Appendix A

Solids Geochemical Data

Oct 2000
Sampling

USEPA REGION 9 LABORATORY
REPORT NARRATIVE

CASE NUMBER:	**R01S07**
SAMPLE DELIVERY GROUP:	**00299B, 00299C**
PROGRAM:	**SUPERFUND**
DOCUMENT CONTROL #:	**ESTW-9B-3810**
DATE:	**11/07/00**
ANALYSIS:	**METALS**
SAMPLE NUMBERS:	

SAMPLE ID	LABORATORY SAMPLE ID
T-1	AB28925
T-2	AB28926
T-3	AB28927
T-4	AB28928
T-5	AB28929
T-6	AB28930
T-7	AB28931
T-8	AB28932
T-9	AB28933
T-10	AB28934
T-11	AB28935
SALT-1	AB28936
SALT-2	AB28937
SALT-3	AB28938
SALT-4	AB28939
SALT-5	AB28940
SALT-6	AB28941
SALT-7	AB28942
SALT-8	AB28943
SALT-9	AB28944
SALT-10	AB28945
SALT-11	AB28946

GENERAL COMMENTS

Twenty two solid samples were received from the Anaconda Copper Mine, Yerington Superfund project on 10/25/00.

The samples were analyzed for metals following SW-846 Methods 6010, 7471 and 7000 (GFAA metals). All mercury samples were analyzed within the required 28-day holding time. All other elements were analyzed within the required 180-day holding time. The sample results are reported in mg/Kg dry weight.

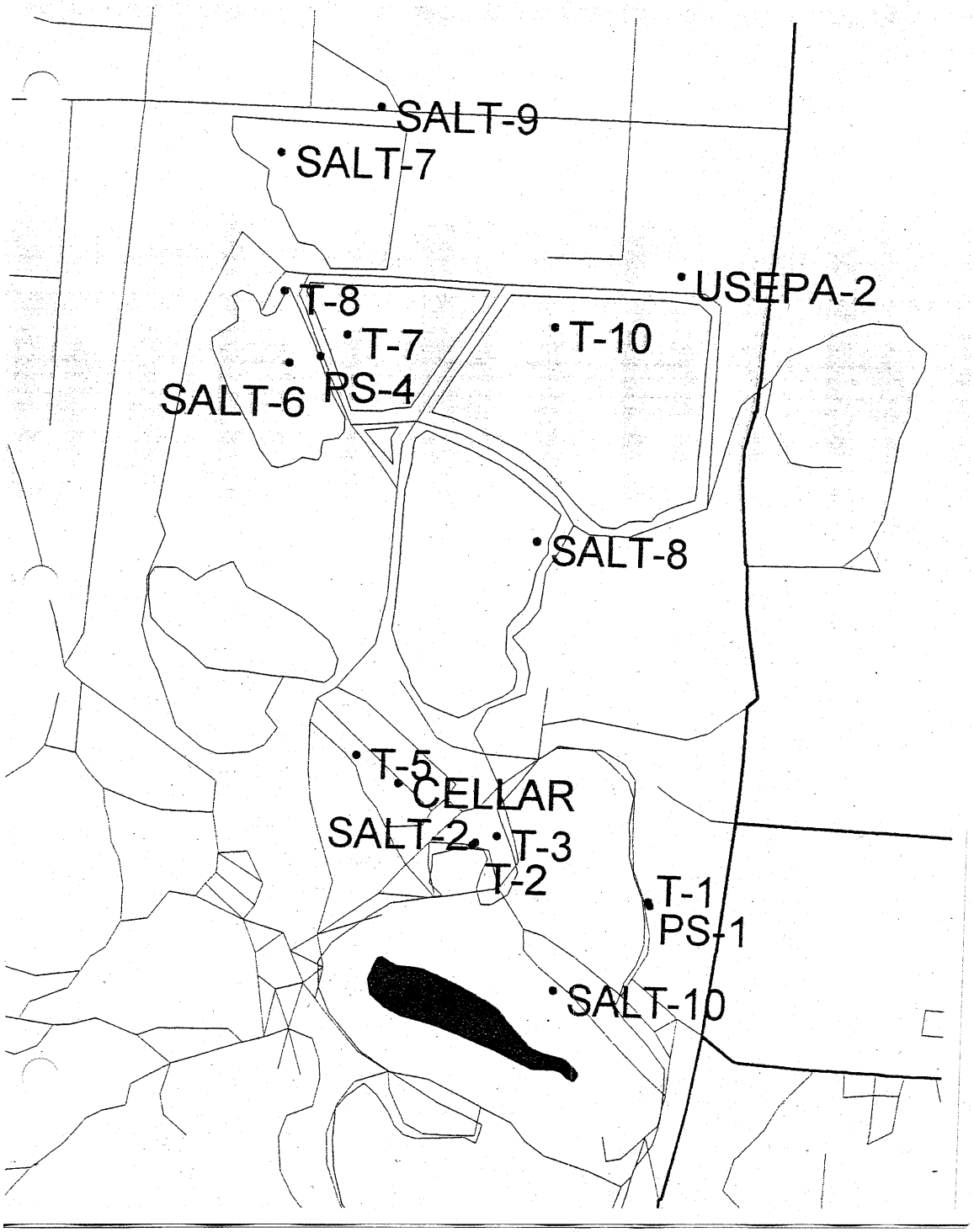
SAMPLE RECEIPT AND PRESERVATION

Samples T-1, T-2, T-3, T-4, T-5, T-6, T-7, T-8, T-9, T-10 and T-11 were received at 10°C, which is outside the 2-6°C temperature requirements. It is believed that this discrepancy will not have an effect on the metals results.

COMMENTS

The following comments appear on the Summary of Analytical Results:

Sample	Location description
CELLAR	Flooded cellar at process fac.
PS-1	slot collection pond
PS-2	Raffenate #2 Pond
PS-3	Megapond
PS-4	VLT leachate pad
PS-5	Duplicate of PS-4
SALT-1	slot collection pond
SALT-2	Raffenate #1 Pond
SALT-3	Phase I leach pad
SALT-4	Megapond
SALT-5	VLT leachate pad
SALT-6	North of VLT pad
SALT-7	Anaconda tailings leach pond
SALT-8	Sulfide tailings impoundment
SALT-9	North of Luzier ln.
SALT-10	Slot area near USEPA-3
SALT-11	Duplicate of SALT-2
T-1	slot tailings pile
T-2	sulfide dump pile
T-3	Phase I tailings leach pad
T-4	Anaconda Oxide stockpile
T-5	Phase II leach pad
T-6	VLT leachate pad
T-7	Anaconda sufide tailings pond
T-8	Iron bleed tailings pond
T-9	Anaconda tailings leach pond
T-10	Sulfide tailings impoundment
T-11	Duplicate of T-2
MW-2	Monitoring well south of VLT stockpile
MW-4	Monitoring well northwest of VLT pad
MW-5	Monitoring well near NE corner of VLT leach pad.
USGS-13	Monitoring well North of site
USGS-2B	Monitoring well near old power plant north of site.
USEPA-2	Downgradient monitoring well at Luzier Ln and HWY 95A
USEPA-4	Duplicate of MW-4


SALT-9
SALT-7
USEPA-2
T-8
T-7
T-10
SALT-6
PS-4
SALT-8
T-5
CELLAR
SALT-2
T-3
T-2
T-1
PS-1
SALT-10

LABORATORY-RICHMOND, CA

SUMMARY OF ANALYTICAL RESULTS

Case Number: [illegible]
Site: PEER MINE, YERINGTON
SDG: 00299B, 00299C
Date: 11/07/00

Analysis: Metals
Matrix: Solids

Sample No.	N/A			N/A			N/A			N/A			ICP			GFAA		
Sample I.D.	SALT-8			SALT-9			SALT-10			SALT-11			Reagent			Reagent		
Lab Sample I.D.	AB28943			AB28944			AB28945			AB28946			Blank-1			Blank-1		
Date of Collection	10/19/00			10/19/00			10/21/00			10/19/00			N/A			N/A		
Units	mg/Kg			mg/Kg			mg/Kg			mg/Kg			mg/Kg			mg/Kg		
Analyte	Result	Q	Com	Result	Q	Com	Result	Q	Com	Result	Q	Com	Result	Q	Com	Result	Q	Com
Aluminum	3400			21000			22000			29000			200 U			N/A		
Antimony	20 U			20 U			30 U			30 U			20 U			N/A		
Arsenic	8 U	J	D	110	J	D	10 U	J	D	10 U	J	D	50 U			2 U		
Barium	20			110			20 U			40			10 U			N/A		
Beryllium	0.3			0.8			2.1			0.9			0.2 U			N/A		
Cadmium	2			1 U			2 U			2 U			1 U			N/A		
Calcium	36000			7700			1400			14000			100 U			N/A		
Chromium	13			15			2	J	A	35			2 U			N/A		
Cobalt	3	J	A	9			360			92			4 U			N/A		
Copper	850			83			130000			85000			4 U			N/A		
Iron	130000			22000			220			30000			1000 U			N/A		
Lead	3 U	J	E	9			5			55000			30 U			0.6 U		
Magnesium	2700			7200			69000			12000			100 U			N/A		
Manganese	70			470			1500			460			10 U			N/A		
Mercury	0.04			0.04			0.05	J	A	19			0.04 U			N/A		
Nickel	6	J	A	10			150			40			10 U			N/A		
Potassium	8000			5000			2000 U			2000 U			1000 U			N/A		
Selenium	8 U			8 U			10 U			10 U			N/A			2 U		
Silver	2 U			3 U			3 U			3 U			2 U			N/A		
Sodium	10000			56000			2700			1900			100 U			N/A		
Thallium	100 U			100 U			200 U			200 U			100 U			N/A		
Vanadium	29			150			7 U			88			4 U			N/A		
Zinc	14			58			280			94			4 U			N/A		
% Solids	96			98			60			72			N/A			N/A		

Com - Comments refer to the corresponding section in the report narrative for each letter.
N/A - Not Applicable.
N/R - Not Required.
Q - Refer to data qualifiers.
U - The parameter was analyzed for, but was not detected; The associated value is the sample quantitation limit, adjusted for dilution, if any.
A - The associated value is an estimated quantity.
All results are in mg/Kg dry weight.

Filename: 00299CM

TABLE 5

Water Quality Analyses of Solids Leaching Tests

Sample Location	Drain #1				Drain #2				Drain #3			
	surface		deep		surface		deep		surface		deep	
Sample Date	03/30/83		03/30/83		03/30/83		03/30/83		03/30/83		03/30/83	
	EP tox.	Shake	EP tox.	Shake	EP tox.	Shake	EP tox.	Shake	EP tox.	Shake	EP tox.	Shake
pH (pH units)	--	7.4	--	7.6	--	7.7	--	3.7	--	3.1	--	4.2
Ca	--	16	--	39	--	224	--	127	--	198	--	71
Mg	--	4.6	--	3.3	--	16	--	8.3	--	103	--	23
Na	--	12	--	28	--	25	--	33	--	105	--	61
K	--	0.6	--	1.1	--	2.8	--	2.1	--	6.8	--	2.2
HCO3	--	35	--	46	--	115	--	0	--	0	--	0
CO3	--	0	--	0	--	0	--	0	--	0	--	0
SO4	--	83	--	130	--	440	--	296	--	2050	--	278
Cl	--	2.9	--	7.8	--	3.9	--	3.9	--	11	--	3.9
F	--	1.2	--	1.4	--	5.8	--	1.0	--	3.0	--	2.0
NO3	--	0.1	--	<0.1	--	0.1	--	<0.1	--	1.3	--	0.2
As	0.004	0.025	<0.002	0.001	0.002	0.008	<0.002	0.003	<0.002	0.004	0.004	0.0005
B	--	<0.1	--	<0.1	--	<0.1	--	<0.1	--	<0.1	--	<0.1
Cd	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cr	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cu	--	<0.1	--	<0.1	--	<0.1	--	0.1	--	1.0	--	0.2
Fe	--	0.4	--	<0.1	--	0.2	--	1.5	--	36	--	16
Hg	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002
Mn	--	0.6	--	0.7	--	3.4	--	2.5	--	13	--	4.0
Pb	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zn	--	<0.1	--	<0.1	--	0.3	--	0.4	--	0.8	--	0.4
C-A balance	--	17.2	--	4.0	--	-0.8	--	-14.9	--	13.2	--	-17.6

Note: All units are in mg/l unless noted otherwise.

TABLE 5 (Cont'd)

Water Quality Analyses of Solids Leaching Tests

Sample Location	Tailings Pond		Evaporation Pond A		Evaporation Pond B		USGS* Site T	USGS* Site S	USGS* Site E
Sample Date	03/30/83		03/30/83		03/30/83		12/14/76	12/08/76	12/08/76
	EP tox.	Shake	EP tox.	Shake	EP tox.	Shake			
pH (pH units)	--	7.2	--	2.7	--	2.3	11.4	4.2	1.8
Ca	--	536	--	326	--	7.7	210	240	700
Mg	--	2.9	--	247	--	730	2.2	13	4700
Na	--	69	--	353	--	266	110	110	2700
K	--	31	--	0.1	--	0.04	27	24	1.6
HCO3	--	27	--	0	--	0	0	0	0
CO3	--	0	--	0	--	0	21	0	0
SO4	--	1522	--	2315	--	17593	580	860	47000
Cl	--	50	--	116	--	*	86	78	1000
F	--	1.0	--	4.3	--	0.16	1.8	2.5	470
NO3	--	0.2	--	6.2	--	3.5	--	--	--
As	<0.002	0.004	0.006	0.013	<0.002	0.008	0.001	0.002	42
B	--	<0.1	--	0.3	--	0.6	0.33	0.28	11
Cd	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0	0	0.6
Cr	<0.05	<0.05	<0.05	0.1	0.15	0.9	0	0	9.0
Cu	--	<0.1	--	43	--	67	0.006	70	330
Fe	--	<0.1	--	50	--	2008	0.05	0.1	30000
Hg	<.0002	<.0002	<.0002	<.0002	<.0002	<.0002	0.0037	0.0052	0.0012
Mn	--	0.2	--	32	--	52	0.01	0.18	420
Pb	<0.1	<0.1	<0.1	<0.1	<0.1	1.0	0	0	3.0
Zn	--	<0.1	--	5.3	--	11	0.01	0.46	56
C-A balance	--	4.4	--	-1.3	--	--	-2.7	4.6	-22.0

* Waste fluid samples
Note: All units in mg/l unless noted otherwise.

MINERALS PROCESSING AND ENVIRONMENTAL LABORATORIES, INC.

NDEP
METEORIC MOBILITY TEST

FOR

Arimetco Inc./Copper Tex Corporation
102 Burch Drive
Yerington, NV 89447

Attn: Mr. Bill Sifford

LABORATORY NUMBER F228-02
INVOICE NUMBER F0783

September 18, 1991

SAMPLE I.D.: VLT

SUMMARY

A 24 hour column leach test was conducted on 4989.9 grams of material identified as VLT. Reagent grade water adjusted to synthetic meteoric water [illegible] nitric acid at pH 5.70 was circulated through the column at a rate of [illegible] liters per hour. The resulting effluent was collected and analyzed for ending pH, Alkalinity, Sulfate, Nitrate, Chloride, Fluoride, W.A.D. Cyanide,

and 32 inorganic elements.

NDEP METEORIC WATER MOBILITY TEST
LABORATORY NUMBER F228-02
INVOICE NUMBER F0783

SAMPLE I.D.: VLT

TEST PROCEDURE

Material, all passing 2 inches identified by the client as VLT was air dried and split to obtain a test sample of 4989.8 grams. The sample was placed in an 8 inch column for extraction by an artificial lixiviant of pH 5.70 made from reagent grade water and nitric acid. A solution application rate of .41 liters per hour was used to circulate 10,000 milliliters of the lixiviant through the material. Solution recovery at 24 hours was 90% with a saturation volume of 500 ml's. The recovered solution was preserved for testing as required for each type of analysis to be conducted.

A separate split of the test material was wet screened to obtain the percentage of material passing a 200 mesh U.S. standard screen. Test results are tabulated as follows:

le: VLT
.c Sample Weight: 4989.9 grams
Solution Volume applied: 10,000 milliliters
Initial pH: 5.70 Lixiviant
Final pH: 3.58 Effluent
Leach Time: 24 hours Leach Method: Column
Saturation Volume: 500 milliliters
Percent material passing 200 mesh: 6.6%

			METHOD
Alkalinity:			EPA 310.0
Bicarbonate	0	mg/l	
Total	0	mg/l	
Sulfate:	1970	mg/l	EPA 375.4
Chloride:	3.59	mg/l	EPA 325.3
Nitrate:	-0.5	mg/l	EPA 350.3
Fluoride:	-0.05	mg/l	EPA 340.2
TDS:	2,533	mg/l	EPA 160.2
W.A.D. Cyanide:	-0.02	mg/l	ASTM D2036-89

EP METEORIC WATER MOBILITY TEST
LABORATORY NUMBER
INVOICE NUMBER

VLT SAMPLE

Element	mg/l	Element	mg/l	Element	mg/l
Aluminum	11.0	Gallium	-0.050	Scandium	0.008
Antimony	-0.025	Iron	0.414	Selenium	-0.005
Arsenic	0.033	Lead	0.076	Silver	-0.025
Barium	0.053	Lithium	0.017	Sodium	9.61
Beryllium	0.002	Magnesium	441.8	Strontium	1.97
Bismuth	48.0	Manganese	0.780	Thallium	-0.040
Cadmium	-0.005	Mercury	-0.001	Tin	-0.080
Calcium	721	Molybdenum	0.083	Titanium	-0.050
Chromium	-0.025	Nickel	0.118	Vanadium	-0.008
Cobalt	0.115	Phosphorus	0.030	Zinc	0.623
Copper	408	Potassium	15.4		

EPA METHOD: 200 SERIES

*Note: Static Test on this sample to follow on Laboratory Number F228-02A, Invoice Number F0783A.

Respectfully Submitted

Wayne Colwell

Wayne M. Colwell
General Manager

MINERALS PROCESSING AND ENVIRONMENTAL LABORATORIES, INC.

STATIC TEST

FOR

Arimetco Inc.
102 Burch Drive
Yerington, NV 89447

October 2, 1991

:ic Test
Laboratory Number F228-02A
Invoice Number F0783A
Page 2

Sample I.D.: VLT		
		Units of Measure
Total Sulfur (as S)	0.08	%
Pyritic Sulfur (as S)	0.01	%
Sulfur, Unidentified (as S)	-0.01	%
Sulfate, Sulfur (%)	0.08	%
APP/Peroxide (as S)	-0.01	%
Total Sulfur	2.5	(Tons CaC03/Kt)
Pyritic Sulfur	0.3	(Tons CaC03/Kt)
APP/Peroxide	-0.1	(Tons CaC03/Kt)
Acid Neutralizing Potential	7.5	(Tons CaC03/Kt)

Wayne Colwell

Wayne M. Colwell
:al Manager

MINERALS PROCESSING AND ENVIRONMENTAL LABORATORIES, INC.

NDEP
METEORIC MOBILITY TEST

FOR

Mr. Bill Sifford

Arimetco
102 Burch Drive
Yerington, NV 89447

LABORATORY NUMBER F238-09L
INVOICE NUMBER F0829L

Sample I.D.: Arimetco Clay 8-26-91

September 18, 1991

SUMMARY

14 hour column leach test was conducted on 5,004.0 grams of materi identified as Arimetco Clay. Reagent grade water adjusted to synthet meteoric water with nitric acid at pH 5.62 was circulated through the colu at a rate of .41 liters per hour. The resulting effluent was collected a analyzed for ending pH, Alkalinity, Sulfate, Nitrate, Chloride, Fluorid W.A.D. Cyanide, TDS and 32 inorganic elements.

NDEP METEORIC WATER MOBILITY TEST
\BORATORY NUMBER
VOICE NUMBER

Sample I.D.: Arimetco Clay 8-26-91

5006 ml
2100 ml
2906 ml
to weight of classified sample

TEST PROCEDURE

Material, all passing 2 inches identified by the client as Arimetco Clay was air dried and split to obtain a test sample of 5,004.0 grams. The sample was placed in an 8 inch column for extraction by an artificial lixiviant of pH 5.62 made from reagent grade water and nitric acid. A solution application rate of .41 liters per hour was used to circulate 5,006 milliliters of the lixiviant through the material. Solution recovery at 24 hours was 58% with a saturation volume of 2,100 ml's. The recovered solution was preserved for testing as required for each type of analysis to be conducted.

A separate split of the test material was wet screened to obtain the percentage of material passing a 200 mesh U.S. standard screen. Test results are tabulated as follows:

Sample: Arimetco Clay
Test Sample Weight: 5,004.0 grams
Solution Volume applied: 10,012 milliliters
nitial pH: 5.62 Lixiviant
Final pH: 7.49 Effluent
Leach Time: 24 hours Leach Method: Column
Saturation Volume: 2,100 milliliters
Percent material passing 200 mesh: 12.8%

			METHOD
Alkalinity:			EPA 310.0
Bicarbonate	0.0	mg/l	
Total	3.20	mg/l	
Sulfate:	2,850	mg/l	EPA 375.4
Chloride:	202.43	mg/l	EPA 325.3
Nitrate:	44	mg/l	EPA 350.3
Fluoride:	2.70	mg/l	EPA 340.2
TDS:	4,197	mg/l	EPA 160.2
W.A.D. Cyanide:	-0.02	mg/l	ASTM D2036-89