L	101	80	120			
WG219332LCSW8	LCSW	01/17/07 18:24	WC061230-1	820		831.7	mg/L	101.4	80	120			

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218929													
WG218929ICV	ICV	01/06/07 17:38	II061230-1	100		99.06	mg/L	99.1	95	105			
WG218929ICB	ICB	01/06/07 17:42				U	mg/L		-0.6	0.6			
WG218929LFB	LFB	01/06/07 17:58	II070102-4	67.95918		74.36	mg/L	109.4	85	115			
L60550-01AS	AS	01/06/07 18:07	II070102-4	135.91836	440	576.72	mg/L	100.6	85	115			
L60550-01ASD	ASD	01/06/07 18:11	II070102-4	135.91836	440	569.24	mg/L	95.1	85	115	1.31	20	
L60568-02AS	AS	01/06/07 18:59	II070102-4	67.95918	35.5	110.16	mg/L	109.9	85	115			
L60568-02ASD	ASD	01/06/07 19:03	II070102-4	67.95918	35.5	110.51	mg/L	110.4	85	115	0.32	20	

Chloride

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	20		20.21	mg/L	101.1	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	20		20.17	mg/L	100.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219171LFB1	LFB	01/12/07 13:14	IC061106-1	30		30.41	mg/L	101.4	90	110			
L60476-01DUP	DUP	01/12/07 13:50			220	219.8	mg/L				0.1	20	
L60476-04AS	AS	01/12/07 14:26	IC061106-1	600	210	835	mg/L	104.2	90	110			
WG219171LFB2	LFB	01/12/07 21:59	IC061106-1	30		30.54	mg/L	101.8	90	110			

Fluoride

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-0.3	0.3			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	3.992		3.99	mg/L	99.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-0.3	0.3			
WG219171LFB1	LFB	01/12/07 13:14	IC061106-1	1.5		1.55	mg/L	103.3	90	110			
L60476-01DUP	DUP	01/12/07 13:50			U	U	mg/L				0	20	RA
L60476-04AS	AS	01/12/07 14:26	IC061106-1	30	3	35.2	mg/L	107.3	90	110			
WG219171LFB2	LFB	01/12/07 21:59	IC061106-1	1.5		1.53	mg/L	102	90	110			

Hydro Geo Chem, Inc.
 Project ID: 78306.2

ACZ Project ID: L60568

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218902													
WG218902ICV	ICV	01/05/07 20:45	II061230-1	100		97.23	mg/L	97.2	95	105			
WG218902ICB	ICB	01/05/07 20:49				U	mg/L		-0.6	0.6			
WG218902LFB	LFB	01/05/07 21:05	II070102-4	54.98614		57.99	mg/L	105.5	85	115			
L60550-01AS	AS	01/05/07 21:13	II070102-4	54.98614	230	286.49	mg/L	102.7	85	115			
L60550-01ASD	ASD	01/05/07 21:17	II070102-4	54.98614	230	285.01	mg/L	100	85	115	0.52	20	
L60568-02AS	AS	01/05/07 22:09	II070102-4	54.98614	3.3	63.01	mg/L	108.6	85	115			
L60568-02ASD	ASD	01/05/07 22:13	II070102-4	54.98614	3.3	63	mg/L	108.6	85	115	0.02	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218873													
WG218873ICV	ICV	01/04/07 20:40	WI061207-1	2.416		2.387	mg/L	98.8	90	110			
WG218873ICB	ICB	01/04/07 20:41				U	mg/L		-0.06	0.06			
WG218873LFB	LFB	01/04/07 20:46	WI060906-4	2		1.976	mg/L	98.8	90	110			
L60564-01AS	AS	01/04/07 20:49	WI060906-4	2	1.66	3.617	mg/L	97.9	90	110			
L60567-01DUP	DUP	01/04/07 20:51			1.18	1.28	mg/L				8.1	20	

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218873													
WG218873ICV	ICV	01/04/07 20:40	WI061207-1	.609		.615	mg/L	101	90	110			
WG218873ICB	ICB	01/04/07 20:41				.012	mg/L		-0.03	0.03			
WG218873LFB	LFB	01/04/07 20:46	WI060906-4	1		.996	mg/L	99.6	90	110			
L60564-01AS	AS	01/04/07 20:49	WI060906-4	1	.01	.992	mg/L	98.2	90	110			
L60567-01DUP	DUP	01/04/07 20:51			.02	.017	mg/L				16.2	20	RA

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218902													
WG218902ICV	ICV	01/05/07 20:45	II061230-1	20		20.06	mg/L	100.3	95	105			
WG218902ICB	ICB	01/05/07 20:49				U	mg/L		-0.9	0.9			
WG218902LFB	LFB	01/05/07 21:05	II070102-4	99.51014		106.11	mg/L	106.6	85	115			
L60550-01AS	AS	01/05/07 21:13	II070102-4	99.51014	6.6	117	mg/L	110.9	85	115			
L60550-01ASD	ASD	01/05/07 21:17	II070102-4	99.51014	6.6	114.44	mg/L	108.4	85	115	2.21	20	
L60568-02AS	AS	01/05/07 22:09	II070102-4	99.51014	2.8	112.29	mg/L	110	85	115			
L60568-02ASD	ASD	01/05/07 22:13	II070102-4	99.51014	2.8	112.54	mg/L	110.3	85	115	0.22	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218892													
WG218892PBW	PBW	01/05/07 13:00				U	mg/L		-20	20			
WG218892LCSW	LCSW	01/05/07 13:01	PCN25977	260		284	mg/L	109.2	80	120			
L60570-01DUP	DUP	01/05/07 13:15			1400	1378	mg/L				1.6	20	

Hydro Geo Chem, Inc.

ACZ Project ID: **L60568**

Project ID: 78306.2

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218902													
WG218902ICV	ICV	01/05/07 20:45	II061230-1	100		99.63	mg/L	99.6	95	105			
WG218902ICB	ICB	01/05/07 20:49				U	mg/L		-0.9	0.9			
WG218902LFB	LFB	01/05/07 21:05	II070102-4					107.4	85	115			
WG218902LFB	LFB	01/05/07 21:05	II070102-4	99.90786		106.15	mg/L	106.2	85	115			
L60550-01AS	AS	01/05/07 21:13	II070102-4	99.90786	379	482.26	mg/L	103.4	85	115			
L60550-01ASD	ASD	01/05/07 21:17	II070102-4	99.90786	379	480.25	mg/L	101.3	85	115	0.42	20	
L60568-02AS	AS	01/05/07 22:09	II070102-4	99.90786	38.5	146.15	mg/L	107.7	85	115			
L60568-02ASD	ASD	01/05/07 22:13	II070102-4	99.90786	38.5	146.25	mg/L	107.8	85	115	0.07	20	

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	50		50.79	mg/L	101.6	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219171LFB1	LFB	01/12/07 13:14	IC061106-1	30		31	mg/L	103.3	90	110			
L60476-01DUP	DUP	01/12/07 13:50			806	804.1	mg/L				0.2	20	
WG219171LFB2	LFB	01/12/07 21:59	IC061106-1	30		30.1	mg/L	100.3	90	110			
L60476-04AS	AS	01/15/07 14:25	IC061106-1	1500	1890	3402	mg/L	100.8	90	110			

Hydro Geo Chem, Inc.

ACZ Project ID: **L60568**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60568-01	WG219171	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218873	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60568-02	WG219171	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218873	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60568-03	WG219171	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218873	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60568-04	WG219171	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218873	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60568-05	WG219171	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218873	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60568-06	WG219171	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218873	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60568-07	WG219171	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218873	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Hydro Geo Chem, Inc.

ACZ Project ID: **L60568**

No certification qualifiers associated with this analysis

Hydro Geo Chem, Inc.
78306.2

ACZ Project ID: L60568
Date Received: 1/4/2007
Received By:
Date Printed: 1/4/2007

Receipt Verification

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

YES	NO	NA
		X
		X
		X
X		
X		
	X	
X		
X		
X		
		X
		X
		X
		X

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

The following items were not in agreement: sampleid. The containers for sample #2 are labeled ESP-1, but the time matches those of ESP-2 on the chain of custody. The sample ID was entered as ESP-2 per the chain of custody.

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

The client was not contacted.

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
na2763	5.2	14

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

Notes

Hydro Geo Chem, Inc.
 78306.2

ACZ Project ID: L60568
 Date Received: 1/4/2007
 Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60568-01	ESP-3-010307		Y									<input type="checkbox"/>
L60568-02	ESP-2-010307		Y									<input type="checkbox"/>
L60568-03	ESP-1-010307		Y									<input type="checkbox"/>
L60568-04	CW-7-010307		Y									<input type="checkbox"/>
L60568-05	CW-9-010307		Y									<input type="checkbox"/>
L60568-06	CW-6-010307		Y									<input type="checkbox"/>
L60568-07	GW-DUP-010307A		Y									<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc.

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

~~L60557~~ L60568
681487

CHAIN of CUSTODY

Report to:

Name: Kimberly A. Garcia
 Company: Hydro Geo Chem, Inc.
 E-mail: kim@HGCinc.com

Address: 51 W. Wetmore Rd #101
Tucson AZ 85705
 Telephone: 520-293-1500 x.123

Copy of Report to:

Name: None
 Company:

E-mail:
 Telephone:

Invoice to:

Name: Kimberly A. Garcia
 Company: Hydro Geo Chem, Inc.
 E-mail: kim@HGCinc.com

Address: Same as above
 Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES NO
 If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Sierrita - Short
 Project/PO #: TRSDLE.2
 Reporting state for compliance testing: AZ
 Sampler's Name: Mark Arneson / Kim Garcia
 Are any samples NRC licensable material? No

# of Containers	Metals: Ca, Mg, Na, K	Alk, TDS, Ammon	604 only	Field EC
2	X	X		393
1			X	393
2	X	X		377
1			X	377
2	X	X		369
1			X	369
1			X	1799
2	X	X		1799
1			X	387
2	X	X		387

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Metals: Ca, Mg, Na, K	Alk, TDS, Ammon	604 only	Field EC
ESP-3-010307	1/3/07 1315	GW	2	X	X		393
ESP-3-010307	1/3/07 1310	GW	1			X	393
ESP-2-010307	1/3/07 1330	GW	2	X	X		377
ESP-2-010307	1/3/07 1335	GW	1			X	377
ESP-1-010307	1/3/07 1350	GW	2	X	X		369
ESP-1-010307	1/3/07 1355	GW	1			X	369
GW-7-010307	1/3/07 1410	GW	1	1.4.07		X	1799
GW-7-010307	1/3/07 1415	GW	2	X	X		1799
GW-9-010307	1/3/07 1440	GW	1			X	387
GW-9-010307	1/3/07 1445	GW	2	X	X		387

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

REMARKS

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<u>[Signature]</u>	<u>1/3/07 11:55</u>	<u>[Signature]</u>	<u>1.4.07 10:46</u>

L60568 ~~L60557~~ L60514-07

ACZ Laboratories, Inc. CHAIN of CUSTODY
 2773 Downhill Drive Steamboat Springs, CO 80487. (800) 334-5493 pg. 2 of 2

Report to:

Name: Kimberly A. Garcia	Address: 51W. Wetmore Rd #10
Company: Hydro Geo Chem Inc	Tucson AZ 85705
E-mail: KimG@HGCinc.com	Telephone: 520-293-1500 x.123

Copy of Report to:

Name: None	E-mail: /
Company: None	Telephone: /

Invoice to:

Name: Same as above	Address: Same as above
Company: Same as above	
E-mail: Same as above	Telephone: Same as above

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES NO
 If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION ANALYSES REQUESTED (attach list or use quote number)

Quote #: Siemta - Short	# of Containers	Metals Cd Ni Pb Cu Mg Na K Alk TDS Amions SDF only	Field EC:
Project/PO #: 18326.2			
Reporting state for compliance testing: AZ			
Sampler's Name: Mark Arneson / Kim Garcia			
Are any samples NRC licensable material? No			

SAMPLE IDENTIFICATION	DATE: TIME	Matrix	# of Containers	Metals	Alk	TDS	Amions	SDF only	Field EC:
SW CW-6-010307	1/3/07 1500	GW	1					X	H8
CW-6-010307	1/3/07 1505	GW	2	X	X				H8
GW Dup-010307A	1-3-07		2	2	3	L60514-07 per sample			
GW Dup-010307A	1-3-07		1	3	containers				

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

REMARKS

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

RELINQUISHED BY:	DATE: TIME	RECEIVED BY:	DATE: TIME
	1/3/07 1655		1-4-07 10:46

January 17, 2007

Report to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Bill to:

Kimberly Garcia
Hydro Geo Chem, Inc.
51 W. Wetmore Rd
Tucson, AZ 85705-1678

Project ID:

ACZ Project ID: L60567

Kimberly Garcia:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 04, 2007. This project has been assigned to ACZ's project number, L60567. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60567. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 17, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



17/Jan/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Hydro Geo Chem, Inc.

Project ID:

Sample ID: GW-640358-010207

ACZ Sample ID: **L60567-01**

Date Sampled: 01/02/07 16:30

Date Received: 01/04/07

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	37.7			mg/L	0.2	1	01/06/07 18:47	gme
Magnesium, dissolved	M200.7 ICP	6.6			mg/L	0.2	1	01/05/07 21:57	gme
Potassium, dissolved	M200.7 ICP	4.3			mg/L	0.3	2	01/05/07 21:57	gme
Sodium, dissolved	M200.7 ICP	32.9			mg/L	0.3	2	01/05/07 21:57	gme

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		167			mg/L	2	20	01/06/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	01/06/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	01/06/07 0:00	cas
Total Alkalinity		167		*	mg/L	2	20	01/06/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		2.6			%			01/17/07 13:22	calc
Sum of Anions		3.7			meq/L	0.1	0.5	01/17/07 13:22	calc
Sum of Cations		3.9			meq/L	0.1	0.5	01/17/07 13:22	calc
Chloride	M300.0 - Ion Chromatography	8.2			mg/L	0.5	3	01/12/07 14:45	nps
Fluoride	M300.0 - Ion Chromatography	0.4	B	*	mg/L	0.1	0.5	01/12/07 14:45	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	1.16			mg/L	0.02	0.1	01/17/07 13:22	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.18	H	*	mg/L	0.02	0.1	01/04/07 20:50	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.02	HB	*	mg/L	0.01	0.05	01/04/07 20:50	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	230			mg/L	10	20	01/05/07 13:02	lcp
Sulfate	300.0 - Ion Chromatography	3.9			mg/L	0.5	3	01/12/07 14:45	nps
TDS (calculated)	Calculation	199			mg/L	10	50	01/17/07 13:22	calc
TDS (ratio - measured/calculated)	Calculation	1.16						01/17/07 13:22	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Hydro Geo Chem, Inc.
 Project ID:

ACZ Project ID: **L60567**

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218923													
WG218923LCSW2	LCSW	01/06/07 12:24	WC061230-1	820		793.3	mg/L	96.7	80	120			
L60587-06DUP	DUP	01/06/07 14:30			802	806.9	mg/L				0.6	20	
WG218923LCSW5	LCSW	01/06/07 14:44	WC061230-1	820		806.2	mg/L	98.3	80	120			
WG218923LCSW8	LCSW	01/06/07 17:21	WC061230-1	820		809.3	mg/L	98.7	80	120			

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218929													
WG218929ICV	ICV	01/06/07 17:38	II061230-1	100		99.06	mg/L	99.1	95	105			
WG218929ICB	ICB	01/06/07 17:42				U	mg/L		-0.6	0.6			
WG218929LFB	LFB	01/06/07 17:58	II070102-4	67.95918		74.36	mg/L	109.4	85	115			
L60550-01AS	AS	01/06/07 18:07	II070102-4	135.91836	440	576.72	mg/L	100.6	85	115			
L60550-01ASD	ASD	01/06/07 18:11	II070102-4	135.91836	440	569.24	mg/L	95.1	85	115	1.31	20	

Chloride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	20		20.21	mg/L	101.1	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	20		20.17	mg/L	100.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219171LFB1	LFB	01/12/07 13:14	IC061106-1	30		30.41	mg/L	101.4	90	110			
L60476-01DUP	DUP	01/12/07 13:50			220	219.8	mg/L				0.1	20	
L60476-04AS	AS	01/12/07 14:26	IC061106-1	600	210	835	mg/L	104.2	90	110			
WG219171LFB2	LFB	01/12/07 21:59	IC061106-1	30		30.54	mg/L	101.8	90	110			

Fluoride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-0.3	0.3			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	3.992		3.99	mg/L	99.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-0.3	0.3			
WG219171LFB1	LFB	01/12/07 13:14	IC061106-1	1.5		1.55	mg/L	103.3	90	110			
L60476-01DUP	DUP	01/12/07 13:50			U	U	mg/L				0	20	RA
L60476-04AS	AS	01/12/07 14:26	IC061106-1	30	3	35.2	mg/L	107.3	90	110			
WG219171LFB2	LFB	01/12/07 21:59	IC061106-1	1.5		1.53	mg/L	102	90	110			

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218902													
WG218902ICV	ICV	01/05/07 20:45	II061230-1	100		97.23	mg/L	97.2	95	105			
WG218902ICB	ICB	01/05/07 20:49				U	mg/L		-0.6	0.6			
WG218902LFB	LFB	01/05/07 21:05	II070102-4	54.98614		57.99	mg/L	105.5	85	115			
L60550-01AS	AS	01/05/07 21:13	II070102-4	54.98614	230	286.49	mg/L	102.7	85	115			
L60550-01ASD	ASD	01/05/07 21:17	II070102-4	54.98614	230	285.01	mg/L	100	85	115	0.52	20	

Hydro Geo Chem, Inc.
 Project ID:

ACZ Project ID: **L60567**

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218873													
WG218873ICV	ICV	01/04/07 20:40	WI061207-1	2.416		2.387	mg/L	98.8	90	110			
WG218873ICB	ICB	01/04/07 20:41				U	mg/L		-0.06	0.06			
WG218873LFB	LFB	01/04/07 20:46	WI060906-4	2		1.976	mg/L	98.8	90	110			
L60564-01AS	AS	01/04/07 20:49	WI060906-4	2	1.66	3.617	mg/L	97.9	90	110			
L60567-01DUP	DUP	01/04/07 20:51			1.18	1.28	mg/L				8.1	20	

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218873													
WG218873ICV	ICV	01/04/07 20:40	WI061207-1	.609		.615	mg/L	101	90	110			
WG218873ICB	ICB	01/04/07 20:41				.012	mg/L		-0.03	0.03			
WG218873LFB	LFB	01/04/07 20:46	WI060906-4	1		.996	mg/L	99.6	90	110			
L60564-01AS	AS	01/04/07 20:49	WI060906-4	1	.01	.992	mg/L	98.2	90	110			
L60567-01DUP	DUP	01/04/07 20:51			.02	.017	mg/L				16.2	20	RA

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218902													
WG218902ICV	ICV	01/05/07 20:45	II061230-1	20		20.06	mg/L	100.3	95	105			
WG218902ICB	ICB	01/05/07 20:49				U	mg/L		-0.9	0.9			
WG218902LFB	LFB	01/05/07 21:05	II070102-4	99.51014		106.11	mg/L	106.6	85	115			
L60550-01AS	AS	01/05/07 21:13	II070102-4	99.51014	6.6	117	mg/L	110.9	85	115			
L60550-01ASD	ASD	01/05/07 21:17	II070102-4	99.51014	6.6	114.44	mg/L	108.4	85	115	2.21	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218892													
WG218892PBW	PBW	01/05/07 13:00				U	mg/L		-20	20			
WG218892LCSW	LCSW	01/05/07 13:01	PCN25977	260		284	mg/L	109.2	80	120			
L60570-01DUP	DUP	01/05/07 13:15			1400	1378	mg/L				1.6	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG218902													
WG218902ICV	ICV	01/05/07 20:45	II061230-1	100		99.63	mg/L	99.6	95	105			
WG218902ICB	ICB	01/05/07 20:49				U	mg/L		-0.9	0.9			
WG218902LFB	LFB	01/05/07 21:05	II070102-4				mg/L	107.4	85	115			
WG218902LFB	LFB	01/05/07 21:05	II070102-4	99.90786		106.15	mg/L	106.2	85	115			
L60550-01AS	AS	01/05/07 21:13	II070102-4	99.90786	379	482.26	mg/L	103.4	85	115			
L60550-01ASD	ASD	01/05/07 21:17	II070102-4	99.90786	379	480.25	mg/L	101.3	85	115	0.42	20	

Hydro Geo Chem, Inc.

ACZ Project ID: **L60567**

Project ID:

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Dual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	50		50.79	mg/L	101.6	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219171LFB1	LFB	01/12/07 13:14	IC061106-1	30		31	mg/L	103.3	90	110			
L60476-01DUP	DUP	01/12/07 13:50			806	804.1	mg/L				0.2	20	
WG219171LFB2	LFB	01/12/07 21:59	IC061106-1	30		30.1	mg/L	100.3	90	110			
L60476-04AS	AS	01/15/07 14:25	IC061106-1	1500	1890	3402	mg/L	100.8	90	110			

Hydro Geo Chem, Inc.

ACZ Project ID: **L60567**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60567-01	WG219171	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG218873	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG218923	Total Alkalinity	SM2320B - Titration	QA	Sample container with preservation type specified by the method was not available for analysis. Alternate sample container was used.	

Hydro Geo Chem, Inc.

ACZ Project ID: **L60567**



No certification qualifiers associated with this analysis

Sample Receipt

Hydro Geo Chem, Inc.

ACZ Project ID: L60567
 Date Received: 1/4/2007
 Received By:
 Date Printed: 1/4/2007

Receipt Verification

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

YES	NO	NA
		X
		X
		X
X		
X		
X		
X		
X		
X		
		X
		X
		X
		X

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA2761	5.5	14

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

Notes

Hydro Geo Chem, Inc.

ACZ Project ID: L60567
 Date Received: 1/4/2007
 Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60567-01	GW-640358-010207		Y									<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____



Laboratories, Inc.

L60567

CHAIN of CUSTODY

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

Report to:

Name: K. Garcia
Company: HGC, Inc.
E-mail: Kim G@HGC, Inc. com

Address: 51 W. Wetmore Rd
Tucson AZ 85705
Telephone: 520.293.1500

Copy of Report to:

Name: Kim Garcia
Company: HGC Inc.

E-mail:
Telephone:

Invoice to:

Name: Same as above
Company: Same as above
E-mail:

Address: Same as above
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [checked] NO
If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Sierrita-Short
Project/PO #:
Reporting state for compliance testing: No
Sampler's Name: Kim Garcia
Are any samples NRC licensable material?

Table with columns for # of Containers and Matrix. Includes handwritten entries for GW samples.

SAMPLE IDENTIFICATION DATE:TIME Matrix

Table with columns for SAMPLE IDENTIFICATION, DATE:TIME, and Matrix. Includes handwritten entries for GW samples.

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

REMARKS

Please run the sample time = 1625 for SD4 only. The other sample is for the Sierrita-Short analyte list. KG

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

RELINQUISHED BY: DATE:TIME RECEIVED BY: DATE:TIME

Handwritten signature and date 1/2/07

Handwritten signature and date 1-4-07 10:44

Handwritten signature and date 1-4-07 10:44

Handwritten signature and date 1-4-07 10:44

January 26, 2007

Report to:

Bill Dorris

Phelps Dodge Sierrita

P.O. Box 527

Green Valley, AZ 85622-0527

Bill to:

Accounts Payable

Phelps Dodge Sierrita

P.O. Box 2671

Phoenix, AZ 85002-2671

cc: Jim Norris

Project ID: OJ00XN

ACZ Project ID: L60671

Bill Dorris:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 11, 2007. This project has been assigned to ACZ's project number, L60671. Please reference this number in all future inquiries.

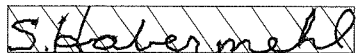
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60671. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after February 26, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



26/Jan/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: ST-5-608531-011007

ACZ Sample ID: **L60671-01**
 Date Sampled: 01/10/07 11:11
 Date Received: 01/11/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	44.8			mg/L	0.2	1	01/13/07 0:29	msh
Magnesium, dissolved	M200.7 ICP	5.5			mg/L	0.2	1	01/13/07 0:29	msh
Potassium, dissolved	M200.7 ICP	3.0			mg/L	0.3	2	01/15/07 19:38	msh
Sodium, dissolved	M200.7 ICP	30.3			mg/L	0.3	2	01/13/07 0:29	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		165			mg/L	2	20	01/23/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	01/23/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	01/23/07 0:00	cas
Total Alkalinity		165			mg/L	2	20	01/23/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.0			%			01/26/07 0:00	calc
Sum of Anions		4.1			meq/L	0.1	0.5	01/26/07 0:00	calc
Sum of Cations		4.1			meq/L	0.1	0.5	01/26/07 0:00	calc
Chloride	M300.0 - Ion Chromatography	9.1			mg/L	0.5	3	01/18/07 20:24	nps
Fluoride	M300.0 - Ion Chromatography	0.3	B	*	mg/L	0.1	0.5	01/18/07 20:24	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.56			mg/L	0.02	0.1	01/26/07 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.56		*	mg/L	0.02	0.1	01/11/07 20:44	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/11/07 20:44	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	250			mg/L	10	20	01/12/07 12:46	lcp
Sulfate	300.0 - Ion Chromatography	23.7			mg/L	0.5	3	01/18/07 20:24	nps
TDS (calculated)	Calculation	218			mg/L	10	50	01/26/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.15						01/26/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: ST-6-608530-011007

ACZ Sample ID: **L60671-02**
 Date Sampled: 01/10/07 11:16
 Date Received: 01/11/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	39.6			mg/L	0.2	1	01/13/07 0:33	msh
Magnesium, dissolved	M200.7 ICP	5.3			mg/L	0.2	1	01/13/07 0:33	msh
Potassium, dissolved	M200.7 ICP	3.2			mg/L	0.3	2	01/15/07 19:42	msh
Sodium, dissolved	M200.7 ICP	37.9			mg/L	0.3	2	01/13/07 0:33	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		144			mg/L	2	20	01/23/07 0:00	cas
Carbonate as CaCO3		3	B		mg/L	2	20	01/23/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	01/23/07 0:00	cas
Total Alkalinity		148			mg/L	2	20	01/23/07 0:00	cas
Cation-Anion Balance Calculation									
Cation-Anion Balance		1.2			%			01/26/07 0:00	calc
Sum of Anions		4.0			meq/L	0.1	0.5	01/26/07 0:00	calc
Sum of Cations		4.1			meq/L	0.1	0.5	01/26/07 0:00	calc
Chloride	M300.0 - Ion Chromatography	8.1			mg/L	0.5	3	01/18/07 21:18	nps
Fluoride	M300.0 - Ion Chromatography	0.5		*	mg/L	0.1	0.5	01/18/07 21:18	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.36			mg/L	0.02	0.1	01/26/07 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.36		*	mg/L	0.02	0.1	01/11/07 20:45	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/11/07 20:45	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	250			mg/L	10	20	01/12/07 12:48	lcp
Sulfate	300.0 - Ion Chromatography	41.1			mg/L	0.5	3	01/18/07 21:18	nps
TDS (calculated)	Calculation	227			mg/L	10	50	01/26/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.10						01/26/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: ST-7-566940-011007

ACZ Sample ID: **L60671-03**
 Date Sampled: 01/10/07 11:41
 Date Received: 01/11/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	35.1			mg/L	0.2	1	01/13/07 0:37	msh
Magnesium, dissolved	M200.7 ICP	3.5			mg/L	0.2	1	01/13/07 0:37	msh
Potassium, dissolved	M200.7 ICP	3.0			mg/L	0.3	2	01/15/07 19:46	msh
Sodium, dissolved	M200.7 ICP	41.4			mg/L	0.3	2	01/13/07 0:37	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		142			mg/L	2	20	01/23/07 0:00	cas
Carbonate as CaCO3		4	B		mg/L	2	20	01/23/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	01/23/07 0:00	cas
Total Alkalinity		146			mg/L	2	20	01/23/07 0:00	cas
Cation-Anion Balance Calculation									
Cation-Anion Balance		0.0			%			01/26/07 0:00	calc
Sum of Anions		3.9			meq/L	0.1	0.5	01/26/07 0:00	calc
Sum of Cations		3.9			meq/L	0.1	0.5	01/26/07 0:00	calc
Chloride	M300.0 - Ion Chromatography	7.9			mg/L	0.5	3	01/18/07 21:36	nps
Fluoride	M300.0 - Ion Chromatography	0.8		*	mg/L	0.1	0.5	01/18/07 21:36	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.39			mg/L	0.02	0.1	01/26/07 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.39		*	mg/L	0.02	0.1	01/11/07 20:46	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/11/07 20:46	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	240			mg/L	10	20	01/12/07 12:49	lcp
Sulfate	300.0 - Ion Chromatography	32.7			mg/L	0.5	3	01/18/07 21:36	nps
TDS (calculated)	Calculation	215			mg/L	10	50	01/26/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.12						01/26/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: ST-5-608531-011007

ACZ Sample ID: **L60671-04**
Date Sampled: 01/10/07 11:10
Date Received: 01/11/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	23.9			mg/L	0.5	3	01/18/07 21:54	nps

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: ST-6-608530-011007

ACZ Sample ID: **L60671-05**
Date Sampled: 01/10/07 11:15
Date Received: 01/11/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	41.3			mg/L	0.5	3	01/18/07 22:12	nps

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: ST-7-566940-011007

ACZ Sample ID: **L60671-06**
Date Sampled: 01/10/07 11:40
Date Received: 01/11/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	32.8			mg/L	0.5	3	01/18/07 22:30	nps

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60671

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219563													
WG219563LCSW2	LCSW	01/23/07 16:57	WC061230-1	820		834.4	mg/L	101.8	80	120			
L60685-05DUP	DUP	01/23/07 19:39			407	408.3	mg/L				0.3	20	
WG219563LCSW5	LCSW	01/23/07 19:52	WC061230-1	820		841.9	mg/L	102.7	80	120			
WG219563LCSW8	LCSW	01/23/07 23:43	WC061230-1	820		846.4	mg/L	103.2	80	120			

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219196													
WG219196ICV	ICV	01/12/07 23:29	II061230-1	100		99.21	mg/L	99.2	95	105			
WG219196ICB	ICB	01/12/07 23:33				U	mg/L		-0.6	0.6			
WG219196LFB	LFB	01/12/07 23:49	II070102-4	67.95918		67.89	mg/L	99.9	85	115			
L60670-01AS	AS	01/12/07 23:57	II070102-4	67.95918	50.7	120.33	mg/L	102.5	85	115			
L60670-01ASD	ASD	01/13/07 0:01	II070102-4	67.95918	50.7	122.47	mg/L	105.6	85	115	1.76	20	

Chloride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	20		20.21	mg/L	101.1	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	20		20.17	mg/L	100.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	20		20.21	mg/L	101.1	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	20		20.27	mg/L	101.4	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-1.5	1.5			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	30		30.14	mg/L	100.5	90	110			
L60648-01DUP	DUP	01/18/07 18:53			12	12.04	mg/L				0.3	20	
L60648-02AS	AS	01/18/07 19:29	IC061106-1	30	22.5	51.8	mg/L	97.7	90	110			
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	30		29.99	mg/L	100	90	110			

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L60671**

Fluoride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-0.3	0.3			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	3.992		3.99	mg/L	99.9	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-0.3	0.3			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-0.3	0.3			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	3.992		4.12	mg/L	103.2	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-0.3	0.3			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	1.5		1.55	mg/L	103.3	90	110			
L60648-01DUP	DUP	01/18/07 18:53			.4	.46	mg/L				14	20	RA
L60648-02AS	AS	01/18/07 19:29	IC061106-1	1.5	.3	1.88	mg/L	105.3	90	110			
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	1.5		1.53	mg/L	102	90	110			

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219196													
WG219196ICV	ICV	01/12/07 23:29	II061230-1	100		96.81	mg/L	96.8	95	105			
WG219196ICB	ICB	01/12/07 23:33				U	mg/L		-0.6	0.6			
WG219196LFB	LFB	01/12/07 23:49	II070102-4	54.98614		54.23	mg/L	98.6	85	115			
L60670-01AS	AS	01/12/07 23:57	II070102-4	54.98614	3.7	60.3	mg/L	102.9	85	115			
L60670-01ASD	ASD	01/13/07 0:01	II070102-4	54.98614	3.7	61.11	mg/L	104.4	85	115	1.33	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219152													
WG219152ICV	ICV	01/11/07 20:24	WI061207-10	2.416		2.314	mg/L	95.8	90	110			
WG219152ICB	ICB	01/11/07 20:25				U	mg/L		-0.06	0.06			
WG219152LFB	LFB	01/11/07 20:30	WI060906-4	2		1.969	mg/L	98.5	90	110			
L60666-01AS	AS	01/11/07 20:33	WI060906-4	40	3	39.94	mg/L	92.4	90	110			
L60667-01DUP	DUP	01/11/07 20:35			.09	.097	mg/L				7.5	20	RA

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219152													
WG219152ICV	ICV	01/11/07 20:24	WI061207-10	.609		.614	mg/L	100.8	90	110			
WG219152ICB	ICB	01/11/07 20:25				U	mg/L		-0.03	0.03			
WG219152LFB	LFB	01/11/07 20:30	WI060906-4	1		.993	mg/L	99.3	90	110			
L60666-01AS	AS	01/11/07 20:33	WI060906-4	20	2.6	20.2	mg/L	88	90	110			M2
L60667-01DUP	DUP	01/11/07 20:35				U	mg/L				0	20	RA

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L60671**

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219259													
WG219259ICV	ICV	01/15/07 19:14	II061230-1	20		20.05	mg/L	100.3	95	105			
WG219259ICB	ICB	01/15/07 19:18				U	mg/L		-0.9	0.9			
WG219259LFB	LFB	01/15/07 19:34	II070102-4	99.51014		102.34	mg/L	102.8	85	115			
L60673-04AS	AS	01/15/07 19:58	II070102-4	995.1014	638	1701.8	mg/L	106.9	85	115			
L60673-04ASD	ASD	01/15/07 20:10	II070102-4	995.1014	638	1682.2	mg/L	104.9	85	115	1.16	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219178													
WG219178PBW	PBW	01/12/07 12:30				U	mg/L		-20	20			
WG219178LCSW	LCSW	01/12/07 12:31	PCN26278	261		274	mg/L	105	80	120			
L60673-08DUP	DUP	01/12/07 12:59			18200	18402	mg/L				1.1	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219196													
WG219196ICV	ICV	01/12/07 23:29	II061230-1	100		99.56	mg/L	99.6	95	105			
WG219196ICB	ICB	01/12/07 23:33				U	mg/L		-0.9	0.9			
WG219196LFB	LFB	01/12/07 23:49	II070102-4	99.90786		99.72	mg/L	99.8	85	115			
L60670-01AS	AS	01/12/07 23:57	II070102-4	99.90786	3	107.69	mg/L	104.8	85	115			
L60670-01ASD	ASD	01/13/07 0:01	II070102-4	99.90786	3	108.82	mg/L	105.9	85	115	1.04	20	

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219171													
WG219171ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219171ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219171ICV1	ICV	01/12/07 12:38	IC070104-1	50		50.79	mg/L	101.6	90	110			
WG219171ICB1	ICB	01/12/07 12:56				U	mg/L		-1.5	1.5			
WG219373													
WG219373ICV	ICV	01/11/07 18:07	IC070104-1	50		50.74	mg/L	101.5	90	110			
WG219373ICB	ICB	01/11/07 18:25				U	mg/L		-1.5	1.5			
WG219373ICV1	ICV	01/18/07 13:27	IC070104-1	50		51.49	mg/L	103	90	110			
WG219373ICB1	ICB	01/18/07 13:45				U	mg/L		-1.5	1.5			
WG219373LFB1	LFB	01/18/07 14:03	IC061106-1	30		30.25	mg/L	100.8	90	110			
L60648-01DUP	DUP	01/18/07 18:53			40.8	40.95	mg/L				0.4	20	
WG219373LFB2	LFB	01/18/07 22:49	IC061106-1	30		29.58	mg/L	98.6	90	110			
L60648-02AS	AS	01/19/07 14:03	IC061106-1	60	105	159.9	mg/L	91.5	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L60671**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60671-01	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219152	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60671-02	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219152	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60671-03	WG219373	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219152	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L60671**

No certification qualifiers associated with this analysis

Sample Receipt

Phelps Dodge Sierrita
 OJ00XN

ACZ Project ID: L60671
 Date Received: 1/11/2007
 Received By:
 Date Printed: 1/26/2007

Receipt Verification

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

YES	NO	NA
		X
		X
		X
X		
X		
X		
X		
X		
X		
		X
		X
		X
		X

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA2804	3	14

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

Notes

Phelps Dodge Sierrita

ACZ Project ID: L60671
 Date Received: 1/11/2007
 Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60671-01	ST-5-608531-011007		Y									<input type="checkbox"/>
L60671-02	ST-6-608530-011007		Y									<input type="checkbox"/>
L60671-03	ST-7-566940-011007		Y									<input type="checkbox"/>
L60671-04	ST-5-608531-011007									X		<input type="checkbox"/>
L60671-05	ST-6-608530-011007									X		<input type="checkbox"/>
L60671-06	ST-7-566940-011007									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparatio

Sample IDs Reviewed By: _____

February 22, 2007

Report to:
Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
Green Valley, AZ 85622-0527

Bill to:
Accounts Payable
Phelps Dodge Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Kim Garcia

Project ID: OJ00XN
ACZ Project ID: L60994

Bill Dorris:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 07, 2007. This project has been assigned to ACZ's project number, L60994. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60994. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after March 22, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



22/Feb/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



ACZ Laboratories, Inc.

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

Inorganic Analytical Results

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: GW-515867-020707

ACZ Sample ID: **L60994-01**
Date Sampled: 02/06/07 11:36
Date Received: 02/07/07
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	683			mS/cm			02/07/07 11:36	kg
pH (Field)	Field Measurement	7.3			units			02/07/07 11:36	kg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	83.1		*	mg/L	0.2	1	02/13/07 19:11	wfg
Magnesium, dissolved	M200.7 ICP	11.2		*	mg/L	0.2	1	02/13/07 19:11	wfg
Potassium, dissolved	M200.7 ICP	3.8			mg/L	0.3	2	02/13/07 19:11	wfg
Sodium, dissolved	M200.7 ICP	49.5			mg/L	0.3	2	02/13/07 19:11	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		193			mg/L	2	20	02/20/07 0:00	cas
Carbonate as CaCO ₃			U		mg/L	2	20	02/20/07 0:00	cas
Hydroxide as CaCO ₃			U		mg/L	2	20	02/20/07 0:00	cas
Total Alkalinity		193			mg/L	2	20	02/20/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		2.1			%			02/22/07 0:00	calc
Sum of Anions		7.0			meq/L	0.1	0.5	02/22/07 0:00	calc
Sum of Cations		7.3			meq/L	0.1	0.5	02/22/07 0:00	calc
Chloride	M300.0 - Ion Chromatography	23.8			mg/L	0.5	3	02/14/07 1:22	jlf/nps
Fluoride	M300.0 - Ion Chromatography	0.4	B	*	mg/L	0.1	0.5	02/14/07 1:22	jlf/nps
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	3.29			mg/L	0.02	0.1	02/22/07 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	3.29			mg/L	0.02	0.1	02/07/07 19:54	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	02/07/07 19:54	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	410			mg/L	10	20	02/13/07 10:51	lcp
Sulfate	300.0 - Ion Chromatography	107			mg/L	1	5	02/15/07 19:44	nps
TDS (calculated)	Calculation	409			mg/L	10	50	02/22/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.00						02/22/07 0:00	calc

Arizona license number: AZ0102

ACZ Laboratories, Inc.

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

Inorganic Analytical Results

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: GW-532595-020707

ACZ Sample ID: **L60994-02**
Date Sampled: 02/06/07 16:46
Date Received: 02/07/07
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	526			mS/cm			02/07/07 16:46	kg
pH (Field)	Field Measurement	7.8			units			02/07/07 16:46	kg

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	71.7		*	mg/L	0.2	1	02/13/07 19:21	wfg
Magnesium, dissolved	M200.7 ICP	10.1		*	mg/L	0.2	1	02/13/07 19:21	wfg
Potassium, dissolved	M200.7 ICP	2.5			mg/L	0.3	2	02/13/07 19:21	wfg
Sodium, dissolved	M200.7 ICP	26.5			mg/L	0.3	2	02/13/07 19:21	wfg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		137			mg/L	2	20	02/20/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	02/20/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	02/20/07 0:00	cas
Total Alkalinity		137			mg/L	2	20	02/20/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		3.7			%			02/22/07 0:00	calc
Sum of Anions		5.2			meq/L	0.1	0.5	02/22/07 0:00	calc
Sum of Cations		5.6			meq/L	0.1	0.5	02/22/07 0:00	calc
Chloride	M300.0 - Ion Chromatography	14.4			mg/L	0.5	3	02/14/07 1:40	jlf/nps
Fluoride	M300.0 - Ion Chromatography		U	*	mg/L	0.1	0.5	02/14/07 1:40	jlf/nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	1.77			mg/L	0.02	0.1	02/22/07 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.77			mg/L	0.02	0.1	02/07/07 19:55	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	02/07/07 19:55	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	310			mg/L	10	20	02/13/07 10:53	lcp
Sulfate	300.0 - Ion Chromatography	94.2		*	mg/L	0.5	3	02/14/07 1:40	jlf/nps
TDS (calculated)	Calculation	309			mg/L	10	50	02/22/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.00						02/22/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: GW-515867-020707

ACZ Sample ID: **L60994-03**
Date Sampled: 02/06/07 11:35
Date Received: 02/07/07
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	683			mS/cm			02/07/07 11:35	kg
pH (Field)	Field Measurement	7.3			units			02/07/07 11:35	kg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	104			mg/L	1	5	02/15/07 20:20	nps

Arizona license number: AZ0102

Phelps Dodge SierritaProject ID: OJ00XN
Sample ID: GW-532595-020707ACZ Sample ID: **L60994-04**
Date Sampled: 02/06/07 16:45
Date Received: 02/07/07
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	526			mS/cm			02/07/07 16:45	kg
pH (Field)	Field Measurement	7.8			units			02/07/07 16:45	kg

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	94.7		*	mg/L	0.5	3	02/14/07 2:16	jlf/nps

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL.
V	High blank data accepted because sample concentration is 10 times higher than blank concentration.
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60994

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220652													
WG220652LCSW2	LCSW	02/20/07 16:45	WC070215-1	820		804.7	mg/L	98.1	80	120			
L60992-03DUP	DUP	02/20/07 19:18			73	73.7	mg/L				1	20	
WG220652LCSW5	LCSW	02/20/07 19:33	WC070215-1	820		818.7	mg/L	99.8	80	120			
WG220652LCSW8	LCSW	02/20/07 22:30	WC070215-1	820		827.9	mg/L	101	80	120			

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220353													
WG220353ICV	ICV	02/13/07 17:50	II070205-1	100		99.67	mg/L	99.7	95	105			
WG220353ICB	ICB	02/13/07 17:53				U	mg/L		-0.6	0.6			
WG220353LFB	LFB	02/13/07 18:07	II070119-5	67.95918		70.78	mg/L	104.2	85	115			
L60992-10AS	AS	02/13/07 19:04	II070119-5	67.95918	542	595.72	mg/L	79	85	115			M3
L60992-10ASD	ASD	02/13/07 19:07	II070119-5	67.95918	542	590.64	mg/L	71.6	85	115	0.86	20	M3

Chloride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220361													
WG220361ICV	ICV	02/13/07 17:31	IC070205-1	20		20.36	mg/L	101.8	90	110			
WG220361ICB	ICB	02/13/07 17:49				U	mg/L		-1.5	1.5			
WG220361LFB1	LFB	02/13/07 18:07	IC070205-3	30		31.01	mg/L	103.4	90	110			
L60992-06DUP	DUP	02/13/07 22:57			9	9.02	mg/L				0.2	20	
L60992-07AS	AS	02/13/07 23:33	IC070205-3	150	13	163.6	mg/L	100.4	90	110			
WG220361LFB2	LFB	02/14/07 2:52	IC070205-3	30		31.74	mg/L	105.8	90	110			
WG220361ICV1	ICV	02/14/07 17:08	IC070205-1	20		20.76	mg/L	103.8	90	110			
WG220361ICB1	ICB	02/14/07 17:26				U	mg/L		-1.5	1.5			

Fluoride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220361													
WG220361ICV	ICV	02/13/07 17:31	IC070205-1	3.992		4.12	mg/L	103.2	90	110			
WG220361ICB	ICB	02/13/07 17:49				U	mg/L		-0.3	0.3			
WG220361LFB1	LFB	02/13/07 18:07	IC070205-3	1.5		1.58	mg/L	105.3	90	110			
L60992-06DUP	DUP	02/13/07 22:57			.5	.51	mg/L				2	20	RA
L60992-07AS	AS	02/13/07 23:33	IC070205-3	7.5	U	8.07	mg/L	107.6	90	110			
WG220361LFB2	LFB	02/14/07 2:52	IC070205-3	1.5		1.58	mg/L	105.3	90	110			
WG220361ICV1	ICV	02/14/07 17:08	IC070205-1	3.992		4.12	mg/L	103.2	90	110			
WG220361ICB1	ICB	02/14/07 17:26				U	mg/L		-0.3	0.3			

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220353													
WG220353ICV	ICV	02/13/07 17:50	II070205-1	100		97.27	mg/L	97.3	95	105			
WG220353ICB	ICB	02/13/07 17:53				U	mg/L		-0.6	0.6			
WG220353LFB	LFB	02/13/07 18:07	II070119-5	54.98614		56.11	mg/L	102	85	115			
L60992-10AS	AS	02/13/07 19:04	II070119-5	54.98614	335	383.22	mg/L	87.7	85	115			
L60992-10ASD	ASD	02/13/07 19:07	II070119-5	54.98614	335	380.57	mg/L	82.9	85	115	0.69	20	M3

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: **L60994**

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220187													
WG220187ICV	ICV	02/07/07 19:16	WI061207-1	2.416		2.356	mg/L	97.5	90	110			
WG220187ICB	ICB	02/07/07 19:18				U	mg/L		-0.06	0.06			
WG220187LFB	LFB	02/07/07 19:21	WI060906-4	2		2.005	mg/L	100.3	90	110			
L60988-03DUP	DUP	02/07/07 19:44			2.82	2.833	mg/L				0.5	20	
L60988-02AS	AS	02/07/07 20:07	WI060906-4	10	6.4	17.35	mg/L	109.5	90	110			

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220187													
WG220187ICV	ICV	02/07/07 19:16	WI061207-1	.609		.628	mg/L	103.1	90	110			
WG220187ICB	ICB	02/07/07 19:18				U	mg/L		-0.03	0.03			
WG220187LFB	LFB	02/07/07 19:21	WI060906-4	1		1.02	mg/L	102	90	110			
L60988-02AS	AS	02/07/07 19:42	WI060906-4	1	U	1.019	mg/L	101.9	90	110			
L60988-03DUP	DUP	02/07/07 19:44			U	U	mg/L				0	20	RA

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220353													
WG220353ICV	ICV	02/13/07 17:50	II070205-1	20		20.16	mg/L	100.8	95	105			
WG220353ICB	ICB	02/13/07 17:53				U	mg/L		-0.9	0.9			
WG220353LFB	LFB	02/13/07 18:07	II070119-5	99.51014		104.03	mg/L	104.5	85	115			
L60992-10AS	AS	02/13/07 19:04	II070119-5	99.51014	8.5	120.44	mg/L	112.5	85	115			
L60992-10ASD	ASD	02/13/07 19:07	II070119-5	99.51014	8.5	119.93	mg/L	112	85	115	0.42	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220362													
WG220362PBW	PBW	02/13/07 10:40				U	mg/L		-20	20			
WG220362LCSW	LCSW	02/13/07 10:41	PCN26281	260		250	mg/L	96.2	80	120			
L61004-01DUP	DUP	02/13/07 10:55			730	710	mg/L				2.8	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220353													
WG220353ICV	ICV	02/13/07 17:50	II070205-1	100		100.31	mg/L	100.3	95	105			
WG220353ICB	ICB	02/13/07 17:53				U	mg/L		-0.9	0.9			
WG220353LFB	LFB	02/13/07 18:07	II070119-5	99.90786		102.38	mg/L	102.5	85	115			
L60992-10AS	AS	02/13/07 19:04	II070119-5	99.90786	47.5	153.5	mg/L	106.1	85	115			
L60992-10ASD	ASD	02/13/07 19:07	II070119-5	99.90786	47.5	152.81	mg/L	105.4	85	115	0.45	20	

Phelps Dodge Sierrita

ACZ Project ID: **L60994**

Project ID: OJ00XN

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220361													
WG220361ICV	ICV	02/13/07 17:31	IC070205-1	50		51.78	mg/L	103.6	90	110			
WG220361ICB	ICB	02/13/07 17:49				U	mg/L		-1.5	1.5			
WG220361LFB1	LFB	02/13/07 18:07	IC070205-3	30		30.85	mg/L	102.8	90	110			
L60992-07AS	AS	02/13/07 23:33	IC070205-3	150	291	417.7	mg/L	84.5	90	110			M2
WG220361LFB2	LFB	02/14/07 2:52	IC070205-3	30		30.7	mg/L	102.3	90	110			
WG220361ICV1	ICV	02/14/07 17:08	IC070205-1	50		51.45	mg/L	102.9	90	110			
WG220361ICB1	ICB	02/14/07 17:26				U	mg/L		-1.5	1.5			
L60992-06DUP	DUP	02/14/07 20:09			669	671.3	mg/L				0.3	20	
WG220517													
WG220517ICV	ICV	02/15/07 18:50	IC070205-1	50		51.17	mg/L	102.3	90	110			
WG220517ICB	ICB	02/15/07 19:08				.66	mg/L		-1.5	1.5			
WG220517LFB	LFB	02/15/07 19:26	IC070205-3	30		30.38	mg/L	101.3	90	110			
L60994-01DUP	DUP	02/15/07 20:02			107	106.6	mg/L				0.4	20	
L60994-03AS	AS	02/15/07 20:38	IC070205-3	60	104	163	mg/L	98.3	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L60994**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60994-01	WG220353	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Magnesium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG220361	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG220187	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L60994-02	WG220353	Calcium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
		Magnesium, dissolved	M200.7 ICP	M3	The accuracy of the spike recovery does not apply because analyte concentration in the sample is disproportionate to the spike level. The recovery of the method control sample was acceptable.
	WG220361	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG220187	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG220361	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
L60994-04	WG220361	Sulfate	300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.

Phelps Dodge Sierrita

ACZ Project ID: **L60994**

No certification qualifiers associated with this analysis

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60994
Date Received: 2/7/2007
Received By:
Date Printed: 2/8/2007

Receipt Verification

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

	YES	NO	NA
1)			X
2)			X
3)			X
4)	X		
5)	X		
6)	X		
7)	X		
8)	X		
9)	X		
10)			X
11)			X
12)			X
13)			X

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA2925	3.3	15

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

Notes

The date on the coc is stated as today 2/7/07 however it would not be possible for that so I assumed that it was suppose to be 2/6/07 so that is the date I used for sampling.

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60994
Date Received: 2/7/2007
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60994-01	GW-515867-020707		Y									<input type="checkbox"/>
L60994-02	GW-532595-020707		Y									<input type="checkbox"/>
L60994-03	GW-515867-020707									X		<input type="checkbox"/>
L60994-04	GW-532595-020707									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

February 28, 2007

Report to:

Ned Hall
Phelps Dodge Sierrita
P.O. Box 527 6200 W. Duval Mine Rd.
Green Valley, AZ 85622-0527

Bill to:

Accounts Payable
Phelps Dodge Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Bill Dorris, Jim Norris, Kim Garcia

Project ID: OJ00XN

ACZ Project ID: L61121

Ned Hall:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 16, 2007. This project has been assigned to ACZ's project number, L61121. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L61121. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after March 28, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



28/Feb/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge SierritaProject ID: OJ00XN
Sample ID: 635386-021507ACZ Sample ID: **L61121-01**
Date Sampled: 02/15/07 13:40
Date Received: 02/16/07
Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	327			mS/cm			02/15/07 13:40	ma
pH (Field)	Field Measurement	7.8			units			02/15/07 13:40	ma

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	39.2			mg/L	0.5	3	02/26/07 20:32	nps

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: 635386-021507

ACZ Sample ID: **L61121-02**
 Date Sampled: 02/15/07 13:37
 Date Received: 02/16/07
 Sample Matrix: Ground Water

Field Data

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	327			mS/cm			02/15/07 13:37	ma
pH (Field)	Field Measurement	7.8			units			02/15/07 13:37	ma

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	35.4			mg/L	0.2	1	02/19/07 20:31	msh
Magnesium, dissolved	M200.7 ICP	5.0			mg/L	0.2	1	02/19/07 20:31	msh
Potassium, dissolved	M200.7 ICP	1.5	B		mg/L	0.3	2	02/19/07 20:31	msh
Sodium, dissolved	M200.7 ICP	22.4			mg/L	0.3	2	02/19/07 20:31	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		107			mg/L	2	20	02/27/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	02/27/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	02/27/07 0:00	cas
Total Alkalinity		107		*	mg/L	2	20	02/27/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.6			%			02/28/07 0:00	calc
Sum of Anions		3.1			meq/L	0.1	0.5	02/28/07 0:00	calc
Sum of Cations		3.2			meq/L	0.1	0.5	02/28/07 0:00	calc
Chloride	M300.0 - Ion Chromatography	6.3			mg/L	0.5	3	02/26/07 20:51	nps
Fluoride	M300.0 - Ion Chromatography	0.1	B	*	mg/L	0.1	0.5	02/26/07 20:51	nps
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	0.38			mg/L	0.02	0.1	02/28/07 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.38		*	mg/L	0.02	0.1	02/16/07 21:47	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	02/16/07 22:16	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	200			mg/L	10	20	02/19/07 16:12	lcp
Sulfate	300.0 - Ion Chromatography	39.0			mg/L	0.5	3	02/26/07 20:51	nps
TDS (calculated)	Calculation	176			mg/L	10	50	02/28/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.14						02/28/07 0:00	calc

Arizona license number: AZ0102



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L61121

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220940													
WG220940LCSW2	LCSW	02/27/07 10:27	WC070215-1	820		812.9	mg/L	99.1	80	120			
L61127-08DUP	DUP	02/27/07 11:14			U	U	mg/L				0	20	RA
WG220940LCSW5	LCSW	02/27/07 12:29	WC070215-1	820		821.7	mg/L	100.2	80	120			
WG220940LCSW8	LCSW	02/27/07 15:00	WC070215-1	820		824.7	mg/L	100.6	80	120			

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220634													
WG220634ICV	ICV	02/19/07 18:20	II070116-1	100		97.54	mg/L	97.5	95	105			
WG220634ICB	ICB	02/19/07 18:24				U	mg/L		-0.6	0.6			
WG220634LFB	LFB	02/19/07 18:40	II070215-2	67.95918		70.21	mg/L	103.3	85	115			
L61112-07AS	AS	02/19/07 19:44	II070215-2	67.95918	349	419.66	mg/L	104	85	115			
L61112-07ASD	ASD	02/19/07 19:47	II070215-2	67.95918	349	421.1	mg/L	106.1	85	115	0.34	20	

Chloride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220898													
WG220898ICV	ICV	02/15/07 18:50	IC070205-1	20		20.34	mg/L	101.7	90	110			
WG220898ICB	ICB	02/15/07 19:08				U	mg/L		-1.5	1.5			
WG220898ICV1	ICV	02/26/07 16:19	IC070205-1	20		20.44	mg/L	102.2	90	110			
WG220898ICB1	ICB	02/26/07 16:37				U	mg/L		-1.5	1.5			
WG220898LFB	LFB	02/26/07 16:55	IC070205-3	30		29.25	mg/L	97.5	90	110			
L60955-05DUP	DUP	02/26/07 17:31			11.1	11.03	mg/L				0.6	20	
L60955-07AS	AS	02/26/07 18:26	IC070205-3	30	9.9	39.93	mg/L	100.1	90	110			

Fluoride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220898													
WG220898ICV	ICV	02/15/07 18:50	IC070205-1	3.992		4.1	mg/L	102.7	90	110			
WG220898ICB	ICB	02/15/07 19:08				U	mg/L		-0.3	0.3			
WG220898ICV1	ICV	02/26/07 16:19	IC070205-1	3.992		4.09	mg/L	102.5	90	110			
WG220898ICB1	ICB	02/26/07 16:37				U	mg/L		-0.3	0.3			
WG220898LFB	LFB	02/26/07 16:55	IC070205-3	1.5		1.5	mg/L	100	90	110			
L60955-05DUP	DUP	02/26/07 17:31			.1	.12	mg/L				18.2	20	RA
L60955-07AS	AS	02/26/07 18:26	IC070205-3	1.5	.1	1.66	mg/L	104	90	110			

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220634													
WG220634ICV	ICV	02/19/07 18:20	II070116-1	100		95.34	mg/L	95.3	95	105			
WG220634ICB	ICB	02/19/07 18:24				U	mg/L		-0.6	0.6			
WG220634LFB	LFB	02/19/07 18:40	II070215-2	54.98614		55.46	mg/L	100.9	85	115			
L61112-07AS	AS	02/19/07 19:44	II070215-2	54.98614	29	87.9	mg/L	107.1	85	115			
L61112-07ASD	ASD	02/19/07 19:47	II070215-2	54.98614	29	87.99	mg/L	107.3	85	115	0.1	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L61121

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220578													
WG220578ICV	ICV	02/16/07 21:29	WI061207-1	2.416		2.39	mg/L	98.9	90	110			
WG220578ICB	ICB	02/16/07 21:30				U	mg/L		-0.06	0.06			
WG220578LFB	LFB	02/16/07 21:35	WI060906-4	2		1.939	mg/L	97	90	110			
L61108-06AS	AS	02/16/07 21:37	WI060906-4	2		1.946	mg/L	97.3	90	110			
L61108-07DUP	DUP	02/16/07 21:40				.02	mg/L				0	20	RA

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220578													
WG220578ICV	ICV	02/16/07 21:29	WI061207-1	.609		.626	mg/L	102.8	90	110			
WG220578ICB	ICB	02/16/07 21:30				U	mg/L		-0.03	0.03			
WG220578LFB	LFB	02/16/07 21:35	WI060906-4	1		1.003	mg/L	100.3	90	110			
L61108-06AS	AS	02/16/07 21:37	WI060906-4	1		.989	mg/L	98.9	90	110			
L61108-07DUP	DUP	02/16/07 21:40				U	mg/L				0	20	RA

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220634													
WG220634ICV	ICV	02/19/07 18:20	II070116-1	20		19.68	mg/L	98.4	95	105			
WG220634ICB	ICB	02/19/07 18:24				U	mg/L		-0.9	0.9			
WG220634LFB	LFB	02/19/07 18:40	II070215-2	99.51014		99.9	mg/L	100.4	85	115			
L61112-07AS	AS	02/19/07 19:44	II070215-2	99.51014	166	274.25	mg/L	108.8	85	115			
L61112-07ASD	ASD	02/19/07 19:47	II070215-2	99.51014	166	273.49	mg/L	108	85	115	0.28	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220632													
WG220632PBW	PBW	02/19/07 16:10				U	mg/L		-20	20			
WG220632LCSW	LCSW	02/19/07 16:11	PCN26281	260		268	mg/L	103.1	80	120			
L61127-09DUP	DUP	02/19/07 16:25			3020	2974	mg/L				1.5	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220634													
WG220634ICV	ICV	02/19/07 18:20	II070116-1	100		98.92	mg/L	98.9	95	105			
WG220634ICV	ICV	02/19/07 18:20	II070116-1	100		98.5	mg/L	98.5	95	105			
WG220634ICB	ICB	02/19/07 18:24				U	mg/L		-6	6			
WG220634ICB	ICB	02/19/07 18:24				U	mg/L		-0.9	0.9			
WG220634LFB	LFB	02/19/07 18:40	II070215-2	99.90786		101.7	mg/L	101.8	85	115			
WG220634LFB	LFB	02/19/07 18:40	II070215-2	99.90786		101.55	mg/L	101.6	85	115			
L61112-07AS	AS	02/19/07 19:44	II070215-2	99.90786	655	753.9	mg/L	99	85	115			
L61112-07ASD	ASD	02/19/07 19:47	II070215-2	99.90786	655	754.5	mg/L	99.6	85	115	0.08	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L61121

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220517													
WG220517ICV	ICV	02/15/07 18:50	IC070205-1	50		51.17	mg/L	102.3	90	110			
WG220517ICB	ICB	02/15/07 19:08				.66	mg/L		-1.5	1.5			
WG220898													
WG220898ICV	ICV	02/15/07 18:50	IC070205-1	50		51.17	mg/L	102.3	90	110			
WG220898ICB	ICB	02/15/07 19:08				.66	mg/L		-1.5	1.5			
WG220898ICV1	ICV	02/26/07 16:19	IC070205-1	50		50.82	mg/L	101.6	90	110			
WG220898ICB1	ICB	02/26/07 16:37				.53	mg/L		-1.5	1.5			
WG220898LFB	LFB	02/26/07 16:55	IC070205-3	30		30.92	mg/L	103.1	90	110			
L60955-05DUP	DUP	02/26/07 17:31			8.7	8.73	mg/L				0.3	20	
L60955-07AS	AS	02/26/07 18:26	IC070205-3	30	8.7	38.33	mg/L	98.8	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L61121**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L61121-02	WG220898	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG220578	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG220940	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L61121**

No certification qualifiers associated with this analysis

Sample Receipt

Phelps Dodge Sierrita
 OJ00XN

ACZ Project ID: L61121
 Date Received: 2/16/2007
 Received By:
 Date Printed: 2/16/2007

Receipt Verification

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

YES	NO	NA
		X
		X
		X
X		
X		
X		
X		
X		
X		
		X
		X
		X
		X

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA2977	3.7	17

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

Notes

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L61121
Date Received: 2/16/2007
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L61121-01	635386-021507									X		<input type="checkbox"/>
L61121-02	635386-021507		Y									<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L61121

Page 2 of 2

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: Kim Garcia
 Company: Hydro Geo Chem Inc.
 E-mail:

Address:
 Telephone:

Copy of Report to:

Name: Ned Hall/Bill Dorris/ Jim Norris
 Company: Phelps Dodge, LLC

E-mail:
 Telephone:

Invoice to:

Name: Ned Hall/Bill Dorris
 Company: Phelps Dodge Sierra
 E-mail:

Address:
 Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES NO
 If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Sierrita Short
 Project/PO #: OJ 00XN
 Reporting state for compliance testing: AZ
 Sampler's Name: K Arneson N
 Are any samples NRC licensable material?

# of Containers	Sulfate	pH	EC						
1		7.75	327						

SAMPLE IDENTIFICATION	DATE:TIME	Matrix
635386-021507	2-15-2007 1340	GW

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

REMARKS

Raw Sulfate Sample

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<u>[Signature]</u>	1542: 2-15-07	<u>[Signature]</u>	2:16:07 11:16

ACZ Laboratories, Inc.

CHAIN of CUSTODY

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

Report to:

Name: Kim Garcia
 Company: Hydro Geo Chem, Inc
 E-mail:

Address:
 Telephone:

Copy of Report to:

Name: Ned Hall/Billy Dorris/Dim Morris
 Company: Phelps Dodge, HGL

E-mail:
 Telephone:

Invoice to:

Name: Ned Hall/Billy Dorris
 Company: Phelps Dodge Sierrita
 E-mail:

Address:
 Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES NO
 If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION ANALYSES REQUESTED (attach list or use quote number)

Quote #: Sierrita Short
 Project/PO #: OJ00XN
 Reporting state for compliance testing: AZ
 Sampler's Name: Mark Arneson
 Are any samples NRC licensable material? No

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Metals: Ca Mg Na K	Wet Chem: Al, K, TDS, Ammonia	PH	EC
635386-021507	2-15-2007 1337	GW	2	X	X	7.75	327

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

REMARKS

Metals + Wet Chem Samples

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<u>Mark Arneson</u>	<u>1540: 2-15-07</u>	<u>[Signature]</u>	<u>2-16-07 11:16</u>

February 20, 2007

Report to:

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
Green Valley, AZ 85622-0527

Bill to:

Accounts Payable
Phelps Dodge Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Jim Norris, Kim Garcia

Project ID: OJ00XN

ACZ Project ID: L60876

Bill Dorris:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 26, 2007. This project has been assigned to ACZ's project number, L60876. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60876. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after March 20, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



20/Feb/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: GW-540451-012507

ACZ Sample ID: **L60876-01**
Date Sampled: 01/25/07 10:46
Date Received: 01/26/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	82.1			mg/L	0.5	3	01/31/07 19:52	jif

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: GW-540451-01257

ACZ Sample ID: **L60876-02**
 Date Sampled: 01/25/07 10:47
 Date Received: 01/26/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	49.2			mg/L	0.2	1	02/06/07 1:59	msh
Magnesium, dissolved	M200.7 ICP	9.3			mg/L	0.2	1	02/07/07 3:51	msh
Potassium, dissolved	M200.7 ICP	1.8	B		mg/L	0.3	2	02/06/07 1:59	msh
Sodium, dissolved	M200.7 ICP	26.3			mg/L	0.3	2	02/06/07 1:59	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		122	H		mg/L	2	20	02/16/07 0:00	cas
Carbonate as CaCO3			UH		mg/L	2	20	02/16/07 0:00	cas
Hydroxide as CaCO3			UH		mg/L	2	20	02/16/07 0:00	cas
Total Alkalinity		122	H	*	mg/L	2	20	02/16/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.1			%			02/20/07 0:00	calc
Sum of Anions		4.5			meq/L	0.1	0.5	02/20/07 0:00	calc
Sum of Cations		4.4			meq/L	0.1	0.5	02/20/07 0:00	calc
Chloride	M300.0 - Ion Chromatography	9.8			mg/L	0.5	3	01/31/07 20:10	jff
Fluoride	M300.0 - Ion Chromatography	0.1	B	*	mg/L	0.1	0.5	01/31/07 20:10	jff
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	1.00			mg/L	0.02	0.1	02/20/07 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.00	H	*	mg/L	0.02	0.1	01/30/07 19:14	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		UH	*	mg/L	0.01	0.05	01/30/07 19:14	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	290	H	*	mg/L	10	20	02/07/07 16:57	seb
Sulfate	300.0 - Ion Chromatography	82.6			mg/L	0.5	3	01/31/07 20:10	jff
TDS (calculated)	Calculation	257			mg/L	10	50	02/20/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.13						02/20/07 0:00	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60876

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220490													
WG220490LCSW2	LCSW	02/16/07 10:44	WC070127-6	820		805.4	mg/L	98.2	80	120			
L60921-01DUP	DUP	02/16/07 11:47			281	280.5	mg/L				0.2	20	
WG220490LCSW5	LCSW	02/16/07 12:57	WC070127-6	820		825	mg/L	100.6	80	120			
WG220490LCSW8	LCSW	02/16/07 15:54	WC070127-6	820		823.5	mg/L	100.4	80	120			

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220056													
WG220056ICV	ICV	02/05/07 23:48	II070116-1	100		95.83	mg/L	95.8	95	105			
WG220056ICB	ICB	02/05/07 23:52				U	mg/L		-0.6	0.6			
WG220056LFB	LFB	02/06/07 0:08	II070119-5	67.95918		67.44	mg/L	99.2	85	115			
L60861-06AS	AS	02/06/07 1:11	II070119-5	67.95918	39.6	106.5	mg/L	98.4	85	115			
L60861-06ASD	ASD	02/06/07 1:15	II070119-5	67.95918	39.6	107.03	mg/L	99.2	85	115	0.5	20	

Chloride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219654													
WG219654ICV	ICV	01/29/07 13:03	IC070104-1	20		20.16	mg/L	100.8	90	110			
WG219654ICB	ICB	01/29/07 13:21				U	mg/L		-1.5	1.5			
WG219806													
WG219806ICV	ICV	01/29/07 13:03	IC070104-1	20		20.16	mg/L	100.8	90	110			
WG219806ICB	ICB	01/29/07 13:21				U	mg/L		-1.5	1.5			
WG219806ICV1	ICV	01/30/07 11:48	IC070104-1	20		20.09	mg/L	100.5	90	110			
WG219806ICB1	ICB	01/30/07 12:06				U	mg/L		-1.5	1.5			
WG219806LFB	LFB	01/30/07 12:24	IC061106-1	30		30.28	mg/L	100.9	90	110			
L60852-06DUP	DUP	01/30/07 17:14			8.1	8.04	mg/L				0.7	20	
L60861-11AS	AS	01/31/07 18:21	IC061106-1	60	127	185.3	mg/L	97.2	90	110			
WG219806ICV2	ICV	02/01/07 14:30	IC070104-1	20		20.1	mg/L	100.5	90	110			
WG219806ICB2	ICB	02/01/07 14:48				U	mg/L		-1.5	1.5			

Fluoride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219654													
WG219654ICV	ICV	01/29/07 13:03	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219654ICB	ICB	01/29/07 13:21				U	mg/L		-0.3	0.3			
WG219806													
WG219806ICV	ICV	01/29/07 13:03	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219806ICB	ICB	01/29/07 13:21				U	mg/L		-0.3	0.3			
WG219806ICV1	ICV	01/30/07 11:48	IC070104-1	3.992		3.99	mg/L	99.9	90	110			
WG219806ICB1	ICB	01/30/07 12:06				U	mg/L		-0.3	0.3			
WG219806LFB	LFB	01/30/07 12:24	IC061106-1	1.5		1.52	mg/L	101.3	90	110			
L60852-06DUP	DUP	01/30/07 17:14			.7	.69	mg/L				1.4	20	RA
L60861-11AS	AS	01/30/07 17:50	IC061106-1	1.5	.3	1.74	mg/L	96	90	110			
WG219806ICV2	ICV	02/01/07 14:30	IC070104-1	3.992		3.97	mg/L	99.4	90	110			
WG219806ICB2	ICB	02/01/07 14:48				.12	mg/L		-0.3	0.3			

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60876

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220106													
WG220106ICV	ICV	02/07/07 1:43	II070116-1	100		96.24	mg/L	96.2	95	105			
WG220106ICB	ICB	02/07/07 1:47				U	mg/L		-0.6	0.6			
WG220106LFB	LFB	02/07/07 2:03	II070119-5	54.98614		55.87	mg/L	101.6	85	115			
L60861-06AS	AS	02/07/07 3:03	II070119-5	54.98614	.8	60.22	mg/L	108.1	85	115			
L60861-06ASD	ASD	02/07/07 3:07	II070119-5	54.98614	.8	61.03	mg/L	109.5	85	115	1.34	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219841													
WG219841ICV	ICV	01/30/07 18:44	WI061207-1	2.416		2.498	mg/L	103.4	90	110			
WG219841ICB	ICB	01/30/07 18:46				U	mg/L		-0.06	0.06			
WG219841LFB	LFB	01/30/07 18:49	WI060906-4	2		2.024	mg/L	101.2	90	110			
L60841-01AS	AS	01/30/07 19:10	WI060906-4	2	.54	2.518	mg/L	98.9	90	110			
L60841-02DUP	DUP	01/30/07 19:12			.56	.555	mg/L				0.9	20	

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219841													
WG219841ICV	ICV	01/30/07 18:44	WI061207-1	.609		.623	mg/L	102.3	90	110			
WG219841ICB	ICB	01/30/07 18:46				U	mg/L		-0.03	0.03			
WG219841LFB	LFB	01/30/07 18:49	WI060906-4	1		1.001	mg/L	100.1	90	110			
L60841-01AS	AS	01/30/07 19:10	WI060906-4	1	U	.952	mg/L	95.2	90	110			
L60841-02DUP	DUP	01/30/07 19:12			U	U	mg/L				0	20	RA

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220056													
WG220056ICV	ICV	02/05/07 23:48	II070116-1	20		20.13	mg/L	100.7	95	105			
WG220056ICB	ICB	02/05/07 23:52				U	mg/L		-0.9	0.9			
WG220056LFB	LFB	02/06/07 0:08	II070119-5	99.51014		100.76	mg/L	101.3	85	115			
L60861-06AS	AS	02/06/07 1:11	II070119-5	99.51014	.6	103.73	mg/L	103.6	85	115			
L60861-06ASD	ASD	02/06/07 1:15	II070119-5	99.51014	.6	103.9	mg/L	103.8	85	115	0.16	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220179													
WG220179PBW	PBW	02/07/07 16:10				U	mg/L		-20	20			
WG220179LCSW	LCSW	02/07/07 16:12	PCN26277	261		276	mg/L	105.7	80	120			
L60876-02DUP	DUP	02/07/07 16:59			290	276	mg/L				4.9	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60876

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220056													
WG220056ICV	ICV	02/05/07 23:48	II070116-1	100		99.81	mg/L	99.8	95	105			
WG220056ICB	ICB	02/05/07 23:52				U	mg/L		-0.9	0.9			
WG220056LFB	LFB	02/06/07 0:08	II070119-5	99.90786		100.58	mg/L	100.7	85	115			
L60861-06AS	AS	02/06/07 1:11	II070119-5	99.90786	98	197.73	mg/L	99.8	85	115			
L60861-06ASD	ASD	02/06/07 1:15	II070119-5	99.90786	98	196.57	mg/L	98.7	85	115	0.59	20	

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219654													
WG219654ICV	ICV	01/29/07 13:03	IC070104-1	50		50.87	mg/L	101.7	90	110			
WG219654ICB	ICB	01/29/07 13:21				U	mg/L		-1.5	1.5			
WG219806													
WG219806ICV	ICV	01/29/07 13:03	IC070104-1	50		50.87	mg/L	101.7	90	110			
WG219806ICB	ICB	01/29/07 13:21				U	mg/L		-1.5	1.5			
WG219806ICV1	ICV	01/30/07 11:48	IC070104-1	50		50.39	mg/L	100.8	90	110			
WG219806ICB1	ICB	01/30/07 12:06				U	mg/L		-1.5	1.5			
WG219806LFB	LFB	01/30/07 12:24	IC061106-1	30		30.36	mg/L	101.2	90	110			
L60852-06DUP	DUP	01/30/07 17:14			47.7	47.69	mg/L				0	20	
WG219806ICV2	ICV	02/01/07 14:30	IC070104-1	50		49.99	mg/L	100	90	110			
WG219806ICB2	ICB	02/01/07 14:48				U	mg/L		-1.5	1.5			
L60861-11AS	AS	02/01/07 15:24	IC061106-1	150	146	294.6	mg/L	99.1	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L60876**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60876-02	WG219806	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG219841	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG220179	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG220490	Total Alkalinity	SM2320B - Titration	C4	Confirmatory analysis was past holding time.

Phelps Dodge Sierrita

ACZ Project ID: **L60876**



No certification qualifiers associated with this analysis

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60876
Date Received: 1/26/2007
Received By:
Date Printed: 1/29/2007

Receipt Verification

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

	YES	NO	NA
			X
			X
			X
		X	
X			
X			
X			
X			
X			
			X
			X
			X
			X

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

A COC was not received for this sample. The project manager contacted the client and a COC was received on 1/29/07.

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
na2879	5.5	14

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

Notes

Phelps Dodge Sierrita
 OJ00XN

ACZ Project ID: L60876
 Date Received: 1/26/2007
 Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60876-01	GW-540451-012507									X		<input type="checkbox"/>
L60876-02	GW-540451-01257		Y									<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

February 14, 2007

Report to:

Ned Hall
Phelps Dodge Sierrita
P.O. Box 527 6200 W. Duval Mine Rd.
Green Valley, AZ 85622-0527

Bill to:

Accounts Payable
Phelps Dodge Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Jim Norris, Kim Garcia

Project ID: OJ00XN

ACZ Project ID: L60869

Ned Hall:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 26, 2007. This project has been assigned to ACZ's project number, L60869. Please reference this number in all future inquiries.

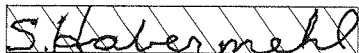
All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L60869. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after March 14, 2007. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

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



14/Feb/07

Scott Habermehl, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

Project ID: OJ00XN
 Sample ID: GW-550533-012507

ACZ Sample ID: **L60869-01**
 Date Sampled: 01/25/07 15:31
 Date Received: 01/26/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	80.1			mg/L	0.2	1	02/06/07 1:55	msh
Magnesium, dissolved	M200.7 ICP	23.4			mg/L	0.2	1	02/07/07 3:47	msh
Potassium, dissolved	M200.7 ICP	4.5			mg/L	0.3	2	02/06/07 1:55	msh
Sodium, dissolved	M200.7 ICP	46.8			mg/L	0.3	2	02/06/07 1:55	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		126		*	mg/L	2	20	02/08/07 0:00	cas
Carbonate as CaCO ₃			U	*	mg/L	2	20	02/08/07 0:00	cas
Hydroxide as CaCO ₃			U	*	mg/L	2	20	02/08/07 0:00	cas
Total Alkalinity		126		*	mg/L	2	20	02/08/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.6			%			02/14/07 0:00	calc
Sum of Anions		8.0			meq/L	0.1	0.5	02/14/07 0:00	calc
Sum of Cations		8.1			meq/L	0.1	0.5	02/14/07 0:00	calc
Chloride	M300.0 - Ion Chromatography	21.1			mg/L	0.5	3	01/30/07 18:44	jlf
Fluoride	M300.0 - Ion Chromatography	0.4	B	*	mg/L	0.1	0.5	01/30/07 18:44	jlf
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	1.61			mg/L	0.02	0.1	02/14/07 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1.61			mg/L	0.02	0.1	01/26/07 18:39	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/26/07 18:39	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	550	H	*	mg/L	10	20	02/07/07 16:40	seb
Sulfate	300.0 - Ion Chromatography	229			mg/L	3	10	01/31/07 18:40	jlf
TDS (calculated)	Calculation	488			mg/L	10	50	02/14/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.13						02/14/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ00XN
Sample ID: GW-550533-012507

ACZ Sample ID: **L60869-02**
Date Sampled: 01/25/07 15:30
Date Received: 01/26/07
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	300.0 - Ion Chromatography	228			mg/L	3	10	02/01/07 15:42	jfr

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
U	Analyte was analyzed for but not detected at the indicated MDL
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60869

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220218													
WG220218LCSW2	LCSW	02/08/07 18:25	WC070127-6	820		831.5	mg/L	101.4	80	120			
L60913-05DUP	DUP	02/08/07 20:48			U	U	mg/L				0	20	RA
WG220218LCSW5	LCSW	02/08/07 21:02	WC070127-6	820		844.9	mg/L	103	80	120			
WG220218LCSW8	LCSW	02/08/07 23:48	WC070127-6	820		848.3	mg/L	103.5	80	120			

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220056													
WG220056ICV	ICV	02/05/07 23:48	II070116-1	100		95.83	mg/L	95.8	95	105			
WG220056ICB	ICB	02/05/07 23:52				U	mg/L		-0.6	0.6			
WG220056LFB	LFB	02/06/07 0:08	II070119-5	67.95918		67.44	mg/L	99.2	85	115			
L60861-06AS	AS	02/06/07 1:11	II070119-5	67.95918	39.6	106.5	mg/L	98.4	85	115			
L60861-06ASD	ASD	02/06/07 1:15	II070119-5	67.95918	39.6	107.03	mg/L	99.2	85	115	0.5	20	

Chloride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219654													
WG219654ICV	ICV	01/29/07 13:03	IC070104-1	20		20.16	mg/L	100.8	90	110			
WG219654ICB	ICB	01/29/07 13:21				U	mg/L		-1.5	1.5			
WG219806													
WG219806ICV	ICV	01/29/07 13:03	IC070104-1	20		20.16	mg/L	100.8	90	110			
WG219806ICB	ICB	01/29/07 13:21				U	mg/L		-1.5	1.5			
WG219806ICV1	ICV	01/30/07 11:48	IC070104-1	20		20.09	mg/L	100.5	90	110			
WG219806ICB1	ICB	01/30/07 12:06				U	mg/L		-1.5	1.5			
WG219806LFB	LFB	01/30/07 12:24	IC061106-1	30		30.28	mg/L	100.9	90	110			
L60852-06DUP	DUP	01/30/07 17:14			8.1	8.04	mg/L				0.7	20	
L60861-11AS	AS	01/31/07 18:21	IC061106-1	60	127	185.3	mg/L	97.2	90	110			
WG219806ICV2	ICV	02/01/07 14:30	IC070104-1	20		20.1	mg/L	100.5	90	110			
WG219806ICB2	ICB	02/01/07 14:48				U	mg/L		-1.5	1.5			

Fluoride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219654													
WG219654ICV	ICV	01/29/07 13:03	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219654ICB	ICB	01/29/07 13:21				U	mg/L		-0.3	0.3			
WG219806													
WG219806ICV	ICV	01/29/07 13:03	IC070104-1	3.992		4.1	mg/L	102.7	90	110			
WG219806ICB	ICB	01/29/07 13:21				U	mg/L		-0.3	0.3			
WG219806ICV1	ICV	01/30/07 11:48	IC070104-1	3.992		3.99	mg/L	99.9	90	110			
WG219806ICB1	ICB	01/30/07 12:06				U	mg/L		-0.3	0.3			
WG219806LFB	LFB	01/30/07 12:24	IC061106-1	1.5		1.52	mg/L	101.3	90	110			
L60852-06DUP	DUP	01/30/07 17:14			.7	.69	mg/L				1.4	20	RA
L60861-11AS	AS	01/30/07 17:50	IC061106-1	1.5	.3	1.74	mg/L	96	90	110			
WG219806ICV2	ICV	02/01/07 14:30	IC070104-1	3.992		3.97	mg/L	99.4	90	110			
WG219806ICB2	ICB	02/01/07 14:48				.12	mg/L		-0.3	0.3			

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60869

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220106													
WG220106ICV	ICV	02/07/07 1:43	II070116-1	100		96.24	mg/L	96.2	95	105			
WG220106ICB	ICB	02/07/07 1:47				U	mg/L		-0.6	0.6			
WG220106LFB	LFB	02/07/07 2:03	II070119-5	54.98614		55.87	mg/L	101.6	85	115			
L60861-06AS	AS	02/07/07 3:03	II070119-5	54.98614	.8	60.22	mg/L	108.1	85	115			
L60861-06ASD	ASD	02/07/07 3:07	II070119-5	54.98614	.8	61.03	mg/L	109.5	85	115	1.34	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219725													
WG219725ICV	ICV	01/26/07 18:12	WI061207-1	2.416		2.311	mg/L	95.7	90	110			
WG219725ICB	ICB	01/26/07 18:14				U	mg/L		-0.06	0.06			
WG219725LFB	LFB	01/26/07 18:17	WI060906-4	2		1.986	mg/L	99.3	90	110			
L60867-02AS	AS	01/26/07 18:38	WI060906-4	2	.93	2.925	mg/L	99.8	90	110			
L60869-01DUP	DUP	01/26/07 18:40			1.61	1.616	mg/L				0.4	20	

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219725													
WG219725ICV	ICV	01/26/07 18:12	WI061207-1	.609		.609	mg/L	100	90	110			
WG219725ICB	ICB	01/26/07 18:14				U	mg/L		-0.03	0.03			
WG219725LFB	LFB	01/26/07 18:17	WI060906-4	1		.994	mg/L	99.4	90	110			
L60867-02AS	AS	01/26/07 18:38	WI060906-4	1	U	1.002	mg/L	100.2	90	110			
L60869-01DUP	DUP	01/26/07 18:40			U	U	mg/L				0	20	RA

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220056													
WG220056ICV	ICV	02/05/07 23:48	II070116-1	20		20.13	mg/L	100.7	95	105			
WG220056ICB	ICB	02/05/07 23:52				U	mg/L		-0.9	0.9			
WG220056LFB	LFB	02/06/07 0:08	II070119-5	99.51014		100.76	mg/L	101.3	85	115			
L60861-06AS	AS	02/06/07 1:11	II070119-5	99.51014	.6	103.73	mg/L	103.6	85	115			
L60861-06ASD	ASD	02/06/07 1:15	II070119-5	99.51014	.6	103.9	mg/L	103.8	85	115	0.16	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220179													
WG220179PBW	PBW	02/07/07 16:10				U	mg/L		-20	20			
WG220179LCSW	LCSW	02/07/07 16:12	PCN26277	261		276	mg/L	105.7	80	120			
L60876-02DUP	DUP	02/07/07 16:59			290	276	mg/L				4.9	20	

Phelps Dodge Sierrita
 Project ID: OJ00XN

ACZ Project ID: L60869

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG220056													
WG220056ICV	ICV	02/05/07 23:48	II070116-1	100		99.81	mg/L	99.8	95	105			
WG220056ICB	ICB	02/05/07 23:52				U	mg/L		-0.9	0.9			
WG220056LFB	LFB	02/06/07 0:08	II070119-5	99.90786		100.58	mg/L	100.7	85	115			
L60861-06AS	AS	02/06/07 1:11	II070119-5	99.90786	98	197.73	mg/L	99.8	85	115			
L60861-06ASD	ASD	02/06/07 1:15	II070119-5	99.90786	98	196.57	mg/L	98.7	85	115	0.59	20	

Sulfate 300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG219654													
WG219654ICV	ICV	01/29/07 13:03	IC070104-1	50		50.87	mg/L	101.7	90	110			
WG219654ICB	ICB	01/29/07 13:21				U	mg/L		-1.5	1.5			
WG219806													
WG219806ICV	ICV	01/29/07 13:03	IC070104-1	50		50.87	mg/L	101.7	90	110			
WG219806ICB	ICB	01/29/07 13:21				U	mg/L		-1.5	1.5			
WG219806ICV1	ICV	01/30/07 11:48	IC070104-1	50		50.39	mg/L	100.8	90	110			
WG219806ICB1	ICB	01/30/07 12:06				U	mg/L		-1.5	1.5			
WG219806LFB	LFB	01/30/07 12:24	IC061106-1	30		30.36	mg/L	101.2	90	110			
L60852-06DUP	DUP	01/30/07 17:14			47.7	47.69	mg/L				0	20	
WG219806ICV2	ICV	02/01/07 14:30	IC070104-1	50		49.99	mg/L	100	90	110			
WG219806ICB2	ICB	02/01/07 14:48				U	mg/L		-1.5	1.5			
L60861-11AS	AS	02/01/07 15:24	IC061106-1	150	146	294.6	mg/L	99.1	90	110			

Phelps Dodge Sierrita

ACZ Project ID: **L60869**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L60869-01	WG220218	Bicarbonate as CaCO ₃	SM2320B - Titration	QA	Sample container with preservation type specified by the method was not available for analysis. Alternate sample container was used.
		Carbonate as CaCO ₃	SM2320B - Titration	QA	Sample container with preservation type specified by the method was not available for analysis. Alternate sample container was used.
	WG219806	Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG220218	Hydroxide as CaCO ₃	SM2320B - Titration	QA	Sample container with preservation type specified by the method was not available for analysis. Alternate sample container was used.
	WG219725	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG220179	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG220218	Total Alkalinity	SM2320B - Titration	QA	Sample container with preservation type specified by the method was not available for analysis. Alternate sample container was used.
			SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: **L60869**

No certification qualifiers associated with this analysis

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60869
Date Received: 1/26/2007
Received By:
Date Printed: 1/26/2007

Receipt Verification

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

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

N/A

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

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA2879	5.5	14

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

Notes

Phelps Dodge Sierrita
OJ00XN

ACZ Project ID: L60869
Date Received: 1/26/2007
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L60869-01	GW-550533-012507		Y									<input type="checkbox"/>
L60869-02	GW-550533-012507									X		<input type="checkbox"/>

Sample Container Preservation Legend

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

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____