phelps dodge Mining Company
Chino Mines Company, Hurley, New Mexico 88043 ● (505) 537-3381

RECEIVED 12/27/05

November 30, 2005

Certified Mail #70041160000109429453
Return Receipt Requested

Mr. William C. Olson, Bureau Chief
New Mexico Environment Department
Ground Water Quality Bureau
P. O. Box 26110
Santa Fe, New Mexico 87502

Dear Mr. Olson:

Re: Biannual Monitoring Report, Groundhog Mine Site
Interim Remedial Action, Hanover/Whitewater Creeks IU

Enclosed is Chino Mines Company's (Chino) biannual monitoring report for the Groundhog Mine Site representing the period covering March 2004 through October 2004. This monitoring report is submitted pursuant to Chino's corrective action proposal dated October 21, 2004 for the release of water from the Groundhog Mine Site on August 18, 2004.

This report includes groundwater water quality data for Monitor Wells GH-2004-2S, GH-2004-2D, and the Groundhog Mine seepage collection system located up gradient of the headwall for the following constituents: cadmium, cobalt, copper, fluoride, iron, lead, manganese, nickel, zinc, sulfate, and total dissolved solids.

If you require additional information, please contact Ms. Pam Pinson at (505) 537-4213.

Very truly yours,

Ned Hall

E. L. (Ned) Hall, Manager
Environment, Land & Water
New Mexico Operations

ELH:pp
Attachment
20051130-005

c: Mr. Chris Eustice, NMED
Mr. Phil Harrigan, NMED
Mr. Al Pasteris, NMED
Ms. Karen Garcia, MMD
Mr. Mark Purcell, EPA

676270

Phelps Dodge Corporation - Chino Mines Company
Water Quality Monitoring Data

Site Number	Sample Date	Cd, Diss (mg/l)	Co, Diss (mg/l)	Cond, Fld micromho	Cu, Diss (mg/l)	Depth to Water (ft)	F, Tot_ (mg/l)	Fe, Diss (mg/l)	Well Collar Level (ft msl)	Well Depth	Mn, Diss (mg/l)	Ni, Diss (mg/l)	Pb, Diss (mg/l)	pH, Field (su)	SO4, Tot_ (mg/l)	TDS (mg/l)	Water Temp (Cent)	Zn, Diss (mg/l)
Water Quality Standard		0.01	0.05		1		1.6	1			0.2	0.2	0.05	6- 9	600	1000		10
GH-2004-2D	10/28/2004	0.0044	<0.006	2292	0.0049	62	<1	<0.02	6,009.67	157.6	0.0591	<0.01	<0.005	6.63	1780	2580	17.3	0.743
GH-2004-2S	10/28/2004	0.0153	<0.006	2019	0.007	53.25	0.31	<0.02	6,009.67	84.8**	0.703	<0.01	<0.005	7.07	1460	2120	17	2.15
GH-2004-2D	5/17/2005	0.0027	<0.006	2339	<0.01	44.5	<0.5	0.089	6003.74	147.6	0.374	<0.01	<0.005	6.76	1640	2440	17.4	0.654
GH-2004-2S	5/17/2005	0.0029	<0.006	2046	0.014	46.73	<0.5	<0.06	6003.74	83	0.0826	<0.01	<0.005	7.39	1360	2080	17.4	0.371
GH-Sump*	4/14/2005	2.31	1.11	5550	95.1	surface	6.04	0.28	surface	surface	333	0.846	1.24	3.92	5530	9220	17.7	844
GH-2004-2D	10/25/2005	0.0074	<0.006	2354	<0.01	46.3	1.03	<0.06	6003.74	147.6	0.213	<0.01	0.009	6.62	1620	2530	17.4	1.65
GH-2004-2S	10/25/2005	0.0026	<0.006	2152	<0.01	40.16	1.02	<0.06	6003.74	83	0.0321	<0.01	<0.0075	6.99	1390	2160	17.3	0.421
GH-Sump*	9/26/2005	0.749	0.307	3643	20.2	surface	1.32	<0.3	surface	surface	95.3	0.178	0.289	4.05	2870	4450	23.6	224

*Water in sump at this time was from the construction phase of the stockpile removal.
**Well depth on record is incorrect

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SVL ANALYTICAL, INC.
One Government Gulch ▪ P.O. Box 929 ▪ Kellogg, Idaho 83837-0929 ▪ Phone: (208)784-1258 ▪ Fax: (208)783-0891

Certificate: ID ID00019

CLIENT : PHELPS DODGE - CHINO MINES
PROJECT: G04880
CLIENT SAMPLE ID: 270674
Sample Collected: 10/25/05 10:15
Sample Receipt : 10/26/05
Date of Report : 10/31/05

SVL JOB: 119685
SAMPLE: 478204
TOT/DIS

Matrix: WATER

	Determination	Result	Units	Method	Analyzed
T	TDS	2530	mg/L	160.1	10/27/05
T	Fluoride	1.03	mg/L	300.0	10/28/05
T	Sulfate, SO4	1620	mg/L	300.0	10/28/05
D	Cadmium	0.00740	mg/L	200.7	10/30/05
D	Cobalt	<0.00600	mg/L	200.7	10/30/05
D	Copper	<0.0100	mg/L	200.7	10/30/05
D	Iron	<0.0600	mg/L	200.7	10/30/05
D	Manganese	0.213	mg/L	200.7	10/30/05
D	Nickel	<0.0100	mg/L	200.7	10/30/05
D	Lead	0.00900	mg/L	200.7	10/30/05
D	Zinc	1.65	mg/L	200.7	10/30/05

Filtered fraction: 478207

Reviewed By: _____ Date 10/31/05
10/31/05 12:59

AZ: AZ0538 CA: NO. 2080 CO: 9/1/05 ID: ID00019 MT: 6/6/05 NV: 7/08/05 WA: C1268

SVL ANALYTICAL, INC.
One Government Gulch ▪ P.O. Box 929 ▪ Kellogg, Idaho 83837-0929 ▪ Phone: (208)784-1258 ▪ Fax: (208)783-0891

Certificate: ID ID00019

CLIENT : PHELPS DODGE - CHINO MINES
PROJECT: G04880
CLIENT SAMPLE ID: 270675
Sample Collected: 10/25/05 9:50
Sample Receipt : 10/26/05
Date of Report : 10/31/05

SVL JOB: 119685
SAMPLE: 478205
TOT/DIS

Matrix: WATER

	Determination	Result	Units	Method	Analyzed
T	TDS	2160	mg/L	160.1	10/27/05
T	Fluoride	1.02	mg/L	300.0	10/28/05
T	Sulfate, SO4	1390	mg/L	300.0	10/28/05
D	Cadmium	0.00260	mg/L	200.7	10/30/05
D	Cobalt	<0.00600	mg/L	200.7	10/30/05
D	Copper	<0.0100	mg/L	200.7	10/30/05
D	Iron	<0.0600	mg/L	200.7	10/30/05
D	Manganese	0.0321	mg/L	200.7	10/30/05
D	Nickel	<0.0100	mg/L	200.7	10/30/05
D	Lead	<0.00750	mg/L	200.7	10/30/05
D	Zinc	0.421	mg/L	200.7	10/30/05

Filtered fraction: 478208

Reviewed By: _____ Date 10/31/05
10/31/05 12:59

AZ: AZ0538 CA: NO. 2080 CO: 9/1/05 ID: ID00019 MT: 6/6/05 NV: 7/08/05 WA: C1268

SVL ANALYTICAL, INC.

Quality Control Report
Part I Prep Blank and Laboratory Control Sample

Client :PHELPS DODGE - CHINO MINES

SVL JOB No: 119685

Analyte	Method	Matrix	Units	Prep Blank	True—LCS—Found		LCS %R	Analysis Date
Arsenic	200.7	WATER	mg/L	<0.0250	1.00	1.01	101.0	10/30/05
Calcium	200.7	WATER	mg/L	<0.040	20.0	20.2	101.0	10/30/05
Cadmium	200.7	WATER	mg/L	<0.0020	1.00	0.997	99.7	10/30/05
Cobalt	200.7	WATER	mg/L	<0.0060	1.00	0.978	97.8	10/30/05
Chromium	200.7	WATER	mg/L	<0.0060	1.00	1.01	101.0	10/30/05
Copper	200.7	WATER	mg/L	<0.010	1.00	0.980	98.0	10/30/05
Iron	200.7	WATER	mg/L	<0.060	10.0	10.1	101.0	10/30/05
Potassium	200.7	WATER	mg/L	<0.50	20.0	20.2	101.0	10/30/05
Magnesium	200.7	WATER	mg/L	<0.060	20.0	19.7	98.5	10/30/05
Manganese	200.7	WATER	mg/L	<0.0040	1.00	0.988	98.8	10/30/05
Sodium	200.7	WATER	mg/L	<0.50	19.0	19.1	100.5	10/30/05
Nickel	200.7	WATER	mg/L	<0.010	1.00	0.946	94.6	10/30/05
Lead	200.7	WATER	mg/L	<0.00750	1.00	1.00	100.0	10/30/05
Zinc	200.7	WATER	mg/L	<0.010	1.00	0.988	98.8	10/30/05
Chloride	300.0	WATER	mg/L	<0.20	5.05	4.97	98.4	10/27/05
Fluoride	300.0	WATER	mg/L	<0.10	2.50	2.48	99.2	10/27/05
Sulfate, SO4	300.0	WATER	mg/L	<0.30	10.0	9.70	97.0	10/27/05
ALKALINITY	2320B	WATER	mg/L	<1.0	82.7	81.0	97.9	10/26/05
TDS	160.1	WATER	mg/L	<10	1620	1540	95.1	10/27/05

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC.

Quality Control Report
Part II Duplicate and Spike Analysis

Client :PHELPS DODGE - CHINO MINES

SVL JOB No: 119685

Test	Method	Mtx	QC SAMPLE ID Units	Result	Duplicate or MSD Found	RPD%	Matrix Spike Result	SPK ADD	%R	Analysis Date
As	200.7	W	1 mg/L	<0.50*	<0.50*	UDL	0.990	1.00	99.0	10/30/05
Ca	200.7	W	1 mg/L	566	553	2.3	560	20.0	R >4S	10/30/05
Cd	200.7	W	1 mg/L	2.06	2.01	2.5	2.92	1.00	86.0	10/30/05
Co	200.7	W	1 mg/L	74.2	72.3	2.6	71.6	1.00	R >4S	10/30/05
Cr	200.7	W	1 mg/L	2.74	2.67	2.6	3.58	1.00	84.0	10/30/05
Cu	200.7	W	1 mg/L	385	381	1.0	372	1.00	R >4S	10/30/05
Fe	200.7	W	1 mg/L	7320	7160	2.2	7020	10.0	R >4S	10/30/05
K	200.7	W	1 mg/L	<10*	<10*	UDL	21.0	20.0	105.0	10/30/05
Mg	200.7	W	1 mg/L	8180	7970	2.6	7820	20.0	R >4S	10/30/05
Mn	200.7	W	1 mg/L	1340	1310	2.3	1280	1.00	R >4S	10/30/05
Na	200.7	W	1 mg/L	<10*	<10*	UDL	383	380	100.8	10/30/05
Ni	200.7	W	1 mg/L	25.4	24.9	2.0	25.3	1.00	R >4S	10/30/05
Pb	200.7	W	1 mg/L	<0.150*	<0.150*	UDL	18.3	20.0	91.5	10/30/05
Zn	200.7	W	1 mg/L	346	334	3.5	329	1.00	R >4S	10/30/05
Cl	300.0	W	2 mg/L	231	222	4.0	567	400	84.0	10/28/05
F	300.0	W	2 mg/L	327	323	1.2	677	400	87.5	10/28/05
SO4	300.0	W	2 mg/L	94100	93300	0.9	119000	25000	99.6	10/28/05
ALK	2320B	W	2 mg/L	<1.0	<1.0	UDL	N/A	N/A	N/A	10/26/05
CO3	2320B	W	2 mg/L	<1.0	<1.0	UDL	N/A	N/A	N/A	10/26/05
HCO3	2320B	W	2 mg/L	<1.0	<1.0	UDL	N/A	N/A	N/A	10/26/05
TDS	160.1	W	2 mg/L	157000	159000	1.3	N/A	N/A	N/A	10/27/05

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) UDL = Both SAM & DUP not detected. *Result or *Found: Interference required dilution.

RPD% = (|SPK - MSD|/((SPK + MSD)/2) * 100) M in Duplicate/MSD column indicates MSD.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC limits for MS recoveries apply only if the spike is at least 1/4 the concentration of the analyte in the sample.

Control limits for the RPD apply only if the concentration of the analyte in the sample is at least five times the reporting limit.

QC Sample 1: SVL SAM No.: 478206 Client Sample ID: 267560 ^D

QC Sample 2: SVL SAM No.: 478203 Client Sample ID: 267560 ^T