Draft
Data Evaluation Report
Arimetco Heap Leach Pads
Remedial Investigation
Anaconda Copper Yerington Mine Site

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Acronyms and Abbreviations

ABA	acid-based accounting
ANOVA	analysis of variance
ARC	Atlantic Richfield Company
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
cm	centimeters
cpm	counts per minute
COC	contaminants of concern
DGPS	Differential Global Positioning System
DQO	data quality objective
EDi	Environmental Dimensions, Incorporated
EPA	U.S. Environmental Protection Agency
FSP	Field Sampling Plan
GIS	Geographic Information System
HLP	Heap Leach Pad
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MCL	Maximum Contaminant Level
mg/kg	milligrams per kilogram
MS/MSD	matrix spike/matrix spike duplicate
MWMP	Meteoric Water Mobility Procedure
NAD	North American Datum
NaI	sodium iodide
NDEP	Nevada Division of Environmental Protection
PRG	Preliminary Remediation Goal
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision

RPD	relative percent difference
SPLP	Synthetic Precipitation Leaching Procedure
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
VLT	Vat Leach Tailing
XRD	x-ray diffraction

SECTION 1.0

Introduction

The purpose of this Data Evaluation Report is to compile and summarize the analytical and field results generated during the remedial investigation (RI) for the Arimetco Heap Leach Pad (HLP) component of the Arimetco Operable Unit at the Anaconda Copper Yerington Mine Site (Site). The investigation was performed as part of the Remedial Investigation/Feasibility Study (RI/FS) being conducted by the U.S Environmental Protection Agency (EPA). In addition to summarizing the investigation results, this report also presents analysis of data quality and an evaluation of whether additional sampling is required to complete the RI and whether data collected are consistent with the EPA-approved Field Sampling Plan (FSP) dated September 2007. Overall, these data are being used to characterize potential contamination associated with the heap leach pads (including Phase I/II contiguous, Phase III South, Phase III 4X, Phase IV Slot, and Phase IV Vat Leach Tailings). EPA is conducting this work under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986.

This report presents information that will be used during preparation of the RI after EPA's review and approval. The RI report will be followed by a Feasibility Study in which remedial alternatives for Arimetco HLP closure will be developed to ensure protection of human health and the environment. The RI/FS process for the heap leach pads will eventually lead to a record of decision (ROD) that will identify the selected closure remedy.

The following sections summarize the Contaminants of Concern (COCs) based on previous studies performed and the purpose of the field sampling program.

1.1 Primary Contaminants of Concern

Based on the results of previous investigations summarized by ARC (2002) and as presented in Section 2.5 of the FSP (CH2M HILL, 2007), primary COCs expected in drain-down fluids included: low pH, arsenic, cadmium, chromium, copper, iron, and radionuclides (radium, thorium, and uranium). Other COCs likely present in the HLPs include aluminum, beryllium, boron, chloride, lead, manganese, mercury, selenium sulfate, and zinc. Petroleum hydrocarbons, primarily kerosene, were also identified as COCs because kerosene was used as a reagent in the electro winning process and likely remained in the acidic solution applied to the HLPs.

1.2 Purpose

The goals of the RI are to characterize drain-down solutions and HLP materials, evaluate the potential for the HLP materials and drain-down solution to release contaminants to the environment, to obtain information sufficient to make basic risk management decisions regarding human health and ecological exposure to the drain-down solutions and HLPs,

and to collect information to support development of remedial alternatives for HLP closure. The RI field program was conducted between September and November 2007 and was comprised of four major components, including the radiological gamma walk-over survey, drain-down fluids sampling, subsurface soil sampling, and surface soil sampling. The purpose of the RI field data collection effort was to characterize the HLPs and associated drain-down fluids according to the sample summary presented in Table 1-1. HLPs were grouped according to similar materials of construction as follows:

1. Group A: Phase I, Phase II, Phase III South, Phase III 4X, and Phase IV Slot HLPs
   a. HLPs contain poorly sorted, crushed oxide ore and run-of-mine rock to boulder-size diameters.
   b. HLPs were constructed with 2 to 10feet of Vat Leach Tailings (VLTs) above the liner.
   c. HLP materials were leached with dilute sulfuric acid.
2. Group B: Phase IV VLT HLP
   a. HLP contains ore that was crushed to 0.5-inch diameter and smaller
   b. The VLT material had previously been leached in vats during Anaconda's operations, then were leached again by Arimetco using dilute sulfuric acid.

TABLE 1-1
Sample Collection Summary[a]

Type of Sampling	Sampling Locations	Field Duplicate Locations	Blanks	Total Samples	MS/MSD[b] (1 per 20)
Drilling	16 / 16	12 / 7	4 / NR[c]	218 / 239	6 / 6
Surface Samples	51 / 45	12 / 7	4 / NR	118 / 105	6 / 6
Drain-down Solution	10 / 8	2 / 2	2 / NR	14 / 48	1 / 1

Notes:
[a] Values indicate the number of samples proposed/actual for each type of sampling
[b] The number of geotechnical samples do not include field duplicates or matrix spike/matrix spike duplicates (MS/MSD)
[c] NR = not required, no reusable equipment was used during drain-down or soils sampling.

Samples were also collected to obtain preliminary information related to evaluating remedial alternatives for HLP closure. The data that were obtained included agricultural, geochemical, and geotechnical information for evaluation of:

- Whether HLP materials can support vegetation growth or if supplements are required;
- Meteoric infiltration and drain-down rates;
- Drain-down solution chemistry and volume; and
- Slope stability and storm water management concerns.

SECTION 2.0

Site Investigation and Data Summary

The following sections summarize field activities for the RI data collection effort, present a summary of data collected, and provide a comparison of planned versus actual field activities.

2.1 Site Investigation

2.1.1 Radiological Walk-over Survey and Field Screening Activities

A non-intrusive radiological gamma walk-over survey was performed over accessible areas on the top decks of the HLPs to identify the presence of gamma radiation at the surface. Environmental Dimensions, Incorporated (EDi) of Albuquerque, New Mexico, conducted the survey. This work was completed between September 10 and September 21, 2007.

The walk-over survey was designed to determine whether surface gamma radiation count rates exist on the HLPs that exceed three standard deviations above the mean background count rate. The walk-over survey data were used to determine whether the soil sampling strategy needed modification (that is, more samples), whether the health and safety program was adequate for the protection of workers, and to identify whether additional radiological surveys were required to complete the RI.

The walk-over survey was performed using a Ludlum Model 2221 scaler/rate meter with a Ludlum Model 43-10 2-inch by 2-inch sodium iodide (NaI) gamma scintillation detector. The detector was suspended at a height of approximately 15 centimeters (cm) above the ground and moved in parallel lines about 3 meters apart at a speed of 0.5 meters per second. The measurements were position correlated and data were automatically logged with the measurement coordinates using the 9 channel Trimble Pro-XRS Differential Global Positioning System (DGPS) technology. The DGPS link tied survey data to spatial locations using state plane coordinates North American Datum (NAD) US State Plane 1927, Nevada West 2703. The DGPS was checked daily to ensure accuracy and repeatability.

The equipment setup for the walk-over survey consisted of a roving DGPS/gamma-survey package and a base station transmitter/receiver. The roving unit combined the Trimble Pro-XRS with a TDC1 data logger for the global positioning and the Ludlum scaler/rate meter for gamma detection. The rover simultaneously logged gamma count rates and position data. The fixed base station, located at a known coordinate site near the HLPs, was used as a reference point for differential correction of the rover unit data.

The rover instrumentation was mounted on a four-wheeled all-terrain vehicle in a manner that allowed for consistent, near-surface scanning of the entire area of interest. To the extent possible, areas not accessible to the survey vehicle were measured on foot utilizing the same instrumentation mounted on a backpack. Due to steep terrain and uneven footing conditions, some portions of the planned survey area were inaccessible.

The plat map provided the coordinates of survey points that were used to digitize a general outline of the area of interest. These points were imported into an Arcview geographic information program to generate a map of the HLPs in relation to the entire base map.

As part of the initial DGPS/gamma survey, EDi used one of the known coordinate stations nearest the HLP as the fixed base station. Using data collected by the fixed base station during the gamma surveys, Trimble's Pathfinder software differentially corrected the rover's positional data. Differential correction allowed for position accuracy in the sub-meter range. The data were then uploaded into a Geographic Information System (GIS) database for the HLP that accurately displays the location of collected gamma data. Gamma data were sorted and displayed to identify the location and distribution of peak gamma values for the RI. These values were then compared to background gamma values from a nearby unaffected area, the results of which are presented in Section 2.2. A copy of the EDi Radiological Walk-Over Survey Report is included as Attachment A.

Comparison of Planned to Actual Field Activities

The FSP specified that the walk-over survey would be performed in accordance with Class II guidelines for *Multi-Agency Radiation Survey and Site Investigation Manual* (MARSSIM) by a radiological control technician. A MARSSIM Class II designation required a 100-percent survey of the site. A 100-percent survey was not practical or appropriate based on process knowledge.

However, process knowledge, existing radiological survey data, and drain-down sampling analyses from the VLT pad indicated that the HLPs should be evaluated under MARSSIM Class III guidelines, which allow for professional judgment to guide the survey. Therefore, the radiological walk-over survey was conducted in accordance with Class III MARSSIM. The radiological walk-over surveys were performed with 2x2 NaI(Tl) that were sensitive to levels less than DCGLs and methods were consistent with project data quality objectives (DQOs).

The results of the walk-over survey, screening of drill core and drain-down locations and samples confirm that the radiological activity at the Arimetco heaps does not exceed two-times established background levels (See Attachment A for report).

2.1.2 Drain-down Solution Sampling

Summary of Field Activities

Drain-down samples were collected between September 9 and 13, 2007 by CH2M HILL personnel. Samples were collected using a peristaltic pump with disposable tubing and appropriate sample containers as specified by the analytical laboratory and in accordance with the FSP (CH2M HILL, 2007, Table 5-5). Samples were placed in appropriate containers as specified by the laboratory and analyzed and in accordance with Table 2-1. Immediately after sampling, containers were labeled and placed on ice. Prior to shipping to the laboratory, all samples were field screened for radiological activity. No readings exceeded background levels, as interpreted by EDi radiological field personnel.

Comparison of Planned to Actual Field Activities

Per the FSP, 10 drain-down fluid sample locations (two per pad, Phase I/II are contiguous and for purposes of sampling drain-down fluids they were considered one pad) were initially planned. These locations were selected discretely, with one sample per HLP intended to characterize the primary collection pond associated with that HLP and a second sample selected to assess the primary perimeter collection ditch associated with each HLP. Of the 10 sample locations planned, eight contained sufficient fluids for sampling. Two of the planned sample locations, one each at the Phase III 4X HLP and the Mega Pond, were dry. In addition, two of the perimeter ditch sample locations were adjusted in the field to areas that contained sufficient drain-down fluids for sampling. The actual drain-down fluids sample locations relative to the planned locations are shown on the figures in Attachment B.

TABLE 2-1
Analytical Parameters, Methods, and Detection Limits for Aqueous Solutions

Parameter	Method[a]	Reporting Limit	Units	Accuracy[b] (percent recovery)	Precision[c] (RPD)
NDEP Profile II [d]					
*pH (+/- 0.01)	EPA 150.1	0.2	units	NA	NA
*Total Dissolved Solids	EPA 160.1	1	mg/L	75–125	20
*Phosphorus	EPA 300.0	0.1	mg/L	75–125	20
*Alkalinity, Total	EPA 310.1	NA	mg/L	NA	20
*Nitrate (NO3+NO2 as N)	EPA 353.2	0.1	mg/L	75–125	20
*Aluminum	ILM05.3/ILM05.4	200	µg/L	75–125	20
*Antimony	ILM05.3/ILM05.4	2	µg/L	75–125	20
*Arsenic	ILM05.3/ILM05.4	1	µg/L	75–125	20
*Barium	ILM05.3/ILM05.4	10	µg/L	75–125	20
*Beryllium	ILM05.3/ILM05.4	1	µg/L	75–125	20
*Bismuth	ILM05.3/ILM05.4 Modification	0.1	µg/L	75–125	20
*Boron	ILM05.3/ILM05.4 Modification	3	µg/L	75–125	20
*Cadmium	ILM05.3/ILM05.4	1	µg/L	75–125	20
*Calcium	ILM05.3/ILM05.4	5,000	µg/L	75–125	20
*Chloride	EPA Method 300	0.1	mg/L	75–125	20
*Chromium	ILM05.3/ILM05.4	2	µg/L	75–125	20
*Cobalt	ILM05.3/ILM05.4	1	µg/L	75–125	20
*Copper	ILM05.3/ILM05.4	2	µg/L	75–125	20
*Fluoride	EPA Method 300	0.1	mg/L	75–125	20
*Iron	ILM05.3/ILM05.4	100	µg/L	75–125	20
*Lead	ILM05.3/ILM05.4	1	µg/L	75–125	20
*Lithium	ILM05.3/ILM05.4 Modification	0.020	µg/L	75–125	20
*Magnesium	ILM05.3/ILM05.4	5,000	µg/L	75–125	20
*Manganese	ILM05.3/ILM05.4	1	µg/L	75–125	20

TABLE 2-1
Analytical Parameters, Methods, and Detection Limits for Aqueous Solutions

Parameter	Method[a]	Reporting Limit	Units	Accuracy[b] (percent recovery)	Precision[c] (RPD)
*Mercury	ILM05.3/ILM05.4	0.20	µg/L	75–125	20
*Molybdenum	ILM05.3/ILM05.4 Modification	0.06	µg/L	75–125	20
*Nickel	ILM05.3/ILM05.4	1	µg/L	75–125	20
*Potassium	ILM05.3/ILM05.4	5,000	µg/L	75–125	20
*Scandium	ILM05.3/ILM05.4 Modification	1	µg/L	75–125	20
*Selenium	ILM05.3/ILM05.4	5	µg/L	75–125	20
*Silver	ILM05.3/ILM05.4	1	µg/L	75–125	20
*Sodium	ILM05.3/ILM05.4	5,000	µg/L	75–125	20
*Strontium	ILM05.3/ILM05.4 Modification	0.10	µg/L	75–125	20
*Sulfate	EPA Method 300	0.10	mg/L	75–125	20
*Thallium	ILM05.3/ILM05.4	1	µg/L	75–125	20
*Tin	ILM05.3/ILM05.4	0.10	µg/L	75–125	20
*Titanium	ILM05.3/ILM05.4 Modification	0.50	µg/L	75–125	20
*Vanadium	ILM05.3/ILM05.4	5	µg/L	75–125	20
*Zinc	ILM05.3/ILM05.4	2	µg/L	75–125	20
TPH					
TPH-Kerosene	EPA 8015B	0.25	mg/L	75-125	20
Radionuclides					
Gross Alpha/Beta	EPA 900.0	3	pCi/L	TY 30–105 LCSY 80–120	20 NA
Gamma Spectrometry	EPA 901.1	1	pCi/L	TY 30–105 LCSY 80–120	20 NA
Radium 226	EPA 903.1	1	pCi/L	TY 30–105 LCSY 80–120	20 NA
Radium 228	EPA 904.0	1	pCi/L	TY 30–105 LCSY 80-120	20 NA
Isotopic Uranium	NAS/DOE 3050 or ASTM D3972-90M	1	pCi/L	TY 30–105 LCSY 80-120	20 NA
Total Uranium	EPA 910 or HASL 300	1	pCi/L	TY 30–105 LCSY 80-120	20 NA
Isotopic Thorium	EPA 908.0 or ASTM D5174	1	pCi/L	TY 30–105 LCSY 80-120	20 NA
Total Thorium	HASL 300	1	pCi/L	TY 30–105 LCSY 80-120	20 NA

TABLE 2-1
Analytical Parameters, Methods, and Detection Limits for Aqueous Solutions

Parameter	Method[a]	Reporting Limit	Units	Accuracy[b] (percent recovery)	Precision[c] (RPD)

*NDEP Profile II Target Analytes

[a]Source of Methods:

ILM05.3/ILM05.4 from EPA Contract Laboratory Statement of Work

EPA methods from EPA, 1994

ASTM methods from ASTM, 2001

HASL-300 from DOE, 1997

NAS/DOE 3050/RP from National Academy of Sciences (NAS) and DOE, 1994

[b]Percent recovery (%R) is used to calculate accuracy. Accuracy is assessed from the recovery of analytes spiked into a blank or sample matrix of interest, or from the recovery of surrogate compounds spiked into each sample. The recovery of each spiked analyte is calculated using the following equation: %R = 100 x (Cs-Cu/Cn), where: Cs = concentration of the analyte in the spiked sample, Cu = concentration of the analyte in the unspiked sample, and Cn = concentration increase that should result from spiking the sample.

[c]RPD (relative percent difference) is used to calculate precision. Precision is estimated from the relative percent difference between the results for matrix spike and matrix spike duplicate analyses or between replicate analyses of unspiked samples. It is calculated using the following equation: RPD = 100 x {(|C1-C2|)/[(C1+C2)/2]}, where: C1 = concentration of the analyte in the first sample aliquot and C2 = concentration of the analyte in the second sample aliquot.

[d]Nevada Division of Environmental Protection Water Pollution Control Profile II. The target analytes lithium, gallium, scandium and WAD cyanide will not be included in the profile for this project.

Notes:
µg/L = micrograms per liter
mg/L = milligrams per liter
LCSY = laboratory control sample yield
NA = not applicable
NE = none exist
HASL = Health and Safety Laboratory
TPH = total petroleum hydrocarbons

2.1.3 Subsurface and Surface Soil Sampling

Summary of Field Activities

As indicated in Section 1.2, the HLPs were divided into two groups, with Group A consisting of Phase I HLP, Phase II HLP, Phase III South HLP , Phase III 4X HLP, and Phase IV Slot HLP. Group A heaps are comprised primarily of poorly sorted, crushed oxide ore and rock ranging up to boulder-size diameters. Group B includes the Phase IV VLT HLP, which was constructed almost exclusively of processed VLT materials and is thus distinct from the Group A HLPs. The VLT material is ore that had previously been crushed to 0.5-inch diameter and leached in vats by Anaconda prior to Arimetco using it to construct an HLP.

The soil sampling program consisted of both subsurface sample collection using drilling technologies and in-situ/grab surface soil sampling. There were 16 borehole locations and

40 surface soil locations that were randomly selected as described in the FSP (CH2M HILL, 2007).

Subsurface drilling was conducted between September 25 and October 17, 2007. The drilling was performed using Boart Longyear's Sonic drilling rig configured with a 7-inch diameter drill pipe. Sampling was performed by CH2M HILL, with radiological field screening conducted by EDi. Composite samples were collected at 20- to 50-foot intervals, depending on the drilling depth. Drilling depths for each borehole are provided in Attachment C. Composite sampling for chemical and radiological samples was conducted by collecting equal mass of soil every 20 feet over the sampling interval. The soil was thoroughly mixed and placed into the appropriate container. Discrete sampling for geotechnical samples was conducted at various intervals and based on field conditions. At the conclusion of drilling, boreholes were backfilled with drill cuttings to within about 20 feet of the HLP surface and capped with cement slurry to the top of the HLP.

Surface soil samples, consisting of grab samples obtained at depths of 0.25 to 0.75 foot beneath the top of the HLP, were collected by CH2M HILL between October 23 and October 29, 2007.

Soil samples were collected using dedicated plastic bags and new, pre-cleaned, disposable sampling trowels. Samples were placed in appropriate containers as specified by the laboratory and analyzed and in accordance with Table 2-2. The samples were placed on ice then shipped to the appropriate laboratory under chain-of-custody. Prior to shipment, all samples were field screened for radiological activity. No readings above background were detected, as interpreted by EDi radiological field personnel.

TABLE 2-2
Analytical Parameters, Methods, and Detection Limits for Solids

Parameter	Method[a]	Reporting Limit	Units	Accuracy[b] (percent recovery)	Precision[c] (RPD)
TAL Metals					
Aluminum	ILM05.3/ILM05.4	20	mg/kg	75–125	20
Antimony	ILM05.3/ILM05.4	6	mg/kg	75–125	20
Arsenic	ILM05.3/ILM05.4	1	mg/kg	75–125	20
Barium	ILM05.3/ILM05.4	20	mg/kg	75–125	20
Beryllium	ILM05.3/ILM05.4	0.5	mg/kg	75–125	20
Cadmium	ILM05.3/ILM05.4	0.5	mg/kg	75–125	20
Calcium	ILM05.3/ILM05.4	500	mg/kg	75–125	20
Chromium	ILM05.3/ILM05.4	1	mg/kg	75–125	20
Cobalt	ILM05.3/ILM05.4	5	mg/kg	75–125	20
Copper	ILM05.3/ILM05.4	2.5	mg/kg	75–125	20
Iron	ILM05.3/ILM05.4	10	mg/kg	75–125	20
Lead	ILM05.3/ILM05.4	1	mg/kg	75–125	20

TABLE 2-2
Analytical Parameters, Methods, and Detection Limits for Solids

Parameter	Method[a]	Reporting Limit	Units	Accuracy[b] (percent recovery)	Precision[c] (RPD)
Magnesium	ILM05.3/ILM05.4	500	mg/kg	75–125	20
Manganese	ILM05.3/ILM05.4	1.5	mg/kg	75–125	20
Mercury	ILM05.3/ILM05.4	0.1	ng/g	75–125	20
Nickel	ILM05.3/ILM05.4	4	mg/kg	75–125	20
Potassium	ILM05.3/ILM05.4	500	mg/kg	75–125	20
Selenium	ILM05.3/ILM05.4	3.5	mg/kg	75–125	20
Silver	ILM05.3/ILM05.4	1	mg/kg	75–125	20
Sodium	ILM05.3/ILM05.4	500	mg/kg	75–125	20
Thallium	ILM05.3/ILM05.4	2.5	mg/kg	75–125	20
Vanadium	ILM05.3/ILM05.4	5	mg/kg	75–125	20
Zinc	ILM05.3/ILM05.4	6	mg/kg	75–125	20
TPH					
TPH-Kerosene	EPA 8015B	25	mg/kg	75-125	20
Radionuclides					
Gross Alpha/Beta	SW9310 or EPA 900	10	pCi/g	TY 30–105 LCSY 80–120	35 NA
Gamma Spectroscopy.	EPA 901.1 or HASL 300	1	pCi/g	TY 30–105 LCSY 80–120	35 NA
Radium 226/228 (Bi/Pb-214 ingrowth)	SW9315, 901.0M	1	pCi/g	TY 30–105 LCSY 80–120	35 NA
Total Thorium	ASTM C1345-96 or HASL 300	1	pCi/g	TY 30–105 LCSY 80–120	35 NA
Isotopic Thorium	ASTM D3972-90M	1	pCi/g	TY 30–105 LCSY 80–120	35 NA
Total Uranium	ASTM C1345-96 or HASL 300	1	pCi/g	TY 30–105 LCSY 80–120	35 NA
Isotopic Uranium	ASTM D3972-90M	1	pCi/g	TY 30–105 LCSY 80–120	35 NA

TABLE 2-2
Analytical Parameters, Methods, and Detection Limits for Solids

Parameter	Method[a]	Reporting Limit	Units	Accuracy[b] (percent recovery)	Precision[c] (RPD)

[a] Source of Methods:

ILM05.3/ILM05.4 from EPA Contract Laboratory Statement of Work

EPA methods from EPA, 1994b

ASTM methods from ASTM, 2001

HASL-300 from U.S. Department of Energy (DOE), 1997

[b]Percent recovery (%R) is used to calculate accuracy. Accuracy is assessed from the recovery of analytes spiked into a blank or sample matrix of interest, or from the recovery of surrogate compounds spiked into each sample. The recovery of each spiked analyte is calculated using the following equation: %R = 100 x (Cs-Cu/Cn), where: Cs = concentration of the analyte in the spiked sample, Cu = concentration of the analyte in the unspiked sample, and Cn = concentration increase that should result from spiking the sample.

[c]RPD is used to calculate precision. Precision is estimated from the relative percent difference between the results for matrix spike and matrix spike duplicate analyses or between replicate analyses of unspiked samples. It is calculated using the following equation: RPD = 100 x {(|C1-C2|)/[(C1+C2)/2]}, where: C1 = concentration of the analyte in the first sample aliquot and C2 = concentration of the analyte in the second sample aliquot.

Notes:

mg/kg = milligrams per kilogram
ng/g = nanograms per gram
pCi/g = picocuries per gram
TY = tracer yield
LCSY = laboratory control sample yield
HASL = Health and Safety Laboratory

Comparison of Planned to Actual Field Activities

Subsurface and surface soil sampling was conducted in accordance with the FSP with only minor variations due to field conditions, professional judgment, and/or health and safety concerns. Sixteen boreholes and 40 surface locations were sampled. Some locations were moved based on safety considerations (for example, if terrain was too uneven and or if the side slopes were too steep). Actual surface and subsurface sampling locations are shown in figures contained in Attachment C.

The borehole diameter was increased from the planned 4 inches to 7.5 inches because the initial boreholes kept collapsing. Drilling depths were generally less than the anticipated maximum height of the HLP (see Table 2-2 of the FSP), due mostly to the variable HLP height at each drilling location. For example, the estimated height of the Phase III South HLP was 168 feet, with the actual drilling depth at borehole location H3SSU02 extending to 112 feet prior to contacting the HLP liner. This was the only borehole where the HLP liner was encountered and the borehole was sealed at the bottom using four bags of hydrated bentonite and 50 gallons of water prior to backfilling with cuttings and sealing with quickcrete. Borehole sample intervals and depths are shown in Attachment C.

The number of samples analyzed varied because of field conditions and/or based on professional judgment of senior technical personnel. The number of planned versus actual samples collected are shown in the following table. All samples were submitted in a timely

manner except for seven field duplicate samples (five metals and two Synthetic Precipitation Leaching Procedure [SPLP]) that were inadvertently archived. These samples were subsequently submitted for analysis on January 28, 2008.

TABLE 2-3
Summary of Planned versus Actual Soil Samples by Analysis

Soil Analysis	Planned	Actual	Comments
Inorganics, Total Petroleum Hydrocarbons (TPH), and Physical Properties			
23 TAL Metals	60	64 (10 FD)	5 FD samples submitted for analyses on 1/28/2008
TPH	19	23 (3 FD)	
Bulk (Multiple Size Fraction) Rietveld XRD	17	0	Sr. geochemist reviewed acid-base accounting and net acid generation data and indicated that these XRD analyses were not required.
Whole Rock	17	0	Sr. geochemist reviewed acid-base accounting and net acid generation data and indicated that these whole rock analyses were not required.
SPLP	33	26 (6 FD)	Two FD samples were submitted for analyses 1/28/2008
Inorganic Analyses	29	23	
Radiological			
Radium 226	42	29	Data Pending, fewer samples collected because drilling depths were less than expected.
Radium 228	42	29	Data Pending, fewer samples collected because drilling depths less than planned.
Isotopic Thorium	42	29	Fewer samples collected because drilling depths were less than planned.
Total Thorium	42	29	Fewer samples collected because drilling depths were less than planned.
Isotopic Uranium	42	29	Fewer samples collected because drilling depths were less than planned.
Total Uranium	42	29	Fewer samples collected because drilling depths were less than planned.
Gross Alpha	42	29	Fewer samples collected because drilling depths were less than planned.
Gross Beta	42	29	Fewer samples collected because drilling depths were less than planned.

TABLE 2-3
Summary of Planned versus Actual Soil Samples by Analysis

Soil Analysis	Planned	Actual	Comments
Gross Gamma	42	29	Data Pending, fewer samples collected because drilling depths were less than planned.
Agricultural			
Sodium Adsorption Ratio	12	13	
Calcium, Magnesium, and Sodium	12	13	
Nitrogen, Phosphorous, and Potassium	12	13	
Boron and Chlorine	12	13	
Geochemical			
Nevada MWMP	11	12	
Net Acid Generation	33	25	Fewer samples collected because drilling depths were less than planned.
Acid-Base Accounting	33	25	Fewer samples collected because drilling depths were less than planned.
Geotechnical			
Direct Shear Tests (ASTM D3080)	17	18	Number of samples determined by actual field conditions.
Wet/Dry Densities (ASTM D2937)	13	18	Number of samples determined by actual field conditions.
Moisture Content (ASTM D2216-98)	95	64	Reduced per senior geotechnical advisor due to consistency of Group A materials. Resulted in fewer samples analyzed.
Moisture Retention Capacity (ASTM D2325 or D3152)	31	0	Deleted by senior geotechnical advisor because not necessary for geotechnical program at this time. May be necessary for FS based on alternative selected.
Compaction Curves (ASTM D1557)	113	23	Reduced per senior geotechnical advisor due to consistency of Group A materials. Resulted in fewer samples analyzed.
Grain Size (ASTM D422/C136)	113	40	Reduced per senior geotechnical advisor due to consistency of Group A materials. Resulted in fewer samples analyzed.

TABLE 2-3
Summary of Planned versus Actual Soil Samples by Analysis

Soil Analysis	Planned	Actual	Comments
Specific Gravity (ASTM D854)	113	23	Reduced per senior geotechnical advisor due to consistency of Group A materials. Resulted in fewer samples analyzed.

Note:

FD = Field Duplicate
TPH = Total Petroleum Hydrocarbons
XRD = X-Ray Diffraction
MWMP = Meteoric Water Mobility Procedure
ASTM = American Society for Testing and Materials

Prior to sampling, the senior geochemist requested that the Bulk Rietveld x-ray diffraction (XRD) and whole rock samples be archived until the acid-based accounting and net acid generation data could be reviewed. Based on review of acid-base accounting and net acid generation data, the geochemist determined that the XRD and whole rock analyses would not provide any added benefit to the geochemical program. Therefore, these samples were not analyzed.

The number of radiological samples collected and submitted was less than the number planned, primarily because the actual drilling depths, and thus the sampling interval, were less than expected.

For the geotechnical samples, the number of samples collected and submitted was modified by the senior geotechnical advisor upon site inspection and initial boring conditions. The number of direct shear samples and wet/dry density samples were based on field conditions or if there was a fine layer of material that may be of concern to HLP stability. The number of moisture content, compaction curves, grain-size analyses, and specific gravity samples was reduced because of material consistency between the Group A HLPs, thus requiring fewer samples. Moisture retention samples were deleted from the program because this analysis would not provide any added value to the geotechnical evaluation at this time.

2.2 Data Summary

2.2.1 Summary of Radiological Walk-over Data

Radiological background measurements were collected prior to initiation of the walk-over survey and on a daily basis during the survey. These background locations are shown in the EDi Radiological Walk-Over Survey Report in Attachment A.

The background count rates ranged from approximately 13,000 counts per minute (cpm) to 16,000 cpm. The average background count rate was determined to be 14,595 cpm with a standard deviation of ± 2,895 cpm.

The walk-over survey was designed to cover as much area as possible of the HLP top decks. Several areas were not accessible because of large boulders and shoulder high mounds.

Inaccessible areas were identified based on safety concerns, uneven footing and hazardous terrain and were not surveyed. These areas appear as gaps in the figures showing survey results.

Data files were plotted on a cumulative frequency diagram that represents the direction path of the walk-over survey and the corresponding count rates of the gamma detection instrumentation. The HLP survey maps provide representation of count rate ranges with corresponding colors along with minimum detected count rate, maximum detected count rate and average count rate. These count rates for the 5 HLPs surveyed are summarized in Table 2-4.

TABLE 2-4
Summary of Heap Leach Pad Minimum, Maximum, and Average Gross Gamma Count Rates

Phase I/II HLP: Maximum Count Rate: 14,248 cpm Minimum Count Rate: 9,807 cpm Average Count Rate: 12,908 cpm	Phase III 4X HLP: Maximum Count Rate: 23,417 cpm Minimum Count Rate: 10,267 cpm Average Count Rate: 14,887 cpm
Phase III South and Phase III Bathtub: Maximum Count Rate: 16,625 cpm Minimum Count Rate: 9,766 cpm Average Count Rate: 14,068 cpm	Phase IV Slot HLP: Maximum Count Rate: 19,965 cpm Minimum Count Rate: 9,418 cpm Average Count Rate: 15,911 cpm
Phase IV Vat HLP: Maximum Count Rate: 21,675 cpm Minimum Count Rate: 11,691 cpm Average Count Rate: 15,640 cpm	

The walk-over survey yielded results that are considered to be consistent with a normal background distribution at the Site. Gross gamma count rate data from the relative background population were used to calculate an average. Figures showing the survey locations and readings are included in Attachment A.

2.2.2 Drain-down Solution Sampling Data Summary

Eight drain-down solution samples and two field duplicate samples were collected in accordance with the FSP and analyzed for Nevada Division of Environmental Protection (NDEP) Profile II (for example, physical properties and metals), TPH, and radiological analyses. Figures and tables showing the drain-down data are included in Attachment B.

In general, the data tables show that the pH ranged from 1.9 to 2.8, specific conductance ranged from 31,000 to 45,000 micromhos per centimeter (µmhos/cm). Metals exceeding primary or secondary drinking water maximum contaminant levels (MCLs) include aluminum, antimony, arsenic, beryllium, boron, cadmium, chromium, copper, iron, lead, manganese, mercury, thallium and zinc. Radiological data are currently under review but generally exceed the MCLs for thorium isotopes 228, 230, and 232; uranium isotopes 234, 235, and 238; and gross alpha particles. TPH values range from 750 to 2,100 micrograms per liter (µg/L), which exceeds Nevada cleanup requirements of 1,000 µg /L.

2.2.3 Subsurface and Surface Soil Sampling Data Summary

Surface and subsurface samples from the HLPs were collected for physical properties, TPH, metals, SPLP, radiological, geotechnical, geochemical, and agricultural analyses. Samples were also collected from VLT tailings that could potentially be used to cap the HLPs. Figures showing sampling locations and tables showing the analytical results are contained in Attachment C.

In general, data show that pH values for surface and subsurface soil samples range from 2.66 to 7.89, and metal concentrations exceed the primary or secondary residential Preliminary Remediation Goals (PRGs) for arsenic, copper, and iron. SPLP results indicate that aluminum, copper, iron, and manganese exceed the primary or secondary MCL, with one surface soil sample (H4SSS03) containing 170 milligrams per kilogram (mg/kg) TPH that exceeds Nevada's cleanup threshold of 100 mg/kg for TPH.

Preliminary reviews of the geochemical and geotechnical data indicate data are of good quality and are sufficient for use in preparation of the RI. At this time, radium 226 and radium 228 data have not been received from the laboratory for subsurface soil samples. Only gross alpha and gross beta have been received for the surface soil samples. Therefore, radiological results will not be discussed in this report. Instead a technical memorandum will be issued as a supplement to this DER once the radiological data have been received and evaluated in their entirety.

SECTON 3.0

Data Evaluation and Quality Assurance

This section provides an evaluation of the data collected, including whether the data are of sufficient quantity and quality to complete the RI report or if additional sampling is required. A summary of quality assurance/quality control (QA/QC) measures is also provided.

3.1 Radiological Walk-over Survey and Field Screening Data Evaluation

Localized areas of the HLP top decks were inaccessible due to safety or other concerns and selected positional data could not be corrected due to DGPS interferences. However, CH2M HILL concludes that the available data meet the EPA's quality assurance guidance (QAM/005) definition for completeness. That is, greater than 90 percent of data collected were available for use in the analysis of site conditions. Relative to the background radiological values, there were areas of slight elevation in some locations (as shown in Attachment A) but none of these values were greater than three standard deviations above the mean background count rate. Because elevated gamma levels were not detected, no supplemental soil samples were collected for radiological analyses.

Based on a review of the available radiological survey data, radiological parameters appear to be within the normal range of background. Further, all samples collected for laboratory analyses were screened for gross alpha, beta, and gamma activity. No samples were identified with elevated radiological readings. No further radiological surveys appear warranted for the HLPs.

3.2 Drain-down Solution Sampling Data Evaluation

CH2M HILL concludes that the available data meet the EPA's quality assurance guidance (QAM/005) definition for completeness and that the stated objectives in the FSP (to sample and characterize drain-down solutions) have been met.

A comparison of normal samples to field duplicates is contained in Appendix B. The RPD between these samples are generally in good agreement. Large RPDs in samples may be due to high concentrations of minerals and dissolved solids in these samples.

Also, contained in Appendix B is a table showing a comparison of non-detected analytes where the reporting limit is higher than the screening level (for example, PRG, MCL, and Tap Water standards). The table includes the sample dilution factor and the most restrictive screening level (for drain-down solutions, it is usually Tap Water standards). The dilution factors represent the analytical dilution factor. There is an additional factor of 10 dilution applied during sample preparation that is not included by the laboratory in the Tier 1 deliverable or the EDD. The samples were analyzed by the EPA Region 9 laboratory using

EPA Method 200.7, which is an ICP-AES method essentially identical to the planned contract laboratory produce statement of work method. Because of the high concentrations of metals and minerals in the drain-down solutions, some reporting limits are higher than planned because the samples were not appropriate for ICP-MS analysis.

Drain-down solution samples were collected during the driest part of the year when fluids are concentrated and volumes minimal. It may be beneficial to collect additional samples on a seasonal basis for evaluation of drain-down quality over time. The quantity of drain-down fluid emitting from each pad was not evaluated as part of this study. These data gaps will be evaluated and discussed in the RI report in relation to fluids management and closure alternatives. The drain-down data usability for ecological and human health screening is currently under review and will be discussed in detail in the RI report.

3.3 Subsurface and Surface Soil Sampling Data Evaluation

CH2M HILL concludes that the available data meet EPA's quality assurance guidance (QAM/005) definition for completeness and that the stated objectives in the FSP (to sample and characterize surface and subsurface materials) have been met.

A comparison of normal samples to field duplicates is contained in Appendix C. The RPD between these samples are generally in good agreement. Large RPDs in samples are most likely due to the heterogeneous nature of soils.

Also, contained in Appendix C is a table showing a comparison of non-detected analytes where the reporting limit is higher than the screening level. The table also shows the most screening level (for soil samples it is usually residential PRGs).

Soil samples were prepared using the SPLP procedure designed to simulate contaminant leaching under environmental conditions. After review of the data, it was noticed that the reporting limits were elevated with respect to the project goals, Tap Water PRGs. The laboratory indicated that the samples were treated in a manner similar to waste samples prepared by Toxicity Characteristic Leaching Procedure (TCLP) and the final dilution factor was selected based on the Resource Conservation and Recovery Act (RCRA) hazardous waste limits. Re-analysis of the samples to obtain lower reporting limits is being investigated. Data from any re-analyses conducted will be included in the RI report in preparation. As part of the surface and subsurface investigation, possible heap closure cover source material from the VLT tailings was sampled. However, other cover source material should be considered, such as material from the south waste rock area. Various nearby closure materials should be identified and sampled as part of the feasibility study capping alternative. This data gap will be noted in the RI report.

The usability of soils data for ecological and human health screening is under review and will be discussed in detail in the RI report.

3.3.1 Metals

After the preliminary data were received and in accordance with FSP Section 2.4 and 3.0, statistical analyses were conducted on the metals data to determine whether there was significant data variability between the Group A HLP (Phase I/II, Phase III South, Phase III

4X, and Phase IV Slot). The HLP analytical results were compared statistically using analysis of variance (ANOVA). ANOVA performed on raw data is most valid when the residuals, the differences between actual values and the calculated means for each potential partition, are normally distributed. This assumption is seldom verifiable with environmental data, and was shown not to be the case with these HLP data. Hence, a nonparametric ANOVA method known as the Kruskal-Wallis test (which does not depend on any distributional assumptions such as normality) was performed. This test considered the ranks of the data (all concentrations ranked from lowest to highest) and whether there was a tendency for higher or lower ranks to be more prevalent within one or more of the HLPs.

The results of this ANOVA, shown in Attachment D, Table 1, suggest that the concentrations were typically statistically similar. For most constituents, there was not a significant difference in concentration between the various HLPs using either a significance level of 0.05 or 0.01. The exceptions using a significance level of 0.05 were antimony, mercury, and potassium. The calculated probability for antimony, 0.041, was barely below the significance level of 0.05. The calculated probabilities for mercury and potassium of 0.021 each were below 0.05 but above 0.01. Thus, no constituents demonstrated significant differences at the 0.01 significance level.

It is very unusual for a soil study comparing partitions within the data (for example, lithology, depth, or in this instance the HLPs), to demonstrate a lack of significant differences for all cases. Using a significance level of 0.05, it is anticipated that one of 20 to be calculated to have a significant difference even if all data are drawn from a random data set. With this data set, only three of the 22 constituents demonstrated significant differences, which suggest a small overall level of difference.

A useful complement to the ANOVA results is a graphical presentation of the data for each HLP. Box and whisker plots are presented in Attachment D, Figure 1, for this purpose.

The ANOVA results indicate statistical similarity for all constituents at the 0.05 significance level and similarity for all but three constituents (antimony, mercury, and potassium) at the 0.01 significance level. The box and whisker plots for all constituents, including these three, display relative agreement from each HLP. Based on the review of this graphical inspection and the ANOVA statistical evaluation, data from HLP Phase I/II, HLP Phase III South, HLP Phase III 4X, and HLP Phase IV Slot can be combined into a single data set for subsequent risk screening and technical evaluations to be conducted for the RI report.

3.3.2 Agricultural

In general, agricultural data show that the soil pH is low and that this level of acidity would limit establishment and growth of plant communities, with aluminum and other metals presenting significant issues. Soil amendments such as lime, calcium oxide, and other materials could be used, but the system may be highly buffered and it could require impractically large amounts of these amendments to establish and sustain plant growth.

The water-holding capacity is under review but based on the rocky material present, is expected to be very low and unlikely to support plant growth. Finer textured materials would need to be mixed into at least the upper 1 foot of surface material to have a reasonable chance of plant establishment and sustainability.

Organic amendments such as bio-solids or compost would be helpful in providing nutrients, improving water-holding capacity, and buffering toxicities. Additional sampling and analysis is warranted during the FS or remedial design process and should follow these general recommendations.

3.3.3 Geochemical, Geotechnical, and Radiological

CH2M HILL concludes that the available data meet EPA's quality assurance guidance (QAM/005) definition for completeness and that the stated objectives in the FSP (to sample and characterize the acid-based accounting (ABA) and metal leachability properties and to evaluate the overall stability of the HLP) have been met. Based on this evaluation, no further sampling for geochemical or geotechnical properties appears to be warranted at this time.

Although all of the radiological data have not yet been received, CH2M HILL can conclude that the data available and reviewed also meet EPA's quality assurance guidance requirements for completeness. The stated objectives in the FSP (to assess radiological levels relative to the ARC background investigation and against residential and industrial PRGs) will be evaluated upon receipt and verification/validation of all radiological data.

3.4 Quality Assurance/Quality Control

Quality Assurance/Quality Control (QA/QC) samples were obtained in the field and consisted of field duplicate samples, and matrix spike/matrix spike duplicate (MS/MSD) samples. Field blanks were not collected because the chance of significant false positives due to field contamination is slim. Collected in general accordance with the FSP, QC samples were denoted by a “B” following the sample identification number (e.g., H3SSS01B) for field duplicates.

Environmental data were initially scrutinized at two levels:

- Tier 1 Review—includes a manual (Tier 1A) or automated review (Tier 1B) of quality control results.
- Tier 3 Review—includes manual review of all quality control results, inspection of raw data, supporting documentation, and verification of reported results by independent calculation.

Data review for both the Tier 1A and Tier 1B included an evaluation of the following QC elements:

- Sample Holding Times
- Method Blanks
- Laboratory Control Samples
- Continuing Calibration Standards
- Matrix Spikes
- Sample Duplicates and Spike Duplicates
- Volatile System Monitoring Compounds
- Internal Standards
- Surrogates

Tier 3 validations included all of the elements of the Tier 1 review along with qualitative and quantitative evaluation of the raw data.

Results that were sent to the CLP laboratories:

All results were reviewed using EPA's automated data review and flagging software (Region 9 Tier 1B). The Tier 1B qualifiers are included in the project database. Ten percent of the results were selected by EPA for full validation, which is in progress and ongoing.

Results that were obtained through the USACE subcontract laboratory services:

Ten percent of the results will receive full validation (Region 9 Tier 3 level) and the remaining 90 percent will be reviewed at the Tier 1 level. These review and validation activities are in progress and ongoing.

EPA Region 9 laboratory results:

Results for samples that were analyzed at the EPA Region 9 laboratory were reviewed at the Tier 1 level and the associated data flags have been included in the project database.

SECTION 4.0

Works Cited

Atlantic Richfield Company (ARC). 2002. *Draft Final Arimetco Heap Leach and Process Components Work Plan*. Prepared by Brown and Caldwell, August.

CH2M HILL. 2007. *Final Field Sampling Plan for the Arimetco Heap Leach Pads Remedial Investigation Anaconda Copper Yerington Mine Site*. September.

U.S. Environmental Protection Agency (EPA). 2004. *User's Guide and Background Technical Document for USEPA Region 9's Preliminary Remediation Goal (PRG) Table.*

Attachment A
EDi Radiological Gamma Walk-over Survey Report

EXECUTIVE SUMMARY

This report presents the results of the Radiological Gamma Walkover Survey (GWS) of the Heap Leach Pads, Yerington Mine Site in Yerington, Nevada. The survey was conducted from September 10 through September 21, 2007. This site consists of five heap leach pads including Phase I/II contiguous, Phase III South, Phase III 4x, Phase IV Slot and Phase IV Vat Leach Tailings. The heap leach pads were used to leach copper form low-grade oxide ore with a dilute sulfuric acid solution. The walkover data was compared to background values determined at the site and may be compared at a later date to background values determined during background soil surveys currently being conducted by Atlantic Richfield Company, which was not part of this scope of work. Non-intrusive GWS were performed over accessible areas to identify the presence of elevated gamma radiation at the surface.

Purpose

The purpose of the survey was to confirm that the area was correctly identified as a MARRSIM Class III area. No specific DCGLs were established because it was known that the sensivity of the detection system was below any potential DCGL.

Scope

The GWS was designed to determine if surface gamma radiation count rates exist that exceeded 3 standard deviations above the mean background count rate. The GWS data was used to determine if soil sampling might be required and to suggest any additional surveys that might be required to complete the site investigation.

Gross Gamma Walkover Survey

Gross gamma walkover survey data were collected using a Ludlum Model 2221 scaler/ratemeter with a Ludlum Model 43-10 2 inch × 2 inch sodium iodide (NaI) gamma scintillation detector. The detector was suspended at a height of approximately 15 centimeters (cm) above the ground and moved in parallel lines meters apart at a speed of 0.5 meters per second. The measurements were position correlated and data were automatically logged with the measurement coordinates using the Trimble Pro-XRS GPS system. The GPS link tied survey data to spatial locations using state plane coordinates North American Datum (NAD) US State Plane 1927, Nevada West 2703. The GPS was checked daily to ensure accuracy and repeatability. Background measurements were collected at several onsite locations prior to initiation of the survey and on a daily basis during the GWS. The background count rates ranged from approximately 13,000 counts per minute (cpm) to 16,000 cpm. The average background count rate was determined to be 14,595 cpm with a standard deviation of ±2,895 cpm. Background count rates were collected at three locations; 1) near the temporary trailer; 2) near the old post office (Atlantic Richfield) 3) at the intersection of Birch Drive at Highway 95. Please see Site Map 1-2 for the background locations.

The gross gamma walkover survey was designed to cover as much area as possible of the 5 Heap Leach Pads identified (approximately 480 acres). A low degree of accessibility was

encountered at the site due to large boulders and shoulder high mounds of mineral deposits. Inaccessible areas were identified based on safety concerns of uneven footing and hazardous terrain and were not surveyed and appear as gaps in the survey coverage. The survey was conducted using an all-terrain vehicle (ATV) to offset these safety concerns.

Data files were plotted on a cumulative frequency diagram that represents the direction path of the GWS and the corresponding count rates of the gamma detection instrumentation. The heap leach pads survey maps provide representation of count rate ranges with corresponding colors along with minimum detected count rate, maximum detected count rate and average count rate:

Phase I and II Heap Leach Pads:
Maximum Count Rate: 14,248 cpm
Minimum Count Rate: 9,807 cpm
Average Count Rate: 12,908 cpm
Standard Deviation:

Phase III 4x Heap Leach Pad:
Maximum Count Rate: 23,417 cpm
Minimum Count Rate: 10,267 cpm
Average Count Rate: 14,887 cpm
Standard Deviation:

Phase III South and Phase III Bathtub:
Maximum Count Rate: 16,625 cpm
Minimum Count Rate: 9,766 cpm
Average Count Rate: 14,068 cpm
Standard Deviation

Phase IV Slot Heap Leach Pad:
Maximum Count Rate: 19,965 cpm
Minimum Count Rate: 9,418 cpm
Average Count Rate: 15,911 cpm
Standard Deviation:

Phase IV Vat Heap Leach Pad:
Maximum Count Rate: 21,675 cpm
Minimum Count Rate: 11,691 cpm
Average Count Rate: 15,640 cpm
Standard Deviation:

This site yielded results consistent with a normal background distribution.

Gross gamma count rate data from the relative background population were used to calculate an average.

GWS System Description

The GWS system consisted of a roving GPS/gamma-survey package and a base station transmitter/receiver. The roving unit combined a 9 channel Trimble Pro-XRS with a TDC1 data logger for the global positioning and a Ludlum scaler/rate meter with a 2x2 NaI scintillation detector for gamma detection. The rover simultaneously logged gamma count rates and position data. The data logging frequency was one measurement every second. The fixed base station, located at a known coordinate site near the landfill, was used as a reference point for differential correction of the rover unit data.

The rover instrumentation was mounted on a four-wheeled all-terrain vehicle in a manner that allowed for consistent, near-surface scanning of the entire area of interest. To the extent possible, areas not accessible to the survey vehicle were measured on foot utilizing the same instrumentation mounted on a backpack. Due to steep terrain, and uneven footing conditions, some areas of the site remained inaccessible.

The plat map provided the coordinates of survey points which were used to digitize a general outline of the area of interest. These points were imported into an Arcview geographic information program to generate a map of the heap leach pads in relation to the entire base map.

As part of the initial GPS/gamma survey, EDi used one of the known coordinate stations nearest the heap leach pads as the fixed base station site. Using data collected by the fixed base station data collected during the gamma surveys, Trimble's Pathfinder software differentially corrected the rover position data. Differential correction allowed for position accuracy in the sub-meter range. The data was then used to create an Arc/Info coverage for the landfill that would accurately display all of the gamma data collected. Gamma data was sorted and displayed to identify the location and distribution of peak gamma values for the property. These values were compared to background gamma values from a nearby unaffected area.

Radiological Survey Results

Although some areas of the heap leach were inaccessible and some position data was not correctable due to satellite signal loss, the available data met the USEPA's quality assurance guidance document's (QAM/005) definition for completeness. That is, greater than 90% of data collected were available for use in analysis of site conditions. Considering this, the radiological survey results of the heap leach pads indicate that no points were identified where gamma count rates exceeded 3 standard deviations above the mean background count rate. Computer generated survey maps clearly demonstrate these findings. Due to the fact that no truly elevated gamma levels were identified, no soil samples were collected.

Based on review of the available radiological survey data, EDi suggests radiological parameters at this site to be within the normal range of background.

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LEGEND:

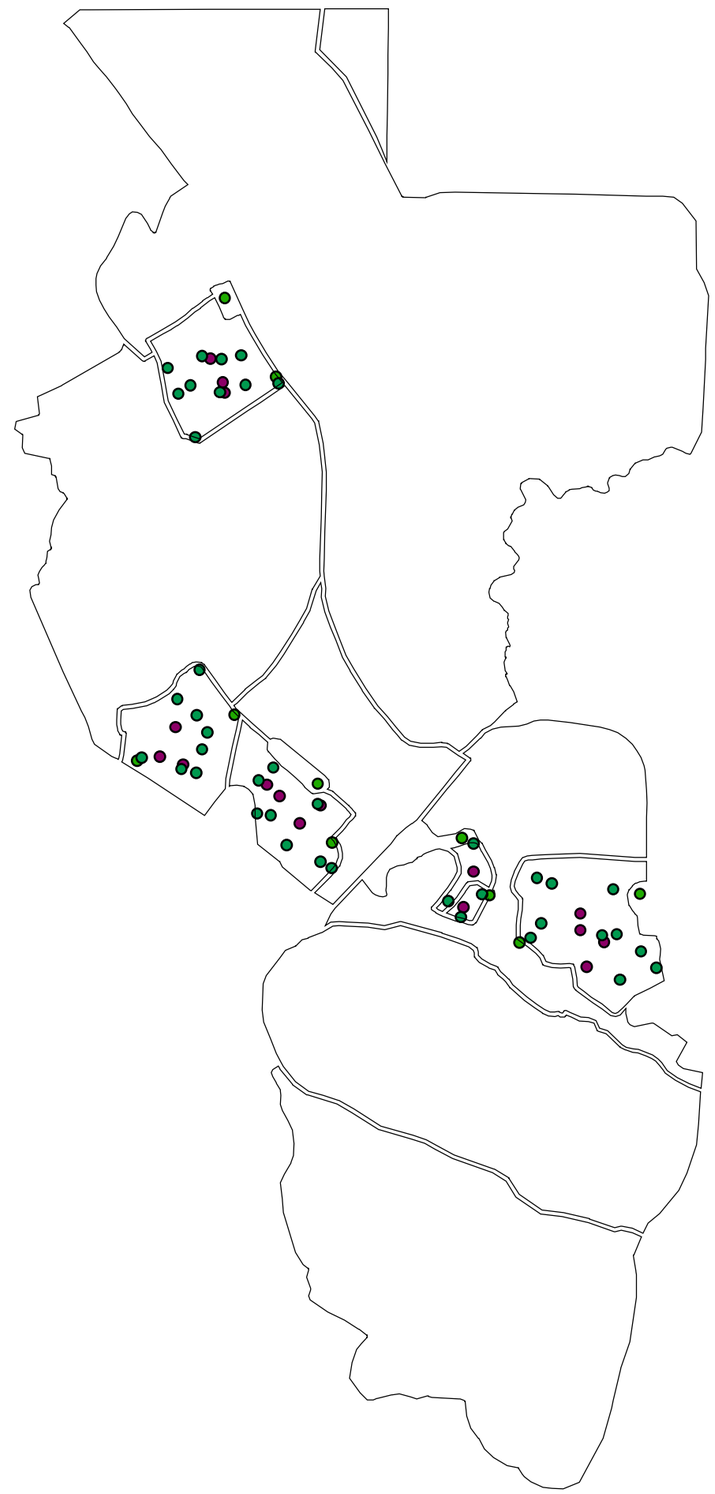
SURVEY DATE:

TITLE:

ANACONDA PROJECT BASE MAP

DRAWN BY:

PRINT DATE:



0 0.25 0.5 1 Miles

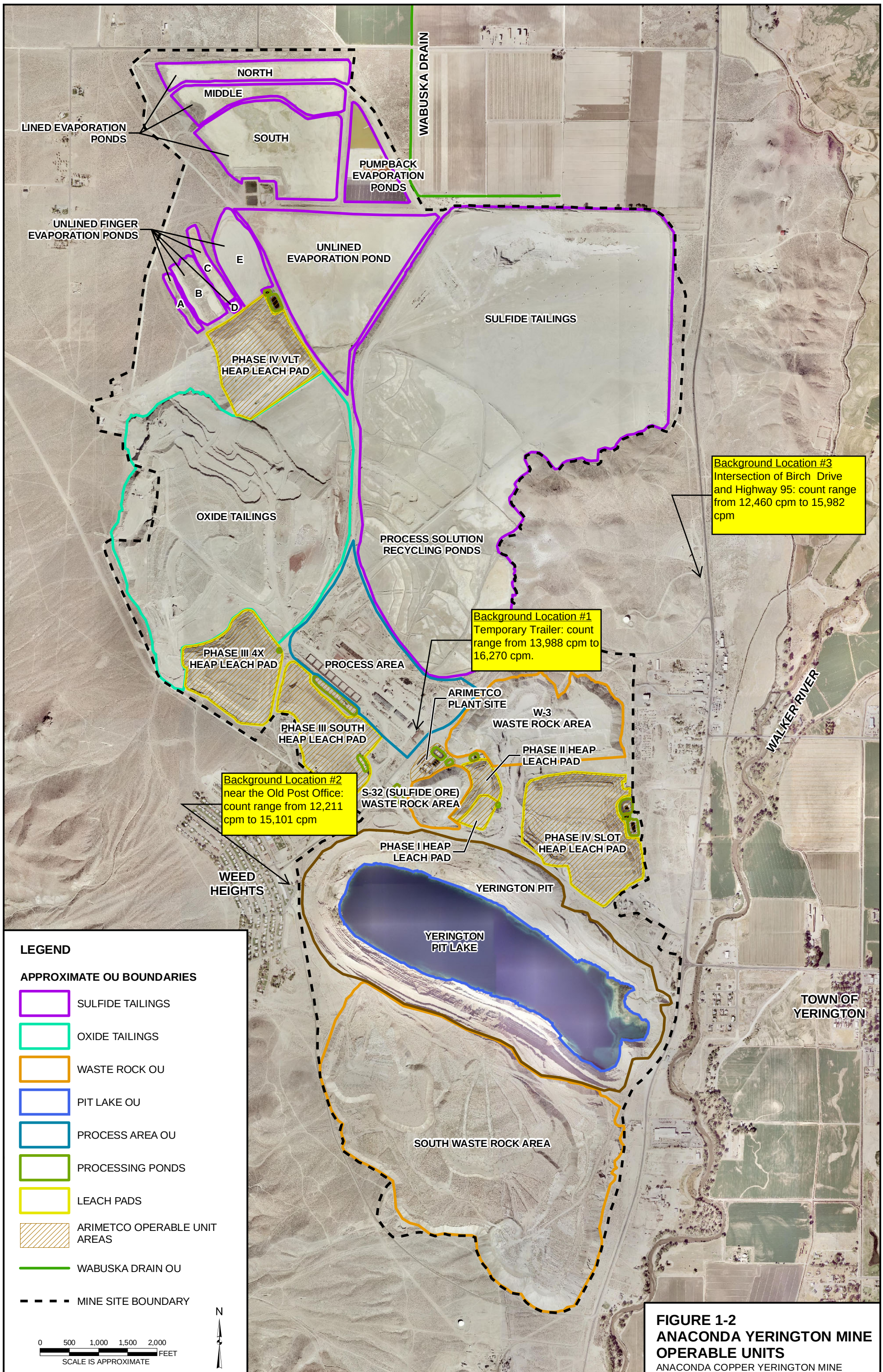


FIGURE 1-2
ANACONDA YERINGTON MINE OPERABLE UNITS
ANACONDA COPPER YERINGTON MINE

CH2MHILL

\\LOKI\PROJECTS\RDDGIS\354946_ANACONDA_COPPER\MAPFILES\FIG1_2_OP_UNIT.MXD 6/13/2007 11:51:52

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Legend

% Proposed Boreholes

(Proposed Drain Down

Proposed Surface Samples

2X2_CPM

- 9807 - 12000
- 12001 - 15000
- 15001 - 20000

HIGH- 14248
LOW- 9807
AVG.- 12908

SURVEY DATE: 9/12/07

TITLE:

PHASE I HEAP LEACH PAD
PHASE II HEAP LEACH PAD

DRAWN BY: M.PLONSKI

DRAFT DATE: 9/15/07

0 0.005 0.01 0.02 Miles

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Legend

- Proposed Boreholes
- Proposed Drain Down
- Proposed Surface Samples

PHASE34X

2X2_CPM

- 2 - 12000
- 12001 - 18000
- 18001 - 23417

HIGH- 23417
LOW- 10267
AVG.- 14887

SURVEY DATE: 9/12/07

TITLE:

PHASE III 4X
HEAP LEACH PAD

DRAWN BY: M.PLONSKI

DRAFT DATE: 9/15/07

0 0.015 0.03 0.06 Miles

5

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Legend

- % Proposed Boreholes
- (Proposed Drain Down
- # Proposed Surface Samples

PHASE 3 S

2X2_CPM

- 0 - 12000
- 12001 - 16625

HIGH- 16625
LOW- 9768
AVG.- 14068

SURVEY DATE: 9/12/07

TITLE: PHASE III SOUTH & PHASE III BATHTUB

DRAWN BY: M.PLONSKI

DRAFT DATE: 9/15/07

0 0.01250.025 0.05 Miles

5

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Legend

- % Proposed Boreholes
- (Proposed Drain Down
- # Proposed Surface Samples

PHASE 4

2X2_CPM

- 2 - 12000
- 12001 - 18000
- 18001 - 21675

HIGH- 21675
LOW- 11691
AVG.- 15640

SURVEY DATE: 9/12/07

TITLE:

PHASE IV VLTG
HEAP LEACH PAD

DRAWN BY: M.PLONSKI

DRAFT DATE: 9/15/07

0 0.015 0.03 0.06 Miles

Attachment B
Drain-Down Data Results

FIGURE 4-2
DRAIN-DOWN SAMPLING LOCATIONS – PHASE I/II, PHASE III, AND PHASE IV SLOT HEAP LEACH PADS
ANACONDA COPPER YERINGTON MINE

CH2MHILL

\\LOKI\PROJECTS\RDDGIS\354946_ANACONDA_COPPER\MAPFILES\RI_FS\FIG4_2_DRN_DOWN.MXD 1/18/2008 13:32:45

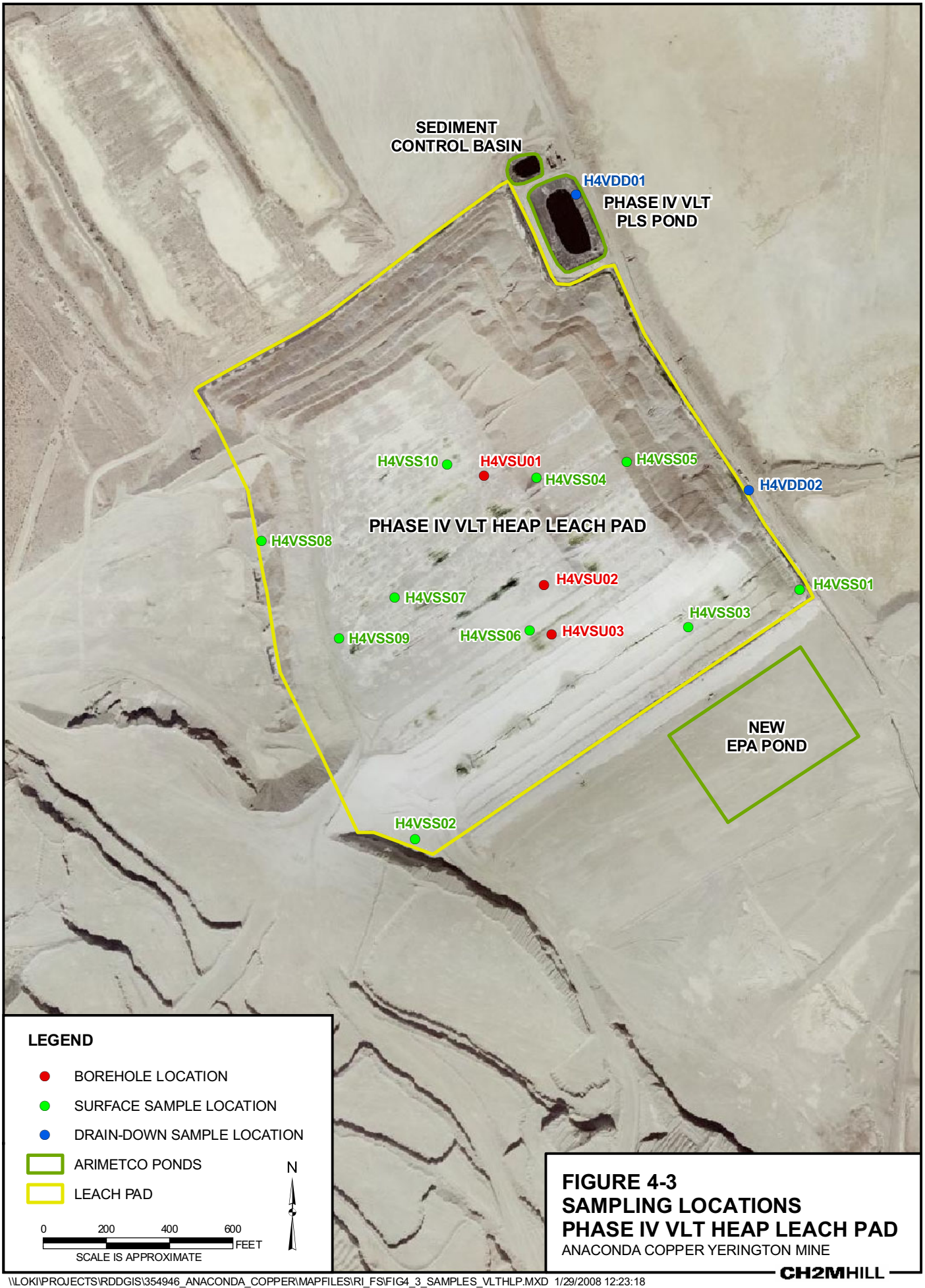

FIGURE 4-3
SAMPLING LOCATIONS
PHASE IV VLT HEAP LEACH PAD
ANACONDA COPPER YERINGTON MINE

CH2MHILL

\\LOKI\PROJECTS\RDDGIS\354946_ANACONDA_COPPER\MAPFILES\RI_FS\FIG4_3_SAMPLES_VLTHLP.MXD 1/29/2008 12:23:18

TABLE B-1
Metal Results, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

	Parameter:	Silica (SiO2)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury
	Primary MCL:	--	--	6	10	2,000	4	--	5	--	100	--	1,300	--	15	--	--	--	2
	Secondary MCL:	--	50 - 200	--	--	--	--	--	--	--	--	--	1000	300	--	--	--	50	--
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Location	Sample Date	Analytical Results																	
PHASE 1 POND																			
H12DD01	9/13/2007	230,000	**19,000,000**	1,600 U	400 U	200 U	**1,200**	2,500	**340**	600,000	**1,300**	45,000	**5,700,000**	**650,000**	1,600 U	13,000	17,000,000	**460,000**	**29**
PHASE I/II PLS POND																			
H12DD02	9/13/2007	250,000	**27,000,000**	1,600 U	**130 J**	200 U	**1,500**	1,800	**400**	450,000	**2,100**	66,000	**4,600,000**	**460,000**	1,600 U	15,000	23,000,000	**700,000**	**8.7**
PHASE III 4X HEAP LEACH PAD - LOW POINT																			
H3XDD01	9/12/2007	120,000	**11,000,000**	**160 J**	**110 J**	200 U	**640**	1,100	**180**	480,000	**460**	29,000	**1,700,000**	**210,000**	1,600 U	7,500	9,600,000	**280,000**	**8.3**
PHASE III BATHTUB POND																			
H3SDD01	9/13/2007	190,000	**23,000,000**	1,600 U	400 U	200 U	**1,300**	1,800	**360**	490,000	**1,900**	47,000	**4,300,000**	**1,100,000**	1,600 U	14,000	21,000,000	**500,000**	**4.7**
PHASE IV SLOT HEAP LEACH PAD																			
H4SDD01	9/13/2007	220,000	**27,000,000**	1,600 U	400 U	200 U	**1,500**	1,900	**420**	420,000	**1,900**	70,000	**3,500,000**	**420,000**	1,600 U	17,000	23,000,000	**740,000**	**6.7**
PHASE IV SLOT III PLS POND																			
H4SDD02	9/13/2007	160,000	**15,000,000**	1,600 U	400 U	200 U	**890**	1,400	**250**	600,000	**1,600**	41,000	**2,000,000**	**470,000**	1,600 U	11,000	13,000,000	**410,000**	**10**
H4SDD02 (FD)	9/13/2007	160,000	**15,000,000**	1,600 U	400 U	200 U	**890**	1,400	**250**	600,000	**1,600**	41,000	**2,000,000**	**470,000**	1,600 U	11,000	13,000,000	**410,000**	**11**
PHASE IV VLT HEAP LEACH PAD																			
H4VDD02	9/12/2007	100,000	**9,000,000**	1,600 U	400 U	200 U	**550**	1,500	**170**	480,000	**940**	28,000	**2,200,000**	**250,000**	1,600 U	6,900	8,600,000	**270,000**	**14**
PHASE IV VLT PLS POND																			
H4VDD01	9/12/2007	140,000	**17,000,000**	**200**	**250**	200 U	**960**	1,700	**290**	600,000	**1,400**	49,000	**2,900,000**	**650,000**	1,600 U	12,000	15,000,000	**460,000**	**7.9**
H4VDD01 (FD)	9/12/2007	140,000	**17,000,000**	1,600 U	**280**	200 U	**970**	1,800	**300**	600,000	**1,500**	50,000	**2,900,000**	**640,000**	1,600 U	12,000	15,000,000	**470,000**	**7.6**

Notes:

Bolded values exceed Primary or Secondary Federal MCL
ug/L - micrograms per Liter
J - Estimated result
U - Not detected at reporting limit
FD - Field Duplicate
MCL - Federal Maximum Contaminant Level
-- - no MCL available

TABLE B-1
Metal Results, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

	Parameter:	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Vanadium	Zinc
	Primary MCL:	--	--	--	**50**	--	--	--	**2**	--	--	--	--
	Secondary MCL:	--	--	--	--	--	--	--	--	--	--	--	**5,000**
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Location	**Sample Date**	**Analytical Results**											
PHASE 1 POND													
H12DD01	9/13/2007	400 U	26,000	120,000	400 U	200 U	1,900,000	15,000	1,600 U	20,000 U	1,000	230	**47,000**
PHASE I/II PLS POND													
H12DD02	9/13/2007	400 U	36,000	75,000	400 U	200 U	2,200,000	3,700	**660 J**	40,000 U	410	300	**63,000**
PHASE III 4X HEAP LEACH PAD - LOW POINT													
H3XDD01	9/12/2007	400 U	17,000	93,000	400 U	200 U	1,100,000	4,500	**380**	8,000 U	180	70 J	**26,000**
PHASE III BATHTUB POND													
H3SDD01	9/13/2007	400 U	30,000	40,000 U	400 U	50 J	2,100,000	140	1,600 U	20,000 U	900	1,100	**60,000**
PHASE IV SLOT HEAP LEACH PAD													
H4SDD01	9/13/2007	400 U	41,000	86,000	400 U	200 U	2,400,000	2,500	**760 J**	40,000 U	330	370	**67,000**
PHASE IV SLOT III PLS POND													
H4SDD02	9/13/2007	400 U	24,000	100,000	400 U	200 U	1,500,000	6,800	1,600 U	20,000 U	310	86 J	**39,000**
H4SDD02 (FD)	9/13/2007	400 U	24,000	99,000	400 U	200 U	1,500,000	6,800	1,600 U	20,000 U	300	81 J	**39,000**
PHASE IV VLT HEAP LEACH PAD													
H4VDD02	9/12/2007	400 U	17,000	66,000	400 U	200 U	970,000	3,800	1,600 U	8,000 U	300	65 J	**26,000**
PHASE IV VLT PLS POND													
H4VDD01	9/12/2007	400 U	30,000	140,000	400 U	200 U	1,700,000	7,600	**890**	20,000 U	1,100	100	**46,000**
H4VDD01 (FD)	9/12/2007	400 U	30,000	140,000	400 U	200 U	1,700,000	7,700	1,600 U	20,000 U	1,100	100 J	**46,000**

Notes:

Bolded values exceed Primary or Secondary Federal MCL
ug/L - micrograms per Liter
J - Estimated result
U - Not detected at reporting limit
FD - Field Duplicate
MCL - Federal Maximum Contaminant Level
-- - no MCL available

TABLE B-2
Inorganic and Total Petroleum Hydrocarbon Results, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

Parameter:		pH	Bicarbonate Alkalinity	Carbonate Alkalinity	Hydroxide Alkalinity	Total Alkalinity	Chloride	Fluoride	Nitrate + Nitrite as N	Phosphorus, Total	Silica (SiO2)	Specific Conductance	Sulfate	TPH, as diesel	TPH, as kerosene
Nevada Cleanup Standard:		--	--	--	--	--	--	--	--	--	--	--	--	1,000	1,000
Secondary MCL:		6.5 - 8.5	--	--	--	--	250	--	--	--	--	--	250	--	--
Units:		pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	umhos/cm	mg/L	ug/L	ug/L
Location	Sample Date	Analytical Results													
PHASE 1 POND															
H12DD01	9/13/2007	**2.2 J**	20 U	20 U	20 U	20 U	220	2,600	16	160	230,000	45,000	**200,000**	**2,000**	**2,100**
PHASE I/II PLS POND															
H12DD02	9/13/2007	**1.9 J**	20 U	20 U	20 U	20 U	170	2,100	21	360	250,000	45,000	**170,000**	**1,700 J**	1,700 UJ
PHASE III 4X HEAP LEACH PAD - LOW POINT															
H3XDD01	9/12/2007	**2.43**	20 U	20 U	20 U	20 U	115	1,600	8.2	110	120,000	44,000	**140,000**	750	1,580 U
PHASE III BATHTUB POND															
H3SDD01	9/13/2007	**2 J**	20 U	20 U	20 U	20 U	**330**	3,300	7	320	190,000	39,000	**280,000**	**1,600**	3,200 U
PHASE IV SLOT HEAP LEACH PAD															
H4SDD01	9/13/2007	**2 J**	20 U	20 U	20 U	20 U	**360**	3,100	18	270	220,000	42,000	**250,000**	**2,100**	4,400 U
PHASE IV SLOT III PLS POND															
H4SDD02	9/13/2007	**2.4 J**	20 U	20 U	20 U	20 U	190	2,100	14	170	160,000	45,000	**170,000**	**1,300**	2,800 U
H4SDD02 (FD)	9/13/2007	**2.4 J**	20 U	20 U	20 U	20 U	**310**	3,900	14	170	160,000	31,000	**340,000**	**1,600**	**1,700**
PHASE IV VLT HEAP LEACH PAD															
H4VDD02	9/12/2007	**2.8 J**	20 U	20 U	20 U	20 U	210	1,200	9.4	210	100,000	38,000	**93,000**	**1,500**	**1,500**
PHASE IV VLT PLS POND															
H4VDD01	9/12/2007	**2.6 J**	20 U	20 U	20 U	20 U	190	2,400	16	380	140,000	44,000	**180,000**	**1,300**	2,600 U
H4VDD01 (FD)	9/12/2007	**2.5 J**	20 U	20 U	20 U	20 U	190	2,400	16	400	140,000	44,000	**190,000**	**1,200**	2,600 U

Notes:

Bolded values exceed or are outside the range of the Nevada Cleanup Standard or Secondary Federal MCL
ug/L - micrograms per Liter
J - Estimated result
U - Not detected at reporting limit
TPH-Total Petroleum Hydrocarbons
FD - Field Duplicate
MCL - Federal Maximum Contaminant Level
-- - no Nevada Cleanup Standard / Secondary MCL available

TABLE B-3
Radiological Results, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

	Parameter:	Alpha	Beta	Thorium 227	Thorium 228	Thorium 230	Thorium 232	Uranium 234	Uranium 235	Uranium 238	Yield
	Primary MCL:	15	4 millirems per year	--	--	--	--	--	--	--	--
	Tap Water PRG:	--	--	1.00E+00	4.45E-01	5.23E-01	4.71E-01	6.74E-01	6.84E-01	7.44E-01	--
	Units:	pCi/L ± unc	pCi/L ± unc	pCi/L ± unc	pCi/L ± unc	pCi/L ± unc	pCi/L ± unc	pCi/L ± unc	pCi/L ± unc	pCi/L ± unc	%
Location	**Sample Date**	**Analytical Results**									
PHASE 1 POND											
H12DD01	9/13/2007	**16300 ± 7180**	4460 ± 1700	ND ± 105	**641 ± 262**	**196 ± 131**	ND ± 75	**6860 ± 898**	**500 ± 234**	**5280 ± 762**	86.2
PHASE I/II PLS POND											
H12DD02	9/13/2007	**8690 ± 6690**	6280 ± 1890	ND ± 28.4	ND ± 41	**72.3 ± 34.4**	**46.9 ± 28.5**	**8390 ± 724**	**377 ± 99.4**	**7010 ± 623**	99.8
PHASE III 4X HEAP LEACH PAD - LOW POINT											
H3XDD01	9/12/2007	**6190 ± 4420**	3200 ± 1500	ND ± 156	ND ± 189	ND ± 85.4	ND ± 78.2	**5660 ± 783**	**217 ± 155**	**4440 ± 674**	99.3
PHASE III BATHTUB POND											
H3SDD01	9/13/2007	**7510 ± 6370**	7290 ± 1950	ND ± 33.5	**79.6 ± 44.7**	**182 ± 52.3**	**54.6 ± 29.8**	**9950 ± 898**	**336 ± 92.6**	**7990 ± 745**	98.4
PHASE IV SLOT HEAP LEACH PAD											
H4SDD01	9/13/2007	**9850 ± 6580**	5130 ± 1770	ND ± 23.2	ND ± 42	**57.1 ± 30.1**	ND ± 14.5	**11000 ± 844**	**433 ± 97**	**8870 ± 701**	96.3
PHASE IV SLOT III PLS POND											
H4SDD02	9/13/2007	**8460 ± 5180**	5480 ± 1750	ND ± 38.9	**155 ± 53.9**	**83.1 ± 33.9**	**36.8 ± 23**	**6120 ± 513**	**291 ± 77.8**	**5360 ± 460**	84.4
H4SDD02 (FD)	9/13/2007	**8640 ± 5050**	5270 ± 1690	ND ± 23.7	**140 ± 59.7**	**67.7 ± 33.1**	**21.3 ± 20.2**	**6020 ± 525**	**400 ± 97.2**	**4870 ± 443**	93.3
PHASE IV VLT HEAP LEACH PAD											
H4VDD02	9/12/2007	**4270 ± 3190**	ND ± 1310	ND ± 21.8	**132 ± 53.4**	**51.5 ± 30**	ND ± 18.4	**3210 ± 320**	**109 ± 49.8**	**2470 ± 265**	93.4
PHASE IV VLT PLS POND											
H4VDD01	9/12/2007	**6670 ± 4630**	6680 ± 1810	ND ± 32.1	**268 ± 72.1**	**156 ± 49.2**	**42 ± 26.3**	**6590 ± 560**	**289 ± 80.4**	**5420 ± 478**	98.8
H4VDD01 (FD)	9/12/2007	**8980 ± 5650**	4890 ± 1700	ND ± 36.1	**274 ± 67.8**	**114 ± 41.5**	**75.7 ± 33.7**	**6230 ± 539**	**368 ± 93.3**	**5330 ± 475**	82.5

Notes:

Bolded values exceed Tap Water PRG or Primary MCL
All results listed as result (MDC)
MDC - Minimum Detectable Concentration
pCi/L - picocuries per Liter
ND - Not detected at MDC
FD - Field Duplicate
unc - radiological measurement uncertainty
MCL - Federal Maximum Contaminant Level
PRG - Preliminary Remediation Goal (EPA, 2004)
-- - no MCL/PRG available

TABLE B-4
Field Duplicate Results, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location ID	Sample Date	Units	Analyte Name	Primary Result	Field Duplicate Result	RPD
Geochemical Results						
H4VDD01	09/12/07	mg/L	Chloride	190	190	0
H4VDD01	09/12/07	mg/L	Fluoride	2400	2400	0
H4VDD01	09/12/07	mg/L	Sulfate	180000	190000	5
H4SDD02	09/13/07	mg/L	Chloride	190	310	48
H4SDD02	09/13/07	mg/L	Fluoride	2100	3900	60
H4SDD02	09/13/07	mg/L	Sulfate	170000	340000	67
Inorganic Results						
H4VDD01	09/12/07	pH units	pH	2.6 J	2.5 J	4
H4VDD01	09/12/07	mg/L	Phosphorus, Total	380	400	5
H4VDD01	09/12/07	ımhos/cn	Specific Conductance	44000	44000	0
H4SDD02	09/13/07	pH units	pH	2.4 J	2.4 J	0
H4SDD02	09/13/07	mg/L	Phosphorus, Total	170	170	0
H4SDD02	09/13/07	ımhos/cn	Specific Conductance	45000	31000	37
Metal Results						
H4VDD01	09/12/07	ug/L	Aluminum	17000000	17000000	0
H4VDD01	09/12/07	ug/L	Antimony	200	1600 U	NC
H4VDD01	09/12/07	ug/L	Arsenic	250	280	11
H4VDD01	09/12/07	ug/L	Beryllium	960	970	1
H4VDD01	09/12/07	ug/L	Boron	1700	1800	6
H4VDD01	09/12/07	ug/L	Cadmium	290	300	3
H4VDD01	09/12/07	ug/L	Calcium	600000	600000	0
H4VDD01	09/12/07	ug/L	Chromium	1400	1500	7
H4VDD01	09/12/07	ug/L	Cobalt	49000	50000	2
H4VDD01	09/12/07	ug/L	Copper	2900000	2900000	0
H4VDD01	09/12/07	ug/L	Iron	650000	640000	2
H4VDD01	09/12/07	ug/L	Lithium	12000	12000	0
H4VDD01	09/12/07	ug/L	Magnesium	15000000	15000000	0
H4VDD01	09/12/07	ug/L	Manganese	460000	470000	2
H4VDD01	09/12/07	ug/L	Mercury	7.9	7.6	4
H4VDD01	09/12/07	ug/L	Nickel	30000	30000	0
H4VDD01	09/12/07	ug/L	Potassium	140000	140000	0
H4VDD01	09/12/07	ug/L	Silica (SiO2)	140000	140000	0
H4VDD01	09/12/07	ug/L	Sodium	1700000	1700000	0
H4VDD01	09/12/07	ug/L	Strontium	7600	7700	1
H4VDD01	09/12/07	ug/L	Thallium	890	1600 U	NC
H4VDD01	09/12/07	ug/L	Titanium	1100	1100	0
H4VDD01	09/12/07	ug/L	Vanadium	100	100 J	0
H4VDD01	09/12/07	ug/L	Zinc	46000	46000	0
H4SDD02	09/13/07	ug/L	Aluminum	15000000	15000000	0
H4SDD02	09/13/07	ug/L	Beryllium	890	890	0
H4SDD02	09/13/07	ug/L	Boron	1400	1400	0

TABLE B-4
Field Duplicate Results, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location ID	Sample Date	Units	Analyte Name	Primary Result	Field Duplicate Result	RPD
Metal Results						
H4SDD02	09/13/07	ug/L	Cadmium	250	250	0
H4SDD02	09/13/07	ug/L	Calcium	600000	600000	0
H4SDD02	09/13/07	ug/L	Chromium	1600	1600	0
H4SDD02	09/13/07	ug/L	Cobalt	41000	41000	0
H4SDD02	09/13/07	ug/L	Copper	2000000	2000000	0
H4SDD02	09/13/07	ug/L	Iron	470000	470000	0
H4SDD02	09/13/07	ug/L	Lithium	11000	11000	0
H4SDD02	09/13/07	ug/L	Magnesium	13000000	13000000	0
H4SDD02	09/13/07	ug/L	Manganese	410000	410000	0
H4SDD02	09/13/07	ug/L	Mercury	10	11	10
H4SDD02	09/13/07	ug/L	Nickel	24000	24000	0
H4SDD02	09/13/07	ug/L	Potassium	100000	99000	1
H4SDD02	09/13/07	ug/L	Silica (SiO2)	160000	160000	0
H4SDD02	09/13/07	ug/L	Sodium	1500000	1500000	0
H4SDD02	09/13/07	ug/L	Strontium	6800	6800	0
H4SDD02	09/13/07	ug/L	Titanium	310	300	3
H4SDD02	09/13/07	ug/L	Vanadium	86 J	81 J	6
H4SDD02	09/13/07	ug/L	Zinc	39000	39000	0
Nitrate Results						
H4VDD01	09/12/07	mg/L	Nitrate + Nitrite as N	16	16	0
H4SDD02	09/13/07	mg/L	Nitrate + Nitrite as N	14	14	0
Radiological Results						
H4VDD01	09/12/07	Ci/L ± un	Alpha	6670	8980	30
H4VDD01	09/12/07	Ci/L ± un	Beta	6680	4890	31
H4VDD01	09/12/07	Ci/L ± un	Thorium 228	268	274	2
H4VDD01	09/12/07	Ci/L ± un	Thorium 230	156	114	31
H4VDD01	09/12/07	Ci/L ± un	Thorium 232	42	75.7	57
H4VDD01	09/12/07	Ci/L ± un	Uranium 234	6590	6230	6
H4VDD01	09/12/07	Ci/L ± un	Uranium 235	289	368	24
H4VDD01	09/12/07	Ci/L ± un	Uranium 238	5420	5330	2
H4VDD01	09/12/07	%	Yield	87.8	82.5	6
H4VDD01	09/12/07	%	Yield	98.8	101	2
H4SDD02	09/13/07	Ci/L ± un	Alpha	8460	8640	2
H4SDD02	09/13/07	Ci/L ± un	Beta	5480	5270	4
H4SDD02	09/13/07	Ci/L ± un	Thorium 228	155	140	10
H4SDD02	09/13/07	Ci/L ± un	Thorium 230	83.1	67.7	20
H4SDD02	09/13/07	Ci/L ± un	Thorium 232	36.8	21.3	53
H4SDD02	09/13/07	Ci/L ± un	Uranium 234	6120	6020	2
H4SDD02	09/13/07	Ci/L ± un	Uranium 235	291	400	32
H4SDD02	09/13/07	Ci/L ± un	Uranium 238	5360	4870	10
H4SDD02	09/13/07	%	Yield	101	93.3	8

TABLE B-4
Field Duplicate Results, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location ID	Sample Date	Units	Analyte Name	Primary Result	Field Duplicate Result	RPD
Radiological Results						
H4SDD02	09/13/07	%	Yield	84.4	84	0
Total Petroleum Hydrocarbon Results						
H4VDD01	09/12/07	ug/L	TPH, as diesel	1300	1200	8
H4SDD02	09/13/07	ug/L	TPH, as diesel	1300	1600	21
H4SDD02	09/13/07	ug/L	TPH, as kerosene	2800 U	1700	NC

Notes:

RPD - Relative Percent Difference = { (Primary Sample - Field Duplicate) / (Primary Sample + Field Duplicate) / 2 } x 100
RPD is calculated and shown only when both the primary and Field Duplicate samples are detected above the Reporting Limit
NC - not calculated
mg/L - milligrams per Liter
pCi/L - picocuries per Liter
µg/L - micrograms per liter
umhos/cm - micromhos per centimeter
J - Estimated result
U - Not detected at reporting limit

TABLE B-5
Metal Results and Dilutions, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Dilution	Units
PHASE 1 POND											
H12DD01	9/13/2007	-	N	E200.7	Antimony	1,600 U	1600	2	6	4	ug/L
				E200.7	Arsenic	400 U	400	1	10	1	ug/L
				E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
				E200.7	Thallium	1,600 U	1600	1	2	4	ug/L
PHASE I/II PLS POND											
H12DD02	9/13/2007	-	N	E200.7	Antimony	1,600 U	1600	2	6	4	ug/L
				E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
PHASE III 4X HEAP LEACH PAD - LOW POINT											
H3XDD01	9/12/2007	-	N	E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
PHASE III BATHTUB POND											
H3SDD01	9/13/2007	-	N	E200.7	Antimony	1,600 U	1600	2	6	4	ug/L
				E200.7	Arsenic	400 U	400	1	10	1	ug/L
				E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
				E200.7	Thallium	1,600 U	1600	1	2	4	ug/L
PHASE IV SLOT HEAP LEACH PAD											
H4SDD01	9/13/2007	-	N	E200.7	Antimony	1,600 U	1600	2	6	4	ug/L
				E200.7	Arsenic	400 U	400	1	10	1	ug/L
				E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
PHASE IV SLOT III PLS POND											
H4SDD02	9/13/2007	-	N	E200.7	Antimony	1,600 U	1600	2	6	4	ug/L
				E200.7	Arsenic	400 U	400	1	10	1	ug/L
				E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
				E200.7	Thallium	1,600 U	1600	1	2	4	ug/L
H4SDD02	9/13/2007	-	FD	E200.7	Antimony	1,600 U	1600	2	6	4	ug/L
				E200.7	Arsenic	400 U	400	1	10	1	ug/L
				E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
				E200.7	Thallium	1,600 U	1600	1	2	4	ug/L
PHASE IV VLT HEAP LEACH PAD											
H4VDD02	9/12/2007	-	N	E200.7	Antimony	1,600 U	1600	2	6	4	ug/L
				E200.7	Arsenic	400 U	400	1	10	1	ug/L
				E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
				E200.7	Thallium	1,600 U	1600	1	2	4	ug/L
PHASE IV VLT PLS POND											
H4VDD01	9/12/2007	-	N	E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
H4VDD01	9/12/2007	-	FD	E200.7	Antimony	1,600 U	1600	2	6	4	ug/L

TABLE B-5
Metal Results and Dilutions, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Dilution	Units
PHASE IV VLT PLS POND											
H4VDD01	9/12/2007	-	FD	E200.7	Lead	1,600 U	1600	1	15	4	ug/L
				E200.7	Selenium	400 U	400	5	50	1	ug/L
				E200.7	Thallium	1,600 U	1600	1	2	4	ug/L

Notes:

Screening Limit is lesser of the Primary or Secondary Federal MCL
ug/L - micrograms per Liter
J - Estimated result
U - Not detected at reporting limit
N - Normal sample
FD - Field Duplicate
MCL - Federal Maximum Contaminant Level

TABLE B-6
Radiological Results and Dilutions, Drain-Down Solutions
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Units
PHASE 1 POND										
H12DD01	9/13/2007	-	N	TH-EICHROM	Thorium 227	-11 U (243)	243	1	1	pCi/L ± unc
				TH-EICHROM	Thorium 232	35.6 U (121)	121	1	0.471	pCi/L ± unc
PHASE I/II PLS POND										
H12DD02	9/13/2007	-	N	TH-EICHROM	Thorium 227	11.1 U (49.2)	49.2	1	1	pCi/L ± unc
				TH-EICHROM	Thorium 228	54.2 U (58.4)	58.4	1	0.445	pCi/L ± unc
PHASE III 4X HEAP LEACH PAD - LOW POINT										
H3XDD01	9/12/2007	-	N	TH-EICHROM	Thorium 227	20.9 U (312)	312	1	1	pCi/L ± unc
				TH-EICHROM	Thorium 228	175 U (298)	298	1	0.445	pCi/L ± unc
				TH-EICHROM	Thorium 230	73.5 U (103)	103	1	0.523	pCi/L ± unc
				TH-EICHROM	Thorium 232	56.4 U (103)	103	1	0.471	pCi/L ± unc
PHASE III BATHTUB POND										
H3SDD01	9/13/2007	-	N	TH-EICHROM	Thorium 227	21.8 U (52.4)	52.4	1	1	pCi/L ± unc
PHASE IV SLOT HEAP LEACH PAD										
H4SDD01	9/13/2007	-	N	TH-EICHROM	Thorium 227	-15 U (64)	64	1	1	pCi/L ± unc
				TH-EICHROM	Thorium 228	53.6 U (61.3)	61.3	1	0.445	pCi/L ± unc
				TH-EICHROM	Thorium 232	8.14 U (21.3)	21.3	1	0.471	pCi/L ± unc
PHASE IV SLOT III PLS POND										
H4SDD02	9/13/2007	-	N	TH-EICHROM	Thorium 227	37 U (53.8)	53.8	1	1	pCi/L ± unc
H4SDD02	9/13/2007	-	FD	TH-EICHROM	Thorium 227	-9.28 U (61.3)	61.3	1	1	pCi/L ± unc
PHASE IV VLT HEAP LEACH PAD										
H4VDD02	9/12/2007	-	N	TH-EICHROM	Thorium 227	-2.27 U (50.3)	50.3	1	1	pCi/L ± unc
				TH-EICHROM	Thorium 232	17.1 U (19.1)	19.1	1	0.471	pCi/L ± unc
PHASE IV VLT PLS POND										
H4VDD01	9/12/2007	-	N	TH-EICHROM	Thorium 227	13.3 U (55.8)	55.8	1	1	pCi/L ± unc
H4VDD01	9/12/2007	-	FD	TH-EICHROM	Thorium 227	16.7 U (62.4)	62.4	1	1	pCi/L ± unc

Notes:

Screening Limit is lesser of the Tap Water PRG or Primary MCL
All results listed as result (MDC)
MDC - Minimum Detectable Concentration
pCi/L - picocuries per Liter
ND - Not detected at MDC
N - Normal sample
FD - Field Duplicate
unc - radiological measurement uncertainty
MCL - Federal Maximum Contaminant Level
PRG - Preliminary Remediation Goal (EPA, 2004)
-- - no MCL/PRG available

Attachment C
Soil Data Results

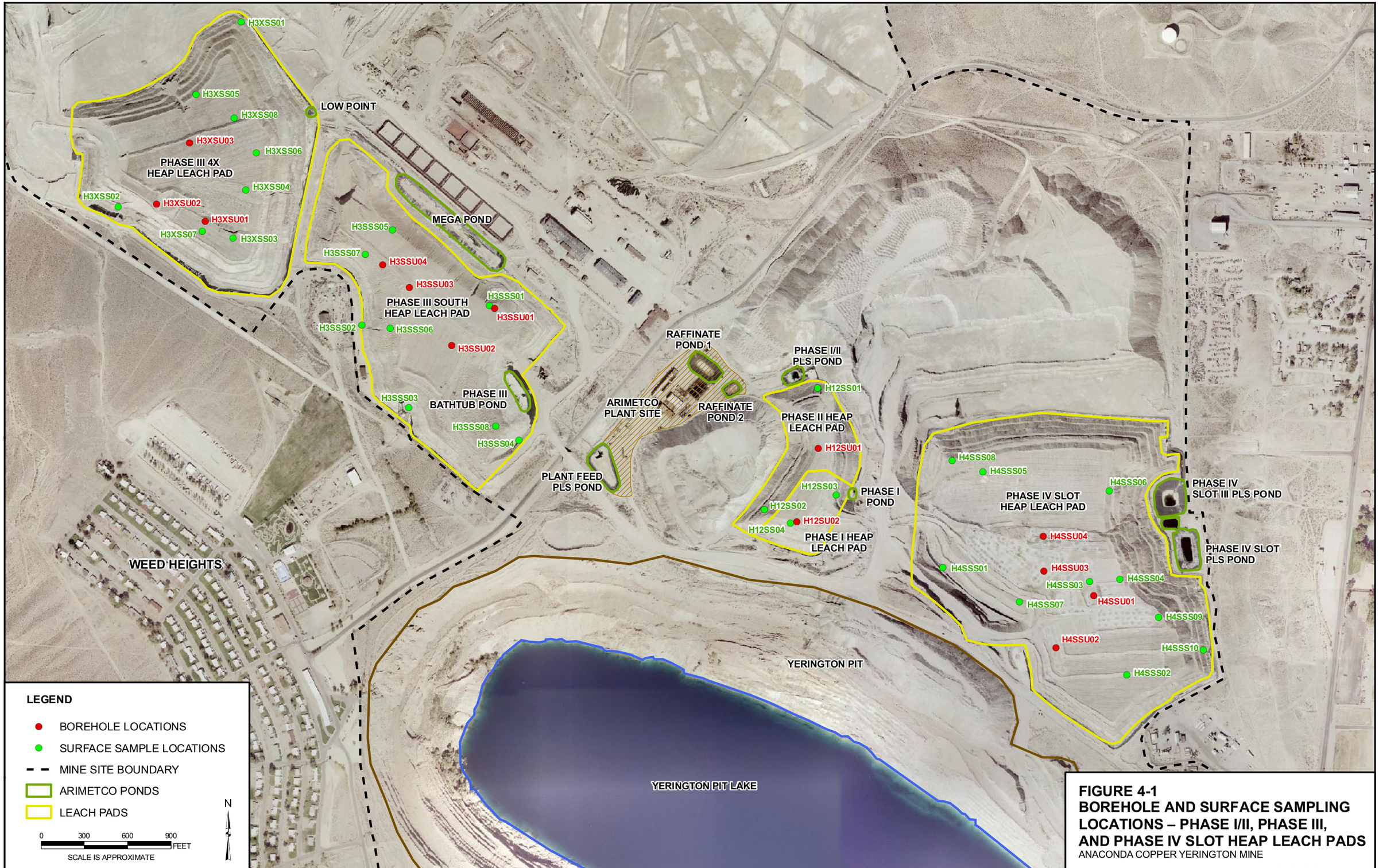

FIGURE 4-1
BOREHOLE AND SURFACE SAMPLING LOCATIONS – PHASE I/II, PHASE III, AND PHASE IV SLOT HEAP LEACH PADS
ANACONDA COPPER YERINGTON MINE

CH2MHILL

\\LOKI\PROJECTS\RDDGIS\354946_ANACONDA_COPPER\MAPFILES\RI_FS\FIG4_1_BORE_SURF.MXD 1/29/2008 12:21:29

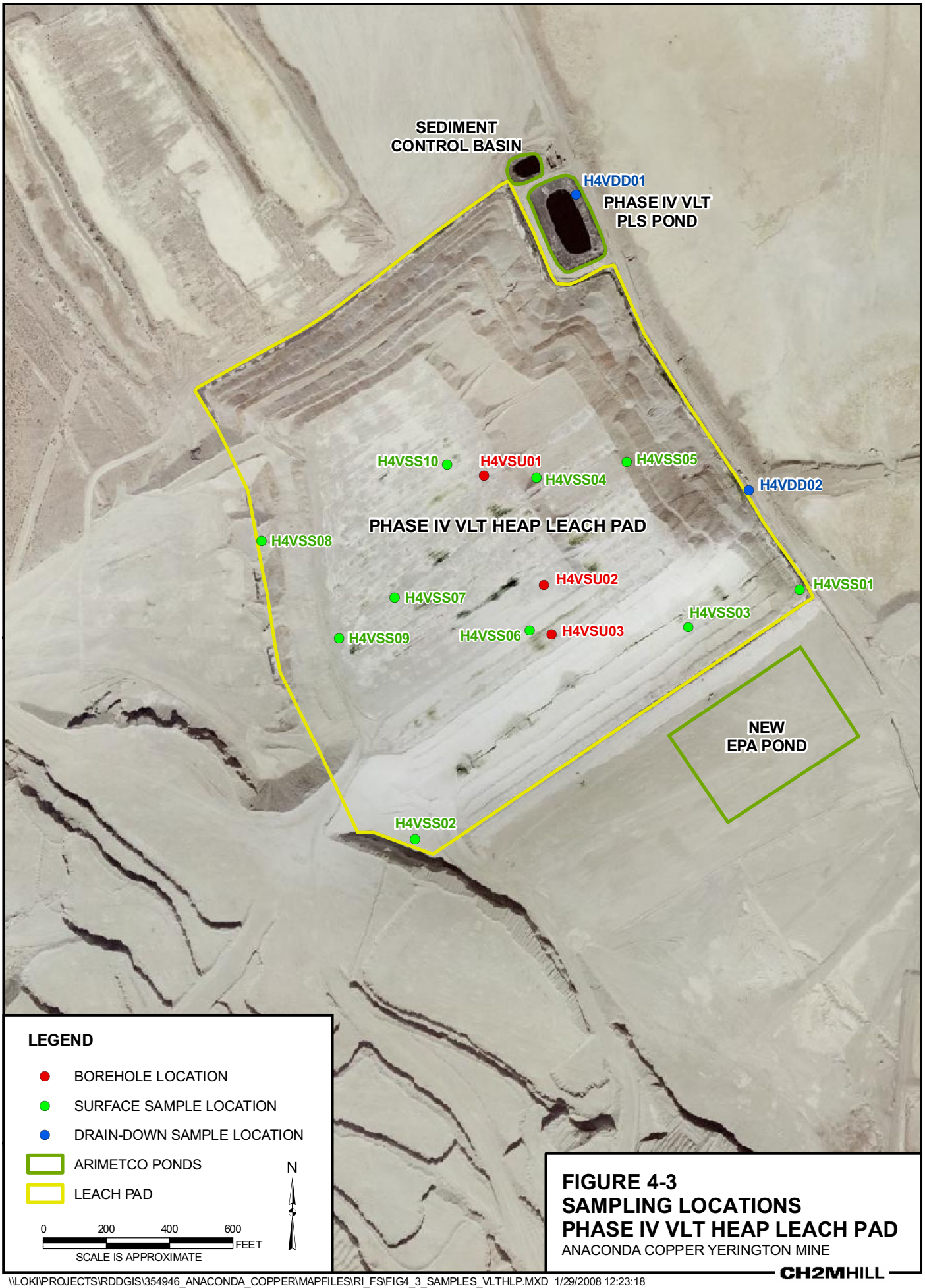

FIGURE 4-3
SAMPLING LOCATIONS
PHASE IV VLT HEAP LEACH PAD
ANACONDA COPPER YERINGTON MINE

CH2MHILL

\\LOKI\PROJECTS\RDDGIS\354946_ANACONDA_COPPER\MAPFILES\RI_FS\FIG4_3_SAMPLES_VLTHLP.MXD 1/29/2008 12:23:18

TABLE C-1
Summary of Samples Collected, Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

Location	Sample ID	Date	Time	Type	Depth [1]
PHASE I/II HEAP LEACH PAD					
H12SS01	H12SS01-1	10/23/2007	9:30:00 AM	N	0.25-0.75
H12SS01	H12SS01-10	10/23/2007	9:30:00 AM	N	0.25-0.75
H12SS01	H12SS01-2	10/23/2007	9:30:00 AM	N	0.25-0.75
H12SS01	H12SS01-7	10/23/2007	9:30:00 AM	N	0.25-0.75
H12SS01	H12SS01-11	10/23/2007	9:30:00 AM	FD1	0.25-0.75
H12SS01	H12SS01-2B	10/23/2007	9:30:00 AM	FD	0.25-0.75
H12SS02	H12SS02-1	10/23/2007	10:10:00 AM	N	0.25-0.75
H12SS02	H12SS02-10	10/23/2007	10:10:00 AM	N	0.25-0.75
H12SS02	H12SS02-2	10/23/2007	10:10:00 AM	N	0.25-0.75
H12SS02	H12SS02-4	10/23/2007	10:10:00 AM	N	0.25-0.75
H12SS02	H12SS02-11	10/23/2007	10:10:00 AM	FD1	0.25-0.75
H12SS03	H12SS03-1	10/23/2007	1:40:00 PM	N	0.25-0.75
H12SS03	H12SS03-10	10/23/2007	1:40:00 PM	N	0.25-0.75
H12SS03	H12SS03-2	10/23/2007	1:40:00 PM	N	0.25-0.75
H12SS03	H12SS03-11	10/23/2007	1:40:00 PM	FD1	0.25-0.75
H12SS04	H12SS04-2	10/23/2007	3:00:00 PM	N	0.25-0.75
H12SS04	H12SS04-7	10/23/2007	3:00:00 PM	N	0.25-0.75
H12SU01	H12SU01-1-2	10/11/2007	10:30:00 AM	N	0-50
H12SU01	H12SU01-1-3	10/11/2007	10:30:00 AM	N	0-50
H12SU01	H12SU01-1-4	10/11/2007	10:30:00 AM	N	0-50
H12SU01	H12SU01-1-8	10/11/2007	10:30:00 AM	N	0-50
H12SU01	H12SU01-1-9	10/11/2007	10:30:00 AM	N	0-50
H12SU01	H12SU01-2-3	10/11/2007	12:30:00 PM	N	50-77
H12SU01	H12SU01-2-8	10/11/2007	12:30:00 PM	N	50-77
H12SU01	H12SU01-2-3D	10/11/2007	12:30:00 PM	MS	50-77
H12SU01	H12SU01-1-2B	10/11/2007	10:30:00 AM	FD	0-50
H12SU01	H12SU01-1-3B	10/11/2007	10:30:00 AM	FD	0-50
H12SU01	H12SU01-1-4B	10/11/2007	10:30:00 AM	FD	0-50
H12SU01	H12SU01-2-3B	10/11/2007	12:30:00 PM	FD	50-77
H12SU02	H12SU02-1-2	10/10/2007	11:45:00 AM	N	0-50
H12SU02	H12SU02-1-3	10/10/2007	11:45:00 AM	N	0-50
H12SU02	H12SU02-1-8	10/10/2007	11:45:00 AM	N	0-50
H12SU02	H12SU02-2-3	10/10/2007	11:45:00 AM	N	50-77
H12SU02	H12SU02-2-4	10/11/2007	4:45:00 PM	N	50-77
H12SU02	H12SU02-2-8	10/10/2007	4:45:00 PM	N	50-77
H12SU02	H12SU02-2-9	10/10/2007	4:45:00 PM	N	50-77
H12SU02	H12SU02-1-3D	10/10/2007	11:45:00 AM	MS	0-50
H12SU02	H12SU02-1-3B	10/10/2007	11:45:00 AM	FD	0-50
H12SU02	H12SU02-2-2B	10/10/2007	11:45:00 AM	FD	50-77
H12SU02	H12SU02-2-3B	10/10/2007	4:45:00 PM	FD	50-77
H12SU02	H12SU02-2-4B	10/10/2007	4:45:00 PM	FD	50-77
PHASE III 4X HEAP LEACH PAD					
H3XSS01	H3XSS01-2	10/25/2007	12:00:00 PM	N	0.25-0.75
H3XSS02	H3XSS02-2	10/25/2007	5:00:00 PM	N	0.25-0.75
H3XSS03	H3XSS03-2	10/25/2007	2:40:00 PM	N	0.25-0.75
H3XSS04	H3XSS04-2	10/25/2007	3:45:00 PM	N	0.25-0.75
H3XSS05	H3XSS05-2	10/25/2007	4:15:00 PM	N	0.25-0.75
H3XSS05	H3XSS05-4	10/25/2007	4:15:00 PM	N	0.25-0.75
H3XSS05	H3XSS05-7	10/25/2007	4:15:00 PM	N	0.25-0.75

TABLE C-1
Summary of Samples Collected, Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

Location	Sample ID	Date	Time	Type	Depth [1]
PHASE III 4X HEAP LEACH PAD					
H3XSS06	H3XSS06-1	10/25/2007	3:55:00 PM	N	0.25-0.75
H3XSS06	H3XSS06-10	10/25/2007	3:55:00 PM	N	0.25-0.75
H3XSS06	H3XSS06-2	10/25/2007	3:55:00 PM	N	0.25-0.75
H3XSS06	H3XSS06-11	10/25/2007	3:55:00 PM	FD1	0.25-0.75
H3XSS07	H3XSS07-2	10/25/2007	3:10:00 PM	N	0.25-0.75
H3XSS07	H3XSS07-4	10/25/2007	3:10:00 PM	N	0.25-0.75
H3XSS07	H3XSS07-7	10/25/2007	3:10:00 PM	N	0.25-0.75
H3XSS07	H3XSS07-3B	10/25/2007	3:10:00 PM	FD	0.25-0.75
H3XSS08	H3XSS08-10	10/25/2007	4:45:00 PM	N	0.25-0.75
H3XSS08	H3XSS08-11	10/25/2007	4:45:00 PM	N	0.25-0.75
H3XSS08	H3XSS08-2	10/25/2007	4:45:00 PM	N	0.25-0.75
H3XSS08	H3XSS08-2B	10/25/2007	4:45:00 PM	FD	0.25-0.75
H3XSU01	H3XSU01-1-2	10/16/2007	12:45:00 PM	N	0-50
H3XSU01	H3XSU01-1-3	10/16/2007	12:45:00 PM	N	0-50
H3XSU01	H3XSU01-1-4	10/16/2007	12:45:00 PM	N	0-50
H3XSU01	H3XSU01-1-8	10/16/2007	12:45:00 PM	N	0-50
H3XSU01	H3XSU01-2-3	10/16/2007	3:00:00 PM	N	50-67
H3XSU01	H3XSU01-2-8	10/16/2007	3:00:00 PM	N	50-67
H3XSU01	H3XSU01-2-9	10/16/2007	3:00:00 PM	N	50-67
H3XSU02	H3XSU02-1-9	10/16/2007	3:00:00 PM	N	0-50
H3XSU02	H3XSU02-2-2	10/17/2007	12:00:00 PM	N	50-67
H3XSU02	H3XSU02-2-3	10/17/2007	12:00:00 PM	N	50-67
H3XSU02	H3XSU02-2-4	10/17/2007	12:00:00 PM	N	50-67
H3XSU02	H3XSU02-2-8	10/17/2007	12:00:00 PM	N	50-67
H3XSU02	H3XSU02-2-2B	10/17/2007	12:00:00 PM	FD	50-67
H3XSU02	H3XSU02-2-3B	10/17/2007	12:00:00 PM	FD	50-67
H3XSU02	H3XSU02-2-4B	10/17/2007	12:00:00 PM	FD	50-67
H3XSU03	H3XSU03-1-8	10/17/2007	1:15:00 PM	N	0-50
H3XSU03	H3XSU03-2-2	10/17/2007	10:30:00 AM	N	50-67
H3XSU03	H3XSU03-2-4	10/17/2007	2:45:00 PM	N	50-67
H3XSU03	H3XSU03-2-9	10/17/2007	2:45:00 PM	N	50-67
PHASE III SOUTH HEAP LEACH PAD					
H3SSS01	H3SSS01-2	10/24/2007	3:30:00 PM	N	0.25-0.75
H3SSS02	H3SSS02-2	10/25/2007	10:25:00 AM	N	0.25-0.75
H3SSS02	H3SSS02-4	10/25/2007	10:25:00 AM	N	0.25-0.75
H3SSS03	H3SSS03-2	10/25/2007	11:00:00 AM	N	0.25-0.75
H3SSS03	H3SSS03-7	10/25/2007	11:00:00 AM	N	0.25-0.75
H3SSS04	H3SSS04-1	10/25/2007	11:30:00 AM	N	0.25-0.75
H3SSS04	H3SSS04-10	10/25/2007	11:30:00 AM	N	0.25-0.75
H3SSS04	H3SSS04-2	10/25/2007	11:30:00 AM	N	0.25-0.75
H3SSS04	H3SSS04-11	10/25/2007	11:30:00 AM	FD1	0.25-0.75
H3SSS04	H3SSS04-2B	10/25/2007	11:30:00 AM	FD	0.25-0.75
H3SSS05	H3SSS05-1	10/24/2007	4:00:00 PM	N	0.25-0.75
H3SSS05	H3SSS05-10	10/24/2007	4:00:00 PM	N	0.25-0.75
H3SSS05	H3SSS05-2	10/24/2007	4:00:00 PM	N	0.25-0.75
H3SSS05	H3SSS05-11	10/24/2007	4:00:00 PM	FD1	0.25-0.75
H3SSS06	H3SSS06-2	10/25/2007	9:40:00 AM	N	0.25-0.75
H3SSS06	H3SSS06-4	10/25/2007	9:40:00 AM	N	0.25-0.75

TABLE C-1
Summary of Samples Collected, Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

Location	Sample ID	Date	Time	Type	Depth [1]
PHASE III SOUTH HEAP LEACH PAD					
H3SSS07	H3SSS07-2	10/24/2007	4:45:00 PM	N	0.25-0.75
H3SSS07	H3SSS07-7	10/24/2007	4:45:00 PM	N	0.25-0.75
H3SSS08	H3SSS08-2	10/24/2007	5:05:00 PM	N	0.25-0.75
H3SSU01	H3SSU01-1-2	9/25/2007	11:30:00 AM	N	0-50
H3SSU01	H3SSU01-1-3	9/25/2007	12:00:00 AM	N	0-50
H3SSU01	H3SSU01-1-4	9/25/2007	11:30:00 AM	N	0-50
H3SSU01	H3SSU01-1-7	9/25/2007	11:30:00 AM	N	0-50
H3SSU01	H3SSU01-1-8	9/25/2007	11:30:00 AM	N	0-50
H3SSU01	H3SSU01-2-3	9/25/2007	12:00:00 AM	N	20-97
H3SSU01	H3SSU01-2-7	9/25/2007	2:00:00 PM	N	20-97
H3SSU01	H3SSU01-2-8	9/25/2007	2:00:00 PM	N	20-97
H3SSU01	H3SSU01-2-9	9/25/2007	11:30:00 AM	N	20-97
H3SSU01	H3SSU02-1-9	10/7/2007	12:00:00 PM	N	0-50
H3SSU02	H3SSU02-2-2	10/7/2007	3:00:00 PM	N	50-100
H3SSU02	H3SSU02-2-3	10/7/2007	3:00:00 PM	N	50-100
H3SSU02	H3SSU02-2-4	10/7/2007	3:00:00 PM	N	50-100
H3SSU02	H3SSU02-2-8	10/7/2007	3:00:00 PM	N	50-100
H3SSU02	H3SSU02-3-3	10/7/2007	5:15:00 PM	N	100-112
H3SSU02	H3SSU02-3-8	10/7/2007	5:15:00 PM	N	100-112
H3SSU03	H3SSU03-1-8	10/6/2007	1:00:00 PM	N	0-50
H3SSU03	H3SSU03-2-9	10/6/2007	3:30:00 PM	N	50-100
H3SSU03	H3SSU03-3-2	10/6/2007	5:30:00 PM	N	100-117
H3SSU03	H3SSU03-3-3	10/6/2007	5:30:00 PM	N	100-117
H3SSU03	H3SSU03-3-8	10/6/2007	5:30:00 PM	N	100-117
H3SSU04	H3SSU04-1-9	9/26/2007	12:00:00 PM	N	0-50
H3SSU04	H3SSU04-2-2	9/26/2007	12:00:00 PM	N	50-100
H3SSU04	H3SSU04-2-3	9/26/2007	12:00:00 AM	N	50-100
H3SSU04	H3SSU04-2-7	9/26/2007	12:00:00 PM	N	50-100
H3SSU04	H3SSU04-2-8	9/26/2007	12:00:00 PM	N	50-100
H3SSU04	H3SSU04-3-7	9/26/2007	2:00:00 PM	N	100-116.5
H3SSU04	H3SSU04-3-8	9/26/2007	2:00:00 PM	N	100-116.5
PHASE IV SLOT HEAP LEACH PAD					
H4SSS01	H4SSS01-2	10/24/2007	9:00:00 AM	N	0.25-0.75
H4SSS01	H4SSS01-4	10/24/2007	9:00:00 AM	N	0.25-0.75
H4SSS02	H4SSS02-2	10/23/2007	4:00:00 PM	N	0.25-0.75
H4SSS03	H4SSS03-10	10/23/2007	4:15:00 PM	N	0.25-0.75
H4SSS03	H4SSS03-11	10/23/2007	4:15:00 PM	N	0.25-0.75
H4SSS03	H4SSS03-2	10/23/2007	4:15:00 PM	N	0.25-0.75
H4SSS03	H4SSS03-4	10/23/2007	4:15:00 PM	N	0.25-0.75
H4SSS04	H4SSS04-2	10/23/2007	4:30:00 PM	N	0.25-0.75
H4SSS05	H4SSS05-10	10/23/2007	4:50:00 PM	N	0.25-0.75
H4SSS05	H4SSS05-11	10/23/2007	4:50:00 PM	N	0.25-0.75
H4SSS05	H4SSS05-2	10/23/2007	4:50:00 PM	N	0.25-0.75
H4SSS06	H4SSS06-2	10/24/2007	9:55:00 AM	N	0.25-0.75
H4SSS06	H4SSS06-4	10/24/2007	9:55:00 AM	N	0.25-0.75
H4SSS06	H4SSS06-7	10/24/2007	9:55:00 AM	N	0.25-0.75
H4SSS06	H4SSS06-2B	10/24/2007	9:55:00 AM	FD	0.25-0.75
H4SSS07	H4SSS07-2	10/24/2007	11:00:00 AM	N	0.25-0.75
H4SSS07	H4SSS07-7	10/24/2007	11:00:00 AM	N	0.25-0.75

TABLE C-1
Summary of Samples Collected, Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

Location	Sample ID	Date	Time	Type	Depth [1]
PHASE IV SLOT HEAP LEACH PAD					
H4SSS08	H4SSS08-2	10/24/2007	9:20:00 AM	N	0.25-0.75
H4SSS09	H4SSS09-2	10/24/2007	11:40:00 AM	N	0.25-0.75
H4SSS10	H4SSS10-2	10/24/2007	12:15:00 PM	N	0.25-0.75
H4SSU01	H4SSU01-1-2	10/8/2007	11:00:00 AM	N	0-50
H4SSU01	H4SSU01-1-3	10/8/2007	11:00:00 AM	N	0-50
H4SSU01	H4SSU01-1-4	10/8/2007	11:00:00 AM	N	0-50
H4SSU01	H4SSU01-1-8	10/8/2007	11:00:00 AM	N	0-50
H4SSU01	H4SSU01-1-9	10/8/2007	11:00:00 AM	N	0-50
H4SSU01	H4SSU01-2-2	10/8/2007	5:45:00 PM	N	50-97
H4SSU01	H4SSU01-2-3	10/8/2007	5:45:00 PM	N	50-97
H4SSU01	H4SSU01-2-8	10/8/2007	5:45:00 PM	N	50-97
H4SSU02	H4SSU02-1-2	10/9/2007	12:00:00 PM	N	0-50
H4SSU02	H4SSU02-1-4	10/9/2007	12:00:00 PM	N	0-50
H4SSU02	H4SSU02-1-9	10/9/2007	12:00:00 PM	N	0-50
H4SSU02	H4SSU02-2-3	10/9/2007	12:00:00 PM	N	0-50
H4SSU03	H4SSU03-2-2	10/9/2007	10:30:00 AM	N	50-77
H4SSU03	H4SSU03-2-3	10/9/2007	10:30:00 AM	N	50-77
H4SSU03	H4SSU03-2-4	10/9/2007	10:30:00 AM	N	50-77
H4SSU03	H4SSU03-2-8	10/9/2007	10:30:00 AM	N	50-77
H4SSU03	H4SSU03-2-9	10/9/2007	10:30:00 AM	N	50-77
H4SSU03	H4SSU03-2-2B	10/9/2007	10:30:00 AM	FD	50-77
H4SSU04	H4SSU04-1-2	10/9/2007	6:00:00 PM	N	0-50
H4SSU04	H4SSU04-1-9	10/9/2007	6:00:00 PM	N	0-50
PHASE IV VLT HEAP LEACH PAD					
H4VSS01	H4VSS01-2	10/26/2007	9:15:00 AM	N	0.25-0.75
H4VSS01	H4VSS01-2B	10/26/2007	9:15:00 AM	FD	0.25-0.75
H4VSS02	H4VSS02-11	10/26/2007	10:15:00 AM	N	0.25-0.75
H4VSS02	H4VSS02-2	10/26/2007	10:15:00 AM	N	0.25-0.75
H4VSS03	H4VSS03-2	10/26/2007	9:45:00 AM	N	0.25-0.75
H4VSS03	H4VSS03-7	10/26/2007	9:45:00 AM	N	0.25-0.75
H4VSS04	H4VSS04-1	10/26/2007	11:30:00 AM	N	0.25-0.75
H4VSS04	H4VSS04-10	10/26/2007	11:30:00 AM	N	0.25-0.75
H4VSS04	H4VSS04-2	10/26/2007	11:30:00 AM	N	0.25-0.75
H4VSS04	H4VSS04-11	10/26/2007	11:30:00 AM	FD1	0.25-0.75
H4VSS04	H4VSS04-3B	10/26/2007	11:30:00 AM	FD	0.25-0.75
H4VSS05	H4VSS05-2	10/26/2007	12:05:00 PM	N	0.25-0.75
H4VSS06	H4VSS06-2	10/26/2007	12:30:00 PM	N	0.25-0.75
H4VSS06	H4VSS06-7	10/26/2007	12:30:00 PM	N	0.25-0.75
H4VSS07	H4VSS07-2	10/26/2007	2:05:00 PM	N	0.25-0.75
H4VSS08	H4VSS08-2	10/26/2007	10:30:00 AM	N	0.25-0.75
H4VSS08	H4VSS08-4	10/26/2007	10:30:00 AM	N	0.25-0.75
H4VSS09	H4VSS09-2	10/26/2007	1:15:00 PM	N	0.25-0.75
H4VSS09	H4VSS09-4	10/26/2007	1:15:00 PM	N	0.25-0.75
H4VSS10	H4VSS10-2	10/26/2007	1:40:00 PM	N	0.25-0.75
H4VSS10	H4VSS10-4	10/26/2007	1:40:00 PM	N	0.25-0.75

TABLE C-1
Summary of Samples Collected, Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

Location	Sample ID	Date	Time	Type	Depth [1]
PHASE IV VLT HEAP LEACH PAD					
H4VSU01	H4VSU01-1-2	9/27/2007	10:30:00 AM	N	0-50
H4VSU01	H4VSU01-1-3	9/27/2007	12:00:00 AM	N	0-50
H4VSU01	H4VSU01-1-4	9/27/2007	10:30:00 AM	N	0-50
H4VSU01	H4VSU01-1-7	9/27/2007	10:30:00 AM	N	0-50
H4VSU01	H4VSU01-1-8	9/27/2007	10:30:00 AM	N	0-50
H4VSU01	H4VSU01-1-9	9/27/2007	10:30:00 AM	N	0-50
H4VSU01	H4VSU01-2-2	9/27/2007	12:30:00 PM	N	50-107
H4VSU01	H4VSU01-2-3	9/27/2007	12:00:00 AM	N	50-107
H4VSU01	H4VSU01-2-7	9/27/2007	12:30:00 PM	N	50-107
H4VSU01	H4VSU01-2-8	9/27/2007	12:30:00 PM	N	50-107
H4VSU02	H4VSU02-1-2	10/2/2007	11:30:00 AM	N	0-50
H4VSU02	H4VSU02-1-3	10/2/2007	11:30:00 AM	N	0-50
H4VSU02	H4VSU02-1-8	10/2/2007	11:30:00 AM	N	0-50
H4VSU02	H4VSU02-2-2	10/5/2007	11:59:00 AM	N	50-107
H4VSU02	H4VSU02-2-3	10/5/2007	11:59:00 AM	N	50-107
H4VSU02	H4VSU02-2-4	10/5/2007	11:59:00 AM	N	50-107
H4VSU02	H4VSU02-2-8	10/5/2007	11:59:00 AM	N	50-107
H4VSU02	H4VSU02-2-9	10/5/2007	11:59:00 AM	N	50-107
H4VSU03	H4VSU03-1-2	10/6/2007	11:45:00 AM	N	0-50
H4VSU03	H4VSU03-1-3	10/6/2007	11:45:00 AM	N	0-50
H4VSU03	H4VSU03-1-8	10/6/2007	11:45:00 AM	N	0-50
H4VSU03	H4VSU03-1-9	10/6/2007	11:45:00 AM	N	0-50
H4VSU03	H4VSU03-2-2	10/6/2007	2:15:00 PM	N	50-87
H4VSU03	H4VSU03-2-3	10/6/2007	2:15:00 PM	N	50-87
H4VSU03	H4VSU03-2-8	10/6/2007	2:15:00 PM	N	50-87
H4VSU03	H4VSU03-1-2B	10/6/2007	11:45:00 AM	FD	0-50
H4VSU03	H4VSU03-1-3B	10/6/2007	11:45:00 AM	FD	0-50
VLT SOIL					
CAPSS01	CAPSS01-1	10/29/2007	10:30:00 AM	N	0.25-0.75
CAPSS01	CAPSS01-10	10/29/2007	10:30:00 AM	N	0.25-0.75
CAPSS01	CAPSS01-2	10/29/2007	10:30:00 AM	N	0.25-0.75
CAPSS01	CAPSS01-11	10/29/2007	10:30:00 AM	FD1	0.25-0.75
CAPSS02	CAPSS02-1	10/26/2007	3:00:00 PM	N	0.25-0.75
CAPSS02	CAPSS02-2	10/26/2007	3:00:00 PM	N	0.25-0.75
CAPSS02	CAPSS02-3	10/26/2007	3:00:00 PM	N	0.25-0.75
CAPSS02	CAPSS02-7	10/26/2007	3:00:00 PM	N	0.25-0.75
CAPSS03	CAPSS03-1	10/29/2007	12:00:00 PM	N	0.25-0.75
CAPSS03	CAPSS03-10	10/29/2007	12:00:00 PM	N	0.25-0.75
CAPSS03	CAPSS03-2	10/29/2007	12:00:00 PM	N	0.25-0.75
CAPSS03	CAPSS03-11	10/29/2007	12:00:00 PM	FD1	0.25-0.75
CAPSS04	CAPSS04-10	10/29/2007	11:35:00 AM	N	0.25-0.75
CAPSS04	CAPSS04-2	10/29/2007	11:35:00 AM	N	0.25-0.75

Notes:

[1] - depth in feet below ground surface
N - Normal sample
FD - Field Duplicate
MS - Sample collected only for matrix spike
FD1 - Sample was not originally designated as a field duplicate, but laboratory analyzed more analytes than were requested on chain of custody.

TABLE C-2

Net Acid Generation and Acid-Base Accounting Results, Surface and Subsurface Soils

Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

Parameter:			Acid Generation Potential (calc on Sulfur total)	Acid Neutralization Potential (calc)	Acid-Base Potential (calc on Sulfur total)	Net Acid Generation Procedure	Neutralization Potential as CaCO3	Sulfur Organic Residual	Sulfur Pyritic Sulfide	Sulfur Sulfate	Sulfur Total	Total Sulfur minus Sulfate
Units:			t CaCO3/Kt	t CaCO3/Kt	t CaCO3/Kt	Kg H2SO4/t	%	%	%	%	%	%
Location	Sample Date	Depth [1]	Analytical Results									
PHASE I/II HEAP LEACH PAD: Soil Boring Composite												
H12SU01	10/11/2007	0-50	12	0	-12	---	0.1 U	0.02	0.01	0.36	0.39	0.03
H12SU01	10/11/2007	50-77	19	0	-19	---	0.1 U	0.04	0.01	0.57	0.62	0.05
H12SU02	10/10/2007	0-50	16	0	-16	---	0.1 U	0.02	0.01 U	0.49	0.5	0.01
H12SU02	10/10/2007	50-77	16	4	-12	---	0.4	0.02	0.01	0.48	0.51	0.03
PHASE III 4X HEAP LEACH PAD: Soil Boring Composite												
H3XSU01	10/16/2007	0-50	19	7	-12	---	0.7	0.03	0.01	0.57	0.61	0.04
H3XSU01	10/16/2007	50-67	24	0	-24	---	0.1 U	0.02	0.01 U	0.74	0.76	0.02
H3XSU02	10/17/2007	50-67	18	12	-6	---	1.2	0.03	0.01 U	0.53	0.56	0.03
H3XSU03	10/17/2007	0-50	19	6	-13	---	0.6	0.01 U	0.01	0.6	0.61	0.01
PHASE III SOUTH HEAP LEACH PAD: Soil Boring Composite												
H3SSU01	9/25/2007	0-50	23	0	-23	4	0.1 U	0.02	0.01 U	0.7	0.72	0.02
H3SSU01	9/25/2007	20-97	23	0	-23	5	0.1 U	0.03	0.01	0.69	0.73	0.04
H3SSU02	10/7/2007	100-112	23	0	-23	---	0.1 U	0.02	0.01	0.72	0.75	0.03
H3SSU02	10/7/2007	50-100	21	0	-21	---	0.1 U	0.02	0.01 U	0.64	0.66	0.02
H3SSU03	10/6/2007	0-50	28	0	-28	---	0.1 U	0.04	0.01	0.84	0.89	0.05
H3SSU03	10/6/2007	100-117	20	0	-20	---	0.1 U	0.05	0.02	0.56	0.63	0.07
H3SSU04	9/26/2007	100-116.5	22	0	-22	5	0.1 U	0.05	0.01	0.63	0.69	0.06
H3SSU04	9/26/2007	50-100	18	0	-18	5	0.1 U	0.05	0.01 U	0.53	0.58	0.05
PHASE IV SLOT HEAP LEACH PAD: Soil Boring Composite												
H4SSU01	10/8/2007	0-50	23	0	-23	---	0.1 U	0.01	0.01	0.72	0.74	0.02
H4SSU01	10/8/2007	50-97	37	3	-34	---	0.3	0.01	0.01	1.17	1.19	0.02
H4SSU03	10/9/2007	50-77	20	0	-20	---	0.1 U	0.02	0.01 U	0.63	0.65	0.02
PHASE IV VLT HEAP LEACH PAD: Soil Boring Composite												
H4VSU01	9/27/2007	0-50	23	0	-23	6	0.1 U	0.03	0.01	0.71	0.75	0.04
H4VSU01	9/27/2007	50-107	33	0	-33	4	0.1 U	0.03	0.01 U	1.02	1.05	0.03
H4VSU02	10/2/2007	0-50	18	3	-15	---	0.3	0.03	0.01	0.55	0.59	0.04
H4VSU02	10/5/2007	50-107	27	26	-1	---	2.6	0.01	0.01	0.85	0.87	0.02
H4VSU03	10/6/2007	0-50	24	3	-21	---	0.3	0.05	0.02	0.7	0.77	0.07
H4VSU03	10/6/2007	50-87	25	17	-8	---	1.7	0.01 U	0.02	0.78	0.8	0.02

Notes:

[1] - depth in feet below ground surface

t CaCO3/Kt - Calcium carbonate / kilogram / ton

% - percent

U - Not detected at reporting limit

calc - calculation

TABLE C-3
Meteoric Water Mobilty Procedure Results, Surface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

Parameter:			pH	Total Alkalinity	Bicarbonate as CaCO3	Carbonate as CaCO3	Chloride	Hydroxide as CaCO3	Nitrate + Nitrite as N	Nitrate as N	Nitrite as N	Phosphorus, ortho dissolved	Sulfate	Total Dissolved Solids	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron
Primary MCL:			--	--	--	--	--	--	--	--	--	--	--	--	--	**0.006**	**0.01**	**2**	**0.004**	--
Secondary MCL:			--	--	--	--	**250**	--	--	--	--	--	**250**	**500**	**0.05 - 0.2**	--	--	--	--	--
Units:			**pH units**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Location	**Sample Date**	**Depth [1]**	**Analytical Results**																	
PHASE I/II HEAP LEACH PAD: Surface Discrete																				
H12SS01	10/23/2007	0.25-0.75	3.7	2 U	2 U	2 U	4	2 U	0.73	0.73	0.01 U	0.56	**3,650**	**5,260**	**164**	0.0004 U	0.0035	0.022	**0.014**	0.16
H12SS04	10/23/2007	0.25-0.75	3.6	2 U	2 U	2 U	5	2 U	0.71	0.71	0.01 U	0.38	**6,010**	**8,220**	**441**	0.0004 U	0.0067	0.006 U	**0.031**	0.15
PHASE III 4X HEAP LEACH PAD: Surface Discrete																				
H3XSS05	10/25/2007	0.25-0.75	4	2 U	2 U	2 U	2	2 U	0.14	0.13	0.01	0.31	**1,340**	**1,980**	**67.9**	0.0011	0.0009	0.003 U	**0.007**	0.12
H3XSS07	10/25/2007	0.25-0.75	4.1	2 U	2 U	2 U	2	2 U	0.06	0.06	0.01 U	0.07	**660**	**900**	**46.9**	0.0004 U	0.0005 U	0.003 U	0.004	0.11
PHASE III SOUTH HEAP LEACH PAD: Surface Discrete																				
H3SSS03	10/25/2007	0.25-0.75	**7.1**	75	75	2 U	1	2 U	1.97	1.91	0.06	0.4	130	310	**0.09**	0.0018	**0.0217**	0.029	0.004 U	0.54
H3SSS07	10/24/2007	0.25-0.75	3.6	2 U	2 U	2 U	5	2 U	0.78	0.78	0.01 U	6	**7,330**	**10,400**	**532**	0.0004 U	0.0075	0.003 U	**0.029**	0.16
PHASE IV SLOT HEAP LEACH PAD: Surface Discrete																				
H4SSS06	10/24/2007	0.25-0.75	4	2 U	2 U	2 U	3	2 U	0.68	0.68	0.01 U	0.66	**2,540**	**3,740**	**46.4**	0.001	0.0023	0.003 U	0.004	0.16
H4SSS07	10/24/2007	0.25-0.75	4.4	2 U	2 U	2 U	1	2 U	0.09	0.09	0.01 U	0.04	**380**	**640**	**14.5**	0.0004 U	0.0005 U	0.003 U	0.002	0.13
PHASE IV VLT HEAP LEACH PAD: Surface Discrete																				
H4VSS03	10/26/2007	0.25-0.75	3.4	2 U	2 U	2 U	11	2 U	1.52	1.52	0.01 U	6.8	**19,200**	**26,100**	**2,170**	0.0012	**0.0278**	0.003 U	**0.121**	0.2
H4VSS06	10/26/2007	0.25-0.75	3.7	2 U	2 U	2 U	5	2 U	0.47	0.46	0.01	1.1	**1,330**	**8,300**	**488**	0.0004	0.007	0.003 U	**0.035**	0.11
VLT SOIL: Surface Discrete																				
CAPSS02	10/26/2007	0.25-0.75	5.1	2 U	2 U	2 U	7	2 U	1.49	1.49	0.01 U	0.16	**2,050**	**2,970**	**11.2**	0.002 U	**0.026**	0.029	0.002 U	0.17

Notes:

Bolded values exceed Primary or Secondary Federal MCL or NDEP Profile II Standards
[1] - depth in feet below ground surface
mg/L - milligrams per Liter
J - Estimated result
U - Not detected at reporting limit
CaCO3 - Calcium carbonate
N - Nitrogen
MCL - Federal Maximum Contaminant Level
-- - no MCL available

TABLE C-3
Meteoric Water Mobilty Procedure Results, Surface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

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		Parameter:	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
		Primary MCL:	0.005	--	0.1	--	1.3	--	0.015	--	--	0.002	--	--	0.05	--	--	0.002	--	--
		Secondary MCL:	--	--	--	--	1	0.3	--	--	0.05	--	--	--	--	--	--	--	--	5
		Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Location	**Sample Date**	**Depth [1]**	**Analytical Results**																	
PHASE I/II HEAP LEACH PAD: Surface Discrete																				
H12SS01	10/23/2007	0.25-0.75	**0.0052**	478	0.02 U	0.53	**169**	**2.43**	0.0004	**319**	**5.89**	0.0017	**0.37**	5.4	0.0106	0.02 U	30.3	0.0003	0.01 U	0.71
H12SS04	10/23/2007	0.25-0.75	**0.0099**	409	0.05	1.82	**102**	**11.4**	0.0004	**651**	**18.4**	**0.0104**	**1.03**	0.6 U	0.0167	0.02 U	18.6	0.0002	0.01	1.58
PHASE III 4X HEAP LEACH PAD: Surface Discrete																				
H3XSS05	10/25/2007	0.25-0.75	0.0018	254	0.01 U	0.26	**14.5**	**0.96**	0.0008	105	**2.74**	0.0008	**0.16**	0.3 U	0.0042	0.01 U	9.2	0.0001 U	0.005 U	0.28
H3XSS07	10/25/2007	0.25-0.75	0.0011	61.4	0.01 U	0.18	**3.45**	**0.98**	0.0002	64.9	**1.79**	0.0002 U	**0.11**	0.3 U	0.0025	0.01 U	5.4	0.0001 U	0.005 U	0.22
PHASE III SOUTH HEAP LEACH PAD: Surface Discrete																				
H3SSS03	10/25/2007	0.25-0.75	0.0001 U	57.8	0.02 U	0.02 U	0.07	0.04 U	0.0001 U	5.9	0.01 U	0.0002 U	0.02 U	2.8	0.0001 U	0.02 U	29.7	0.0001 U	0.01	0.02
H3SSS07	10/24/2007	0.25-0.75	**0.0116**	299	0.04	1.17	**283**	**17.3**	0.0004	**812**	**14.6**	**0.039**	**0.88**	0.3 U	0.0256	0.01 U	39.4	0.0002	0.005 U	2.03
PHASE IV SLOT HEAP LEACH PAD: Surface Discrete																				
H4SSS06	10/24/2007	0.25-0.75	**0.0056**	62	0.01 U	0.18	**3.47**	**0.99**	0.0002	65.7	**1.81**	**0.0067**	**0.12**	0.3 U	0.0073	0.01 U	5.5	0.0001 U	0.005 U	0.22
H4SSS07	10/24/2007	0.25-0.75	0.0008	75.4	0.01 U	0.1	**18.5**	**0.35**	0.0002	39.3	**1.09**	0.0002 U	0.06	0.6	0.0013	0.01 U	4.2	0.0001 U	0.005 U	0.12
PHASE IV VLT HEAP LEACH PAD: Surface Discrete																				
H4VSS03	10/26/2007	0.25-0.75	**0.0427**	425	**0.16**	5.47	**290**	**36.1**	0.0005	**2,110**	**59.1**	**0.028**	**3.31**	0.3 U	**0.101**	0.2 U	146	0.0006	0.072	5
H4VSS06	10/26/2007	0.25-0.75	**0.0109**	420	0.02	1.77	**60.2**	**7.47**	0.0004	**651**	**17**	0.0015	**1.09**	0.3 U	0.0268	0.05 U	23.1	0.0001	0.01	1.63
VLT SOIL: Surface Discrete																				
CAPSS02	10/26/2007	0.25-0.75	0.0045	458	0.01 U	0.13	**200**	0.03	0.0092	80.2	**1.08**	**0.022**	**0.13**	17.5	**1.11**	0.01 U	18	**0.111**	0.005 U	0.23

Notes:

Bolded values exceed Primary or Secondary Federal MCL or NDEP Profile II Standards
[1] - depth in feet below ground surface
mg/L - milligrams per Liter
J - Estimated result
U - Not detected at reporting limit
CaCO3 - Calcium carbonate
N - Nitrogen
MCL - Federal Maximum Contaminant Level
-- - no MCL available

TABLE C-4
Inorganic Parameter Results, Surface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

Location	Sample Date	Depth [1]	pH	Alkalinity, Bicarbonate (as CACO3)	Alkalinity, Carbonate (as CACO3)	Alkalinity, Hydroxide (as CACO3)	Alkalinity, Total (as CACO3)	Chloride	Moisture	Nitrogen, Kjeldahl Total	Phosphorus, Total (as P)	Sodium Absorption Ratio	Total Nitrogen	Total Oxidizable Nitrogen	Boron	Calcium	Magnesium	Potassium	Sodium
Industrial PRG:			--	--	--	--	--	--	--	--	--	--	--	--	200,000	--	--	--	--
Residential PRG:			--	--	--	--	--	--	--	--	--	--	--	--	16,000	--	--	--	--
Units:			pH units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	%	mg/Kg	mg/Kg	NA	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
			Analytical Results																
PHASE I/II HEAP LEACH PAD: Surface Discrete																			
H12SS01	10/23/2007	0.25-0.75	3.58	0.88 U	0.88 U	0.88 U	0.88 U	43	3.6	250	849	0.041	250	3.6	18.2	3,460	5,630	592	173
H12SS01 (FD1)	10/23/2007	0.25-0.75	3.64	0.88 U	0.88 U	0.88 U	0.88 U	38 J	3.7	180	730	0.046	180	2.3	18	3,970	5,500	648	202
H12SS02	10/23/2007	0.25-0.75	3.46	0.89 U	0.89 U	0.89 U	0.89 U	57	4.9	92	529	0.075	94	1.9	15.5	5,850	6,310	457	348
H12SS02 (FD1)	10/23/2007	0.25-0.75	3.84	0.89 U	0.89 U	0.89 U	0.89 U	80 J	4.3	220	534	0.083	220	1.6	15.9	5,870	6,200	517	387
H12SS03	10/23/2007	0.25-0.75	3.41	0.88 U	0.88 U	0.88 U	0.88 U	13 J	2.9	110	519	0.032	110	0.74 J	10.1	8,920	4,400	908	146
H12SS03 (FD1)	10/23/2007	0.25-0.75	3.8	0.87 U	0.87 U	0.87 U	0.87 U	13 J	2.4	110	300	0.021	110	0.66 U	8.8	7,270	4,080	543	93.1 J
PHASE III 4X HEAP LEACH PAD: Surface Discrete																			
H3XSS06	10/25/2007	0.25-0.75	3.28	1.1 U	1.1 U	1.1 U	1.1 U	98 J	22.7	390	719	0.11	400	2	26.9	33,500	10,500	2,550	1,030
H3XSS06 (FD1)	10/25/2007	0.25-0.75	3.29	1.1 U	1.1 U	1.1 U	1.1 U	98 J	22.6	420	798	0.1	420	2.4	31.3	57,900	11,700	3,050	1,210
H3XSS08	10/25/2007	0.25-0.75	3.7	0.9 U	0.9 U	0.9 U	0.9 U	15 J	5.2	120	392	0.025	120	0.68 U	12.8	1,590	6,310	1,190	107
PHASE III SOUTH HEAP LEACH PAD: Surface Discrete																			
H3SSS04	10/25/2007	0.25-0.75	3.76	0.85 U	0.85 U	0.85 U	0.85 U	21	2 U	120	409	0.089	130	4.9	10.7	3,800	3,220	1,470	322
H3SSS04 (FD1)	10/25/2007	0.25-0.75	3.81	0.85 U	0.85 U	0.85 U	0.85 U	14 J	2 U	1,500	416	0.098	1,400	0.64 U	10.7	4,580	3,240	1,460	373
H3SSS05	10/24/2007	0.25-0.75	3.44	0.92 U	0.92 U	0.92 U	0.92 U	18 J	7.8	250	1,370	0.063	250	0.69 U	23.1	2,110	4,520	1,380	242
H3SSS05 (FD1)	10/24/2007	0.25-0.75	3.44	0.92 U	0.92 U	0.92 U	0.92 U	18 J	8.1	81	1,320	0.062	81	0.94 J	20.6	2,130	3,820	1,180	215
PHASE IV SLOT HEAP LEACH PAD: Surface Discrete																			
H4SSS03	10/23/2007	0.25-0.75	3.63	0.89 U	0.89 U	0.89 U	0.89 U	17 J	4.9	180	269	0.048	180	0.67 U	9.3	6,470	4,680	508	215
H4SSS05	10/23/2007	0.25-0.75	3.51	0.92 U	0.92 U	0.92 U	0.92 U	19 J	7.5	160	441	0.029	150	0.69 U	8.5	3,760	2,300	480	98.7 J
PHASE IV VLT HEAP LEACH PAD: Surface Discrete																			
H4VSS02	10/26/2007	0.25-0.75	3.57	0.87 U	0.87 U	0.87 U	0.87 U	34 J	2.8	130	848	0.071	130	0.66 U	13	5,900	7,190	1,600	349
H4VSS04	10/26/2007	0.25-0.75	3.25	0.95 U	0.95 U	0.95 U	0.95 U	120	10.7	110	900	0.089	120	2.8	18.6	14,200	7,180	3,490	578
H4VSS04 (FD1)	10/26/2007	0.25-0.75	3.26	0.98 U	0.98 U	0.98 U	0.98 U	120	12.9	130	1,260	0.11	130	2.4	25.4	16,000	6,700	4,990	719
VLT SOIL: Surface Discrete																			
CAPSS01	10/29/2007	0.25-0.75	5.9	1,200	0.85 U	0.85 U	1,200	37	2 U	120	374	0.05	120	2.8	11	11,000	4,400	1,030	252
CAPSS01 (FD1)	10/29/2007	0.25-0.75	**7.89**	1,700	0.85 U	0.85 U	1,700	37	2 U	130	559	0.038	130	2	14	13,900	4,860	1,060	207
CAPSS02	10/26/2007	0.25-0.75	4.04	0.85 U	0.85 U	0.85 U	0.85 U	15 J	2 U	110	430	0.015	110	2.2	26	5,420	5,830	1,420	67.4 J
CAPSS03	10/29/2007	0.25-0.75	2.7	0.9 U	0.9 U	0.9 U	0.9 U	32 J	5.3	300	305	0.41	300	0.68 U	28.3	2,180	674	1,690	913
CAPSS03 (FD1)	10/29/2007	0.25-0.75	2.66	0.89 U	0.89 U	0.89 U	0.89 U	24	5	270	303	0.27	270	0.67 U	28.3	2,630	1,070	1,590	674

Notes:

[1] - depth in feet below ground surface
mg/Kg - milligrams per kilogram
% - percent
J - Estimated result
U - Not detected at reporting limit
P - Phosphorous
PRG - Preliminary Remediation Goal (EPA, 2004)
-- - no PRG available
FD1 - Sample was not originally designated as a field duplicate, but laboratory analyzed more analytes than requested on chain of custody

TABLE C-5
Radiological Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Alpha	Beta	Thorium 227	Thorium 228	Thorium 230	Thorium 232	Uranium 234	Uranium 235	Uranium 238	Yield
		Residential PRG:	--	--	113	24.2	3.49	3.1	4.01	0.205	4.46	--
		Units:	pCi/g ± unc	pCi/g ± unc	pCi/g ± unc	pCi/g ± unc	pCi/g ± unc	pCi/g ± unc	pCi/g ± unc	pCi/g ± unc	pCi/g ± unc	%
Location	**Sample Date**	**Depth [1]**	**Analytical Results**									
PHASE I/II HEAP LEACH PAD: Soil Boring Composite												
H12SU01	10/11/2007	0-50	23.6 ± 15.5	29 ± 5.87	ND ± 0.0943	1.28 ± 0.247	1.38 ± 0.253	0.884 ± 0.189	0.996 ± 0.221	0.0642 ± 0.0592	0.874 ± 0.204	92.9
H12SU02	10/10/2007	50-77	18 ± 14	28.9 ± 5.8	0.15 ± 0.106	1.54 ± 0.273	1.46 ± 0.256	1.31 ± 0.236	0.849 ± 0.201	0.0816 ± 0.0626	0.727 ± 0.183	93.9
PHASE I/II HEAP LEACH PAD: Surface Discrete												
H12SS01	10/23/2007	0.25-0.75	42.9 ± 19.4	32.1 ± 6.18	---	---	---	---	---	---	---	---
H12SS02	10/23/2007	0.25-0.75	33.9 ± 16.9	31 ± 5.89	---	---	---	---	---	---	---	---
H12SS03	10/23/2007	0.25-0.75	60 ± 22.2	29.9 ± 5.96	---	---	---	---	---	---	---	---
PHASE III 4X HEAP LEACH PAD: Soil Boring Composite												
H3XSU01	10/16/2007	50-67	21.1 ± 15.3	30.8 ± 6.03	0.171 ± 0.125	1.41 ± 0.267	0.986 ± 0.206	1 ± 0.208	1.28 ± 0.256	0.0471 ± 0.047	1.24 ± 0.249	98
H3XSU02	10/16/2007	0-50	32.1 ± 16.8	26.5 ± 5.58	ND ± 0.131	1.22 ± 0.267	1.8 ± 0.331	0.809 ± 0.197	1.68 ± 0.307	0.0623 ± 0.0543	1.21 ± 0.244	85.8
H3XSU03	10/17/2007	50-67	31.1 ± 16.9	26.1 ± 5.43	0.174 ± 0.125	1.9 ± 0.341	**3.67 ± 0.546**	1.45 ± 0.275	2.5 ± 0.399	0.154 ± 0.0755	2.04 ± 0.34	85.4
PHASE III 4X HEAP LEACH PAD: Surface Discrete												
H3XSS06	10/25/2007	0.25-0.75	73.7 ± 24.5	60 ± 8.69	---	---	---	---	---	---	---	---
H3XSS08	10/25/2007	0.25-0.75	35.8 ± 17.5	33.5 ± 6.24	---	---	---	---	---	---	---	---
PHASE III SOUTH HEAP LEACH PAD: Soil Boring Composite												
H3SSU01	9/25/2007	20-97	35.4 ± 18	25.7 ± 5.52	0.191 ± 0.145	1.35 ± 0.275	1.57 ± 0.292	1.03 ± 0.221	1.63 ± 0.313	ND ± 0.0531	1.46 ± 0.289	92.4
H3SSU01	10/7/2007	0-50	24.3 ± 15.4	34.2 ± 6.37	ND ± 0.113	1.41 ± 0.271	1.6 ± 0.287	1.04 ± 0.215	1.28 ± 0.262	0.0923 ± 0.0664	1.33 ± 0.27	88.5
H3SSU03	10/6/2007	50-100	34 ± 17	27 ± 5.66	0.136 ± 0.102	1.04 ± 0.216	1.46 ± 0.262	0.858 ± 0.184	1.27 ± 0.242	0.0625 ± 0.0503	1.23 ± 0.235	90.7
H3SSU04	9/26/2007	0-50	26.6 ± 16.1	27.7 ± 5.74	ND ± 0.117	1.24 ± 0.256	1.94 ± 0.335	1.03 ± 0.219	1.5 ± 0.311	0.134 ± 0.0911	1.38 ± 0.294	95.3
PHASE III SOUTH HEAP LEACH PAD: Surface Discrete												
H3SSS04	10/25/2007	0.25-0.75	22.9 ± 15.8	34 ± 6.38	---	---	---	---	---	---	---	---
H3SSS05	10/24/2007	0.25-0.75	38.3 ± 17.8	29.5 ± 5.81	---	---	---	---	---	---	---	---
PHASE IV SLOT HEAP LEACH PAD: Soil Boring Composite												
H4SSU01	10/8/2007	0-50	33 ± 17.3	30.9 ± 6.06	0.268 ± 0.155	1.68 ± 0.311	3.18 ± 0.483	1.26 ± 0.249	1.81 ± 0.319	0.0876 ± 0.0657	1.68 ± 0.302	97
H4SSU02	10/9/2007	0-50	16.7 ± 14.4	26.5 ± 5.58	0.234 ± 0.144	1.33 ± 0.272	2.68 ± 0.429	0.957 ± 0.211	2 ± 0.351	0.102 ± 0.0683	1.6 ± 0.299	90.4
H4SSU03	10/9/2007	50-77	23.8 ± 15	33.8 ± 6.27	0.354 ± 0.157	1.58 ± 0.283	1.79 ± 0.302	1.4 ± 0.254	1.55 ± 0.274	0.0756 ± 0.0534	1.51 ± 0.269	91.1
H4SSU04	10/9/2007	0-50	19.2 ± 14.3	27.2 ± 5.58	0.162 ± 0.0965	1.72 ± 0.284	1.47 ± 0.25	1.13 ± 0.208	1.37 ± 0.264	ND ± 0.0463	1.32 ± 0.258	93
PHASE IV SLOT HEAP LEACH PAD: Surface Discrete												
H4SSS03	10/23/2007	0.25-0.75	48.8 ± 20.7	29.3 ± 5.98	---	---	---	---	---	---	---	---
H4SSS05	10/23/2007	0.25-0.75	66.9 ± 23.5	38.7 ± 6.79	---	---	---	---	---	---	---	---
PHASE IV VLT HEAP LEACH PAD: Soil Boring Composite												
H4VSU01	9/27/2007	0-50	60.9 ± 22.4	30.8 ± 6.13	0.236 ± 0.141	1.28 ± 0.256	2.25 ± 0.367	0.8 ± 0.183	1.97 ± 0.371	0.132 ± 0.087	1.63 ± 0.324	88.5
H4VSU02	10/5/2007	50-107	13.2 ± 13.3	19 ± 4.91	ND ± 0.144	1.77 ± 0.328	1.82 ± 0.324	1.96 ± 0.341	2.22 ± 0.382	0.0651 ± 0.0567	1.77 ± 0.323	91.5
H4VSU03	10/6/2007	0-50	93.6 ± 29.3	48.3 ± 7.82	ND ± 0.146	1.15 ± 0.253	2.64 ± 0.43	0.953 ± 0.215	1.68 ± 0.308	0.132 ± 0.0752	1.49 ± 0.283	89.1
PHASE IV VLT HEAP LEACH PAD: Surface Discrete												
H4VSS04	10/26/2007	0.25-0.75	50.6 ± 20	33.3 ± 6.15	---	---	---	---	---	---	---	---
VLT SOIL: Surface Discrete												
CAPSS01	10/29/2007	0.25-0.75	25.5 ± 16.5	34.5 ± 6.45	---	---	---	---	---	---	---	---
CAPSS03	10/29/2007	0.25-0.75	40 ± 17.9	29.7 ± 5.75	---	---	---	---	---	---	---	---
CAPSS04	10/29/2007	0.25-0.75	36.3 ± 18.1	27.9 ± 5.79	---	---	---	---	---	---	---	---

Notes:

Bolded values exceed Residential PRG
All results listed as result (MDC)
[1] - depth in feet below ground surface
MDC - Minimum Detectable Concentration
pCI/g - picocuries per gram
ND - Not detected at MDC
unc - radiological measurement uncertainty
PRG - Preliminary Remediation Goal (EPA, 2004)
-- - no PRG available

TABLE C-6
Metal Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium
		Industrial PRG:	**920,000**	**410**	**1.6**	**67,000**	**1,900**	**450**	**--**	**--**	**1,900**	**41,000**	**310,000**	**--**	**--**	**19,000**	**--**	**5,100**	**20,000**	**--**
		Residential PRG:	**76,000**	**31**	**0.39**	**5,400**	**150**	**37**	**--**	**--**	**900**	**3,100**	**23,000**	**--**	**--**	**1,800**	**--**	**390**	**1,600**	**--**
		Units:	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**
Location	**Sample Date**	**Depth [1]**	**Analytical Results**																	
PHASE I/II HEAP LEACH PAD: Soil Boring Composite																				
H12SU01	10/11/2007	0-50	5,340	1.7 J	**9.5 J**	55	0.15 UJ	1.2 J	3,240	5.7	2.8 J	1,080	20,300	3	4,310	43.9	0.13	---	4.2 U	1,120
H12SU01 (FD)	10/11/2007	0-50	5,160	0.85 J	**5.7 J**	62.5	0.12 UJ	1 UJ	2,690	4.8	2.3 J	1,040	19,600	2.4	4,480	41.6	0.15	---	4.2 U	1,260
H12SU02	10/10/2007	0-50	5,920	1.4 J	**8.6 J**	45.5	0.14 UJ	0.75 UJ	3,310	3.9	1.7 J	955	15,700	2.7	5,140	44.2	0.17	---	4.3 U	963 J
H12SU02 (FD)	10/10/2007	50-77	5,970	1 J	**7.7**	50.6	0.15 UJ	0.7 UJ	3,250	4.1	1.5 J	875	14,800	2.8	4,620	40.2	0.2	---	1.2 UJ	1,110 J
PHASE I/II HEAP LEACH PAD: Surface Discrete																				
H12SS01	10/23/2007	0.25-0.75	7,860	1.3 J	**22.6**	68.3	0.36 J	0.52 U	3,720	2.8 J	5.8	2,830 J	19,400	6.1	6,290	71.7	0.18	---	6.5	708
H12SS01 (FD)	10/23/2007	0.25-0.75	11,000	1 J	**26**	81	0.39	1 U	6,700	5	4.7	2,100	**24,000**	5.8	7,500	66	0.12	3.7 J	7.3	830
H12SS02	10/23/2007	0.25-0.75	7,760	1.1 J	**21.4**	74.7	0.35 J	0.53 U	5,430	2.5 J	7.3	1,450 J	14,400	3.9	5,950	78.4	0.17	---	6.3	490 J
H12SS03	10/23/2007	0.25-0.75	5,440	1.5 J	**9.1**	60.6	0.27 J	0.51 U	6,670	3.3 J	3.2 J	1,100 J	8,510	4.2	3,230	28.7	1	---	4.5	803
H12SS04	10/23/2007	0.25-0.75	5,770	0.36 J	**12.5**	73	0.28 J	0.54 U	5,540	2.1 J	2.9 J	1,040 J	20,100	7	3,560	33.8	0.11	---	3.5 J	1,300
PHASE III 4X HEAP LEACH PAD: Soil Boring Composite																				
H3XSU01	10/16/2007	0-50	4,360	0.69 J	**1.7 J**	30.9 J	0.11 UJ	0.49 UJ	2,530	3	3.3 J	1,570	10,100	2 J	4,160	55.5	0.098 J	---	2.8 UJ	925 J
H3XSU02	10/17/2007	50-67	3,910	0.47 J	**3.7**	34.2 J	0.13 UJ	0.5 UJ	1,990	2.7	2.1 J	554	10,900	1.8 J	2,930	35.2	0.33	---	1.3 UJ	860 J
H3XSU02 (FD)	10/17/2007	50-67	4,050	0.7 J	**6.8**	32.1 J	0.15 UJ	0.55 UJ	2,180	2.6	2.2 J	617	11,100	1.7 J	3,210	47.8	0.22	---	1.7 UJ	1,310
H3XSU03	10/17/2007	50-67	8,210	1.7 J	**7.5**	71.2	0.33 UJ	0.97 UJ	3,630	8.2	5.8 J	2,060	18,900	2.5	6,620	73	0.42	---	4.4 UJ	1,230
PHASE III 4X HEAP LEACH PAD: Surface Discrete																				
H3XSS01	10/25/2007	0.25-0.75	11,800	0.28 J	**12**	81.4	0.49 J	0.51 U	11,200	19.1 J	12.3	3,090 J	20,600	3.4	7,710	118	0.033 J	---	12.1	1,360
H3XSS02	10/25/2007	0.25-0.75	11,500	6.2 J	**24.8**	105	0.55	0.51 U	16,800	5.1 J	9.1	**8,060 J**	**23,800**	6	6,490	123	0.83	---	9.4	1,650
H3XSS03	10/25/2007	0.25-0.75	7,600	1 J	**7.8**	60.4	0.25 J	0.52 U	5,160	7.7 J	5.2	520 J	12,400	5.5	5,350	55.2	0.31	---	7.5	1,300
H3XSS04	10/25/2007	0.25-0.75	5,850	0.48 J	**6.8**	44.1	0.19 J	0.51 U	3,270	3.9 J	3.5 J	540 J	10,500	6.5	4,710	32.9	0.35	---	5	1,360
H3XSS05	10/25/2007	0.25-0.75	4,950	2.7 J	**13**	65.7	0.23 J	0.52 U	10,200	4.5 J	4 J	655 J	12,400	6.7	3,230	41.8	0.36	---	3.9 J	1,420
H3XSS06	10/25/2007	0.25-0.75	13,700	1.5 J	**19.4**	110	0.52 J	0.67 U	48,300	11 J	13.3	1,080 J	**24,700**	53.2	8,730	125	1.8	---	11.5	3,110
H3XSS07	10/25/2007	0.25-0.75	6,810	1.2 J	**9.3**	70.8	0.23 J	0.52 U	4,520	4.9 J	4.6 J	539 J	12,200	7.9	5,060	48.7	0.48	---	6	1,390
H3XSS08	10/25/2007	0.25-0.75	7,690	0.53 J	**7.7**	60.4	0.2 J	0.53 U	1,990	4.5 J	5.1 J	585 J	13,000	4.9	6,960	56	0.47	---	7.1	1,670
H3XSS08 (FD)	10/25/2007	0.25-0.75	8,800	4 U	**8.5**	58	0.22	1 U	2,600	6	4.2	480	16,000	4.5	7,300	56	0.53	4 J	7.8	1,800
PHASE III SOUTH HEAP LEACH PAD: Soil Boring Composite																				
H3SSU01	9/25/2007	0-50	5,270	2.2 J	**8.8 J-**	65.7	0.2 UJ	0.76 J	4,320	4.3	2.7 J	947	13,800	3.8	3,830	42.9	0.5 J-	---	4.4 U	998 J
H3SSU02	10/7/2007	50-100	5,520	1.1 J	**6.1 J**	50.1	0.18 UJ	0.67 UJ	3,800	4.6	4.5 J	619	13,800	3	4,300	59.1	1.8	---	1.7 J	984 J
H3SSU03	10/6/2007	100-117	5,790	0.86 J	**3.9 J**	60.2	0.16 UJ	1.7 J	2,150	7.7	3.9 J	905	**29,800**	2.5	3,970	65	0.092 UJ	---	4.3 U	1,620
H3SSU04	9/26/2007	50-100	5,640	1.2 J	**5 J-**	56.5	0.19 UJ	1.3 J	2,930	4.8	3.1 J	831	22,600	2.6	3,900	51	0.11 U	---	4.4 U	1,090
PHASE III SOUTH HEAP LEACH PAD: Surface Discrete																				
H3SSS01	10/24/2007	0.25-0.75	7,680	0.96 J	**9.8**	71.5	0.34 J	0.53 U	6,770	3.9 J	6.2	1,420 J	18,500	4.6	4,660	81.9	0.22	---	5.4	1,150
H3SSS02	10/25/2007	0.25-0.75	7,390	1.2 J	**18.4**	76.9	0.38 J	0.55 U	4,660	4.8 J	5.5	1,670 J	19,800	5.5	5,030	64.7	0.082 J	---	6.1	1,300
H3SSS03	10/25/2007	0.25-0.75	12,700	0.93 J	**14.8**	57.3	0.44 J	0.51 U	7,000	2.7 J	9.3	**6,060 J**	20,600	4.3	9,960	68.5	0.28	---	7.6	448 J
H3SSS04	10/25/2007	0.25-0.75	3,890	0.26 J	**2.6**	40.5	0.08 J	0.5 U	1,730	5.3 J	2.6 J	207 J	12,500	1.8	4,280	32.3	0.37	---	5.6	1,610
H3SSS04 (FD)	10/25/2007	0.25-0.75	4,500	2 U	**2.4**	39	0.09 J	1 U	3,700	7.1	2.3	200	16,000	1.7 J	4,700	37	0.22	2.7 J	6.3	2,300
H3SSS05	10/24/2007	0.25-0.75	6,960	0.29 J	**11.3**	52.7	0.19 J	0.55 U	1,540	5.3 J	2.6 J	990 J	19,700	5.7	3,740	37.8	0.097 J	---	3.5 J	1,170
H3SSS06	10/25/2007	0.25-0.75	5,580	0.55 J	**11.4**	72.3	0.21 J	0.52 U	7,530	3.5 J	2.6 J	518 J	12,500	6.7	2,570	41.2	0.25	---	3.5 J	1,170
H3SSS07	10/24/2007	0.25-0.75	8,640	0.42 J	**10.6**	45.2	0.31 J	0.53 U	4,000	2.4 J	8	1,960 J	16,800	5.7	7,320	98.1	0.27	---	7.6	993
H3SSS08	10/24/2007	0.25-0.75	7,080	0.25 J	**11.6**	124	0.21 J	0.51 U	4,810	3.3 J	1.9 J	1,300 J	**28,000**	3.2	3,190	43.6	0.11	---	2.6 J	1,660

TABLE C-6
Metal Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium
		Industrial PRG:	**920,000**	**410**	**1.6**	**67,000**	**1,900**	**450**	**--**	**--**	**1,900**	**41,000**	**310,000**	**--**	**--**	**19,000**	**--**	**5,100**	**20,000**	**--**
		Residential PRG:	**76,000**	**31**	**0.39**	**5,400**	**150**	**37**	**--**	**--**	**900**	**3,100**	**23,000**	**--**	**--**	**1,800**	**--**	**390**	**1,600**	**--**
		Units:	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**
Location	**Sample Date**	**Depth [1]**	**Analytical Results**																	
PHASE IV SLOT HEAP LEACH PAD: Soil Boring Composite																				
H4SSU01	10/8/2007	50-97	7,420	1.8 J	**8.3 J**	86.4	0.25 UJ	0.81 UJ	8,090	5.3	5.2 J	1,180	15,600	3.5	4,680	77.6	0.31	---	1.7 J	1,390
H4SSU01	10/8/2007	0-50	6,940	0.87 J	**5.3 J**	61.7	0.22 UJ	0.66 UJ	4,660	4.5	4.5 J	681	13,300	3.2	6,000	62.9	0.17	---	2.4 J	1,650
H4SSU02	10/9/2007	0-50	5,500	1.5 J	**4.4 J**	52.5	0.2 UJ	0.6 UJ	3,610	6.8	4.3 J	756	12,600	2.6	4,410	54.7	0.27	---	3 J	915 J
H4SSU03	10/9/2007	50-77	5,780	1.2 J	**5.5 J**	74.9	0.19 UJ	0.82 UJ	3,190	4.4	4 J	856	15,400	3.1	4,770	57.7	0.093 UJ	---	1.3 J	1,500
H4SSU03 (FD)	10/9/2007	50-77	6,280	1.2 J	**11.5 J**	56.6	0.22 UJ	1.1 UJ	4,630	5.5	4.3 J	946	21,200	3.5	4,860	63.2	0.14	---	0.35 J	1,590
H4SSU04	10/9/2007	0-50	6,470	4.5 J	**8.6 J**	101	0.2 UJ	0.68 UJ	12,800	4.6	3.8 J	1,010	14,200	3.9	4,310	53.1	1.3	---	0.63 J	1,090
PHASE IV SLOT HEAP LEACH PAD: Surface Discrete																				
H4SSS01	10/24/2007	0.25-0.75	6,920	1.5 J	**8.7**	47.1	0.15 J	0.53 U	1,810	4.6	3.6 UJ	543	11,600	3.6 J	5,530	37	0.81	---	6.1	684
H4SSS02	10/23/2007	0.25-0.75	8,560	0.57 J	**10.2**	62.8	0.34 J	0.53 U	3,450	4.9	6.9	973	16,300	5.8 J	4,770	66.8	0.29	---	6.4	1,110
H4SSS03	10/23/2007	0.25-0.75	7,990	2.1 J	**9.1**	47.1	0.25 J	0.52 U	5,480	6.2	6.2	594	11,100	8.1 J	6,160	47.9	1.1	---	6.8	697
H4SSS04	10/23/2007	0.25-0.75	7,750	7.2	**15.3**	45.6	0.31 J	0.53 U	4,600	5.5	6.1	1,030	11,500	16.4 J	5,300	36.4	2.7	---	6.5	507 J
H4SSS05	10/23/2007	0.25-0.75	5,990	0.78 J	**12**	54.3	0.25 J	0.54 U	8,080	2.3	2.8 UJ	668	14,100	20.4 J	3,990	38.3	0.31	---	3.1 J	768
H4SSS06	10/24/2007	0.25-0.75	12,500	4.6 J	**31.6**	106	0.73	0.52 U	8,320	7.6	5.6	**3,690**	**24,100**	8.2 J	5,850	69.4	0.72	---	7.9	1,460
H4SSS06 (FD)	10/24/2007	0.25-0.75	14,000	6.9	**28**	120	0.74	1 U	7,500	9.7	5.9	**3,600**	**27,000**	7.6	6,200	75	0.66	19	8.9	1,700
H4SSS07	10/24/2007	0.25-0.75	8,480	1.8 J	**12.8**	87.9	0.4 J	0.52 U	4,820	4.2	4.4 UJ	1,320	18,000	7.1 J	5,660	57.9	0.94	---	5.9	1,080
H4SSS08	10/24/2007	0.25-0.75	7,430	0.87 J	**17.1**	72.6	0.27 J	0.52 U	7,690	2.9	4.7 UJ	909	17,300	9.3 J	5,140	49.7	0.29	---	4.7	1,020
H4SSS09	10/24/2007	0.25-0.75	7,410	0.95 J	**13.5**	86.2	0.36 J	0.54 U	4,540	6.6	4.5 UJ	614	17,400	6.2 J	3,920	49.4	0.44	---	5.3	1,510
H4SSS10	10/24/2007	0.25-0.75	11,100	4.1 J	**22.5**	221	0.69	0.51 U	13,800	3.9	23.2	**7,360**	17,900	5 J	6,610	152	5.1	---	8	936
PHASE IV VLT HEAP LEACH PAD: Soil Boring Composite																				
H4VSU01	9/27/2007	50-107	6,700	0.75 J	**3 J-**	49	0.3 UJ	0.54 J	6,400	4.7	5.7 J	702	10,400	2.8	6,360	105	0.086 U	---	2.9 J	1,680
H4VSU01	9/27/2007	0-50	6,190	1.1 J	**4.5 J-**	47.4	0.22 UJ	0.47 J	3,200	4.8	5.6 J	579	9,610	2.2	5,720	63.9	0.34 J-	---	3.9 J	1,600
H4VSU02	10/2/2007	0-50	7,610	2.3 J	**9.6 J**	51.4	0.25 UJ	0.86 UJ	3,760	4.9	5.8 J	1,020	17,700	3.8	6,460	71.9	0.37	---	2.1 J	1,040 J
H4VSU02	10/5/2007	50-107	7,970	0.58 J	**2.4 J**	54.7	0.35 UJ	0.55 UJ	4,420	9	6.1 J	906	11,200	2.1 J	8,030	74.9	0.12	---	8 J	2,310
H4VSU03	10/6/2007	0-50	6,370	0.58 J	**3.8 J**	34.5 UJ	0.2 UJ	0.53 UJ	3,020	4.1	6.2 J	686	12,100	2.9	5,820	75.9	0.24	---	3.5 J	1,320
H4VSU03	10/6/2007	50-87	7,690	0.85 J	**2.3 J**	53.8	0.29 UJ	0.56 UJ	3,820	9.7	6.3 J	681	11,100	2.1 J	8,000	83.8	0.076 UJ	---	7.5 J	1,740
H4VSU03 (FD)	10/6/2007	0-50	6,020	0.9 J	**4.4 J**	39.5 UJ	0.19 UJ	0.54 UJ	2,610	3.7	6.2 J	645	12,200	3.8	5,380	73.5	0.23	---	3.7 J	1,140
PHASE IV VLT HEAP LEACH PAD: Surface Discrete																				
H4VSS01	10/26/2007	0.25-0.75	13,700	0.75 J	**9.4**	39.7	0.69	0.03 J	3,810	5.1	51.6	**10,400**	13,400	5.5 J	17,300	336	0.029 J	---	31.4	1,080
H4VSS01 (FD)	10/26/2007	0.25-0.75	8,200	4 U	**8.4**	49	0.25	1 U	4,400	5.6	5.1	1,000	15,000	5.7	6,700	66	0.57	4 J	8	1,300
H4VSS02	10/26/2007	0.25-0.75	11,300	0.77 J	**8.3**	83.1	0.39 J	0.51 U	7,250	10.3	8.3	1,230	16,700	5.3 J	8,280	96.9	0.34	---	10.7	2,150
H4VSS03	10/26/2007	0.25-0.75	6,440	0.56 J	**6**	31.5	0.25 J	0.54 U	11,200	4.4	8.3	643	9,160	6.7 J	4,980	86.3	0.56	---	7.2	1,180
H4VSS04	10/26/2007	0.25-0.75	11,600	0.75 J	**11.5**	46.7	0.49 J	0.55 U	18,200	9.5	19.1	1,620	**27,500**	6.4 J	8,370	181	0.63	---	12.5	5,140
H4VSS05	10/26/2007	0.25-0.75	8,690	0.93 J	**13.9**	90.4	0.3 J	0.51 U	2,690	4.5	4.8 UJ	824	18,200	6.5 J	4,920	52	0.093 J	---	5.7	1,470
H4VSS06	10/26/2007	0.25-0.75	7,260	0.95 J	**8.7**	47.3	0.23 J	0.52 U	5,690	3.7	6.1	703	11,900	4.5 J	5,870	58.4	0.52	---	6.2	958
H4VSS07	10/26/2007	0.25-0.75	10,700	0.43 J	**9.1**	68	0.5 J	0.53 U	7,560	5.6	15.1	896	16,400	5.8 J	8,450	153	0.22	---	12.3	2,030
H4VSS08	10/26/2007	0.25-0.75	8,230	0.47 J	**7.8**	74.8	0.46 J	0.51 U	6,080	6.4	19.4	2,840	13,000	3.8 J	7,420	155	0.04 J	---	12.7	1,880
H4VSS09	10/26/2007	0.25-0.75	6,970	0.52 J	**8.1**	75.8	0.22 J	0.53 U	5,590	2.8	4.9 UJ	559	17,200	7 J	5,220	69.1	0.3	---	5.8	1,480
H4VSS10	10/26/2007	0.25-0.75	27,100	1.2 J	**13.6**	71.9	2.6	0.73 U	60,700	24.2	69	**6,920**	**61,100**	23.3 J	19,800	825	0.41	---	41.2	14,600
VLT SOIL: Surface Discrete																				
CAPSS01	10/29/2007	0.25-0.75	4,910	1.3 J	**4.7 J**	37.7	0.25 J	0.5 U	15,300	3 J	24.6 J	**10,600**	15,100	4	4,450	81.2	0.45	---	10.9	1,290
CAPSS02	10/26/2007	0.25-0.75	6,280	3.6 J	**119 J**	283	0.2 J	0.96	3,950	12.7 J	21 J	1,250	**27,900**	48.5	4,570	29.5	20.2	---	49.4	1,280

TABLE C-6
Metal Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium
		Industrial PRG:	**920,000**	**410**	**1.6**	**67,000**	**1,900**	**450**	**--**	**--**	**1,900**	**41,000**	**310,000**	**--**	**--**	**19,000**	**--**	**5,100**	**20,000**	**--**
		Residential PRG:	**76,000**	**31**	**0.39**	**5,400**	**150**	**37**	**--**	**--**	**900**	**3,100**	**23,000**	**--**	**--**	**1,800**	**--**	**390**	**1,600**	**--**
		Units:	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**
Location	**Sample Date**	**Depth [1]**	**Analytical Results**																	
VLT SOIL: Surface Discrete																				
CAPSS03	10/29/2007	0.25-0.75	1,970	1.5 J	**13.1 J**	104	0.06 J	0.52 U	2,570	2.8 J	2 J	**6,260**	**30,000**	271	735	20	0.81	---	1.1 J	1,980
CAPSS04	10/29/2007	0.25-0.75	7,500	0.81 J	**29.3 J**	58.8	0.36 J	0.51 U	6,140	15.6 J	4.8 J	**22,100**	20,500	39.1	4,760	65.1	0.68	---	16	770

Notes:

Bolded values exceed Industrial or Residential PRG
[1] - depth in feet below ground surface
mg/Kg - milligrams per kilogram
J - Estimated result
U - Not detected at reporting limit
FD - Field Duplicate
PRG - Preliminary Remediation Goal (EPA, 2004)
-- - no PRG available

TABLE C-6
Metal Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
		Industrial PRG:	5,100	5,100	--	67	1,000	310,000
		Residential PRG:	390	390	--	5.2	78	23,000
		Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Location	Sample Date	Depth [1]	Analytical Results					
PHASE I/II HEAP LEACH PAD: Soil Boring Composite								
H12SU01	10/11/2007	0-50	3.7 UJ	1.1 U	120 J	2.6 U	26.8	5.8 UJ
H12SU01 (FD	10/11/2007	0-50	3.7 UJ	1.1 U	115 J	2.6 U	22.5	5.2 UJ
H12SU02	10/10/2007	0-50	3.8 UJ	1.1 U	134 J	2.7 U	23	8.2 UJ
H12SU02 (FD	10/10/2007	50-77	4.3 UJ	1.2 U	110 J	3.1 UJ	22.4	8.2 J
PHASE I/II HEAP LEACH PAD: Surface Discrete								
H12SS01	10/23/2007	0.25-0.75	3.8 J	0.17 J	206 J	0.99 J	23.8	13.5
H12SS01 (FD	10/23/2007	0.25-0.75	3.6	2 U	210	10 U	30	12
H12SS02	10/23/2007	0.25-0.75	3.7 J	1.1 U	346 J	0.7 J	14.1	13
H12SS03	10/23/2007	0.25-0.75	3.8 J	1 U	117 J	0.43 J	12.1	7.3
H12SS04	10/23/2007	0.25-0.75	4.1 J	0.18 J	154 J	0.92 J	23.2	8.7
PHASE III 4X HEAP LEACH PAD: Soil Boring Composite								
H3XSU01	10/16/2007	0-50	3.8 UJ	1.1 U	78.6 J	2.7 UJ	12.7	11.5 J
H3XSU02	10/17/2007	50-67	4.3 UJ	1.2 U	85.7 J	3.1 UJ	16	6.1 J
H3XSU02 (FD	10/17/2007	50-67	4 UJ	1.2 U	93.2 J	2.9 UJ	17.3	8.7 J
H3XSU03	10/17/2007	50-67	3.8 UJ	1.1 U	160 J	2.7 UJ	31.8	7.5 J
PHASE III 4X HEAP LEACH PAD: Surface Discrete								
H3XSS01	10/25/2007	0.25-0.75	3.5 J	0.09 J	337 J	0.52 J	50.3	12.2
H3XSS02	10/25/2007	0.25-0.75	5.2 J	0.56 J	102 J	1 J	38.1	24.2
H3XSS03	10/25/2007	0.25-0.75	3.1 J	1 U	262 J	0.82 J	18.9	13.2
H3XSS04	10/25/2007	0.25-0.75	5.5 J	0.13 J	135 J	0.7 J	19.1	9.3
H3XSS05	10/25/2007	0.25-0.75	2.9 J	0.12 J	321 J	0.74 J	18.5	8.3
H3XSS06	10/25/2007	0.25-0.75	9.5 J	0.38 J	795	1.2 J	18.8	23.5
H3XSS07	10/25/2007	0.25-0.75	3.9 J	0.2 J	194 J	0.75 J	17.6	12.2
H3XSS08	10/25/2007	0.25-0.75	6.1 J	0.23 J	99.5 J	0.82 J	22.7	14.5
H3XSS08 (FD	10/25/2007	0.25-0.75	5.4	2 U	91	10 U	30	14
PHASE III SOUTH HEAP LEACH PAD: Soil Boring Composite								
H3SSU01	9/25/2007	0-50	3.8 UJ	1.1 U	143 J	2.7 U	21.2	7.1 J
H3SSU02	10/7/2007	50-100	3.8 UJ	1.1 U	177 J	2.7 U	23.4	8.2 UJ
H3SSU03	10/6/2007	100-117	3.8 UJ	1.1 U	172 J	2.7 U	28.6	7.9 UJ
H3SSU04	9/26/2007	50-100	3.8 UJ	1.1 U	163 J	2.7 U	27.2	7.7 J
PHASE III SOUTH HEAP LEACH PAD: Surface Discrete								
H3SSS01	10/24/2007	0.25-0.75	4.3 J	0.25 J	410 J	0.99 J	20.8	14.6
H3SSS02	10/25/2007	0.25-0.75	3.5 J	0.12 J	283 J	0.99 J	27.4	13.4
H3SSS03	10/25/2007	0.25-0.75	3.7 J	0.29 J	143 J	0.89 J	32	10.6
H3SSS04	10/25/2007	0.25-0.75	1.6 J	0.13 J	277 J	0.81 J	25.5	11.4
H3SSS04 (FD	10/25/2007	0.25-0.75	1.3 J	2 U	270	10 U	27	11
H3SSS05	10/24/2007	0.25-0.75	4.6 J	0.2 J	175 J	1.2 J	19.9	10.8
H3SSS06	10/25/2007	0.25-0.75	2.3 J	1 U	100 J	0.62 J	18	13.1
H3SSS07	10/24/2007	0.25-0.75	3.4 J	0.11 J	415 J	0.91 J	15.2	21.2
H3SSS08	10/24/2007	0.25-0.75	6.3 J	0.41 J	194 J	1.4 J	24.3	10.9

TABLE C-6
Metal Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
		Industrial PRG:	5,100	5,100	--	67	1,000	310,000
		Residential PRG:	390	390	--	5.2	78	23,000
		Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Location	Sample Date	Depth [1]	Analytical Results					
PHASE IV SLOT HEAP LEACH PAD: Soil Boring Composite								
H4SSU01	10/8/2007	50-97	3.9 UJ	1.1 U	296 J	2.8 U	27.8	12.9 UJ
H4SSU01	10/8/2007	0-50	3.8 UJ	1.1 U	188 J	2.7 U	24.6	11.3 UJ
H4SSU02	10/9/2007	0-50	3.8 UJ	1.1 U	232 J	2.7 U	15.7	10 UJ
H4SSU03	10/9/2007	50-77	0.52 J	1.1 U	168 J	2.7 U	25.6	9.4 UJ
H4SSU03 (FD	10/9/2007	50-77	3.8 UJ	1.1 U	212 J	2.7 U	29	10.3 UJ
H4SSU04	10/9/2007	0-50	3.8 UJ	1.1 U	167 J	2.7 U	22.7	8.7 UJ
PHASE IV SLOT HEAP LEACH PAD: Surface Discrete								
H4SSS01	10/24/2007	0.25-0.75	5.2	0.15 J	64.2 J	0.68 J	18.9	9.3
H4SSS02	10/23/2007	0.25-0.75	4.9	0.12 J	433 J	0.9 J	17.8	13.4
H4SSS03	10/23/2007	0.25-0.75	4.9	0.11 J	233 J	0.68 J	19.8	7.7
H4SSS04	10/23/2007	0.25-0.75	6.9	0.22 J	174 J	0.6 J	20.7	7.2
H4SSS05	10/23/2007	0.25-0.75	4.8	0.15 J	131 J	0.76 J	13.1	8.6
H4SSS06	10/24/2007	0.25-0.75	5	0.22 J	298 J	1.1 J	46.8	22.4
H4SSS06 (FD	10/24/2007	0.25-0.75	4.6	2 U	290	10 U	53	22
H4SSS07	10/24/2007	0.25-0.75	4.6	0.11 J	93.8 J	1 J	21.1	13.5
H4SSS08	10/24/2007	0.25-0.75	5.2	0.1 J	171 J	0.97 J	23.6	10.6
H4SSS09	10/24/2007	0.25-0.75	3.9	0.13 J	181 J	0.95 J	19.7	12.2
H4SSS10	10/24/2007	0.25-0.75	2.2 UJ	0.32 J	338 J	0.85 J	33.9	18.2
PHASE IV VLT HEAP LEACH PAD: Soil Boring Composite								
H4VSU01	9/27/2007	50-107	3.8 UJ	1.1 U	190 J	2.7 U	24	8.6 J
H4VSU01	9/27/2007	0-50	3.8 UJ	1.1 U	170 J	2.7 U	19	10.1 J
H4VSU02	10/2/2007	0-50	3.8 UJ	1.1 U	182 J	2.7 U	24.6	11.4 UJ
H4VSU02	10/5/2007	50-107	3.8 UJ	1.1 U	205 J	2.7 U	29.8	8.7 UJ
H4VSU03	10/6/2007	0-50	0.47 J	1.1 U	227 J	2.7 U	16.5	12.6 UJ
H4VSU03	10/6/2007	50-87	3.8 UJ	1.1 U	214 J	2.7 U	30.5	10.1 UJ
H4VSU03 (FD	10/6/2007	0-50	3.9 UJ	1.1 U	211 J	2.8 U	18.5	11.2 UJ
PHASE IV VLT HEAP LEACH PAD: Surface Discrete								
H4VSS01	10/26/2007	0.25-0.75	6.1	0.28 J	990	0.78 J	16.3	62.5
H4VSS01 (FD	10/26/2007	0.25-0.75	5.1	2 U	130	10 U	21	16
H4VSS02	10/26/2007	0.25-0.75	3.9	0.16 J	440 J	1 J	25	23.6
H4VSS03	10/26/2007	0.25-0.75	3.3 UJ	1.1 U	290 J	0.54 J	10.8	11.2
H4VSS04	10/26/2007	0.25-0.75	5.6	1.1 U	822	1.3 J	15	20.8
H4VSS05	10/26/2007	0.25-0.75	4.7	0.12 J	424 J	1 J	22.4	15.9
H4VSS06	10/26/2007	0.25-0.75	4.5	0.17 J	155 J	0.75 J	18.1	10.8
H4VSS07	10/26/2007	0.25-0.75	4.7	1.1 U	614	1 J	18	26.2
H4VSS08	10/26/2007	0.25-0.75	3.8	0.27 J	358 J	0.77 J	27	14
H4VSS09	10/26/2007	0.25-0.75	5.7	0.25 J	343 J	1.2 J	17.9	16.8
H4VSS10	10/26/2007	0.25-0.75	5.3	1.5 U	3,410	2.5 J	9.7	72.6
VLT SOIL: Surface Discrete								
CAPSS01	10/29/2007	0.25-0.75	6.6 J	0.79 J	207 J	0.86 J	10.2	20.5
CAPSS02	10/26/2007	0.25-0.75	83.3 J	1.1	133 J	**6.6**	21.7	108

TABLE C-6
Metal Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
		Industrial PRG:	**5,100**	**5,100**	**--**	**67**	**1,000**	**310,000**
		Residential PRG:	**390**	**390**	**--**	**5.2**	**78**	**23,000**
		Units:	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**
Location	**Sample Date**	**Depth [1]**	**Analytical Results**					
VLT SOIL:	**Surface Discrete**							
CAPSS03	10/29/2007	0.25-0.75	13.8 J	1.9	1,020	2 J	8.5	13.2
CAPSS04	10/29/2007	0.25-0.75	9.2 J	0.69 J	125 J	1.2 J	17.9	11.1

Notes:

Bolded values exceed Industrial or Residential PRG
[1] - depth in feet below ground surface
mg/Kg - milligrams per kilogram
J - Estimated result
U - Not detected at reporting limit
FD - Field Duplicate
PRG - Preliminary Remediation Goal (EPA, 2004)
-- - no PRG available

TABLE C-7

Synthetic Precipitate Leaching Procedure Results, Surface and Subsurface Soils

Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum
		Primary MCL:	--	0.006	0.01	2	0.004	--	0.005	--	0.1	--	1.3	--	0.015	--	--	--	0.002	--
		Secondary MCL:	0.05 - 0.2	--	--	--	--	--	--	--	--	--	1	0.3	--	--	--	0.05	--	--
		Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Location	**Sample Date**	**Depth [1]**	**Analytical Results**																	
PHASE I/II HEAP LEACH PAD: Soil Boring Composite																				
H12SU01	10/11/2007	0-50	40 U	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	90	0.4 U	0.8 U	**3.4**	40 U	1.2 U	0.4 U	17	**0.65 J**	0.00015 J	2 U
H12SU01	10/11/2007	50-77	**22**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	110	0.4 U	0.8 U	**2.5**	40 U	1.2 U	0.4 U	36	**1.2**	0.0006 U	2 U
H12SU01	10/11/2007	50-77	**21**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	100	0.2 U	0.11 J	**2.5**	**8.6 J**	0.6 U	0.2 U	35	**1.2**	0.0006 U	1 U
H12SU01 (FD)	10/11/2007	0-50	40 U	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	86	0.4 U	0.8 U	**3.3**	40 U	1.2 U	0.4 U	17	**0.6 J**	0.0006 U	2 U
H12SU01 (FD)	10/11/2007	50-77	**22**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	100	0.4 U	0.8 U	**2.5**	40 U	1.2 U	0.4 U	36	**1.2**	0.00021 J	2 U
H12SU02	10/10/2007	50-77	**17 J**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	100	0.4 U	0.8 U	**7.2**	40 U	1.2 U	0.4 U	29	**0.51 J**	0.00081	2 U
H12SU02	10/10/2007	0-50	**17**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	120	0.2 U	0.4 U	**8.6**	**14**	0.6 U	0.2 U	37	**1**	0.0006 U	1 U
H12SU02	10/10/2007	0-50	**16 J**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	110	0.4 U	0.8 U	**8.6**	**14 J**	1.2 U	0.4 U	35	**1**	0.00015 J	2 U
H12SU02 (FD)	10/10/2007	0-50	**15**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	110	0.2 U	0.4 U	**8.1**	**11**	0.6 U	0.2 U	34	**0.95**	0.0006 U	1 U
H12SU02 (FD)	10/10/2007	50-77	**17**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	100	0.2 U	0.4 U	**7.2**	20 U	0.6 U	0.2 U	29	**0.53**	0.00041	1 U
PHASE III 4X HEAP LEACH PAD: Soil Boring Composite																				
H3XSU01	10/16/2007	0-50	**23**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	88	0.2 U	0.11 J	**1.6**	20 U	0.6 U	0.2 U	36	**0.96**	0.0006 U	1 U
H3XSU01	10/16/2007	50-67	**26**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	110	0.2 U	0.4 U	**3.3**	20 U	0.6 U	0.2 U	39	**0.91**	0.0006 U	1 U
H3XSU02	10/17/2007	50-67	**18**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	83	0.2 U	0.1 J	**1.4**	20 U	0.6 U	0.2 U	31	**0.89**	0.0006 U	1 U
H3XSU02 (FD)	10/17/2007	50-67	**16**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	77	0.2 U	0.4 U	**1.3**	20 U	0.6 U	0.2 U	29	**0.86**	0.0006 U	1 U
PHASE III 4X HEAP LEACH PAD: Surface Discrete																				
H3XSS07 (FD)	10/25/2007	0.25-0.75	**8.5 J**	0.2 U	0.2 U	0.5 U	0.01 U	1 U	0.05 U	104	0.1 U	0.2 U	**1.1**	10 U	0.3 U	0.1 U	20	**0.57**	0.0006 U	0.5 U
PHASE III SOUTH HEAP LEACH PAD: Soil Boring Composite																				
H3SSU01	9/25/2007	0-50	**7.3 J**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	130	0.2 U	0.4 U	**5.1**	20 U	0.6 U	0.2 U	19	**0.43 J**	0.00016 J	1 U
H3SSU01	9/25/2007	20-97	**8.8 J**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	99	0.2 U	0.4 U	**8.8 J**	**5.6 J**	0.6 U	0.2 U	23	**0.52**	0.00016 J	1 U
H3SSU02	10/7/2007	50-100	**19 J**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	110	0.4 U	0.8 U	**2.9**	40 U	1.2 U	0.4 U	33	**1.1**	0.0011	2 U
H3SSU02	10/7/2007	100-112	**22**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	120	0.4 U	0.8 U	**5.2**	40 U	1.2 U	0.4 U	36	**1.3**	0.0006 U	2 U
H3SSU03	10/6/2007	100-117	**19 J**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	88	0.4 U	0.8 U	**3.3**	**13 J**	1.2 U	0.4 U	37	**1.4**	0.0006 U	2 U
H3SSU04	9/26/2007	50-100	**18**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	100	0.2 U	0.4 U	**2.9**	**5.8 J**	0.6 U	0.2 U	34	**0.89**	0.0006 U	1 U
PHASE IV SLOT HEAP LEACH PAD: Soil Boring Composite																				
H4SSU01	10/8/2007	0-50	**16 J**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	100	0.4 U	0.8 U	**3.5**	40 U	1.2 U	0.4 U	30	**0.88 J**	0.0006 U	2 U
H4SSU01	10/8/2007	50-97	**30**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	240	0.4 U	0.8 U	**6.4**	40 U	1.2 U	0.4 U	43	**1.3**	0.00015 J	2 U
H4SSU02	10/9/2007	0-50	**13 J**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	96	0.4 U	0.8 U	**5.4**	40 U	1.2 U	0.4 U	27	**0.79 J**	0.0006 U	2 U
H4SSU03	10/9/2007	50-77	**27**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	100	0.2 U	0.13 J	**6.8**	20 U	0.6 U	0.2 U	41	**1.3**	0.0006 U	1 U
PHASE IV VLT HEAP LEACH PAD: Soil Boring Composite																				
H4VSU01	9/27/2007	50-107	20 U	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	220	0.2 U	0.4 U	**1.3**	20 U	0.6 U	0.2 U	30	**1.5**	0.0006 U	1 U
H4VSU01	9/27/2007	0-50	**27**	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	88	0.2 U	0.11 J	**5**	20 U	0.6 U	0.2 U	39	**1.2**	0.00015 J	1 U
H4VSU02	10/2/2007	0-50	**23**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	84	0.4 U	0.8 U	**4.7**	40 U	1.2 U	0.4 U	33	**1**	0.00017 J	2 U
H4VSU02	10/5/2007	50-107	**34**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	91	0.4 U	0.8 U	**6.1**	40 U	1.2 U	0.4 U	46	**1.4**	0.0006 U	2 U
H4VSU03	10/6/2007	0-50	**36**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	78	0.4 U	0.8 U	**5**	40 U	1.2 U	0.4 U	48	**1.4**	0.0006 U	2 U
H4VSU03	10/6/2007	50-87	**25**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	97	0.4 U	0.8 U	**4.4**	40 U	1.2 U	0.4 U	37	**1.1**	0.0006 U	2 U
H4VSU03 (FD)	10/6/2007	0-50	**39**	0.8 U	0.8 U	2 U	0.04 U	4 U	0.2 U	83	0.4 U	0.8 U	**5.3**	40 U	1.2 U	0.4 U	52	**1.6**	0.0006 U	2 U
PHASE IV VLT HEAP LEACH PAD: Surface Discrete																				
H4VSS04 (FD)	10/26/2007	0.25-0.75	10 U	0.2 U	0.2 U	0.5 U	0.01 U	1 U	0.05 U	10 U	0.1 U	0.2 U	0.4 U	10 U	0.3 U	0.1 U	5 U	0.5 U	0.0006 U	0.5 U
VLT SOIL: Surface Discrete																				

TABLE C-7

Synthetic Precipitate Leaching Procedure Results, Surface and Subsurface Soils

Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum
		Primary MCL:	**--**	**0.006**	**0.01**	**2**	**0.004**	**--**	**0.005**	**--**	**0.1**	**--**	**1.3**	**--**	**0.015**	**--**	**--**	**--**	**0.002**	**--**
		Secondary MCL:	**0.05 - 0.2**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1**	**0.3**	**--**	**--**	**--**	**0.05**	**--**	**--**
		Units:	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
Location	**Sample Date**	**Depth [1]**	**Analytical Results**																	
VLT SOIL: Surface Discrete																				
CAPSS02	10/26/2007	0.25-0.75	20 U	0.4 U	0.4 U	1 U	0.02 U	2 U	0.1 U	95	0.2 U	0.4 U	**7.1**	20 U	0.6 U	0.2 U	3.8 J	1 U	0.00045	1 U

Notes:

Bolded values exceed Primary or Secondary Federal MCL

[1] - depth in feet below ground surface

mg/L - milligrams per Liter

J - Estimated result

U - Not detected at reporting limit

FD - Field Duplicate

MCL - Federal Maximum Contaminant Level

-- - no MCL available

TABLE C-7

Synthetic Precipitate Leaching Procedure Results, Surface and Subsurface Soils

Arimetco Heap Leach Pads, Anaconda Yerington Mine

DRAFT

		Parameter:	Nickel	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Tin	Titanium	Vanadium	Zinc
		Primary MCL:	--	--	0.05	--	--	--	0.002	--	--	--	--
		Secondary MCL:	--	--	--	--	--	--	--	--	--	--	5
		Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Location	Sample Date	Depth [1]	Analytical Results										
PHASE I/II HEAP LEACH PAD: Soil Boring Composite													
H12SU01	10/11/2007	0-50	2 U	200 U	0.8 U	0.4 U	11 J	0.52	2 U	4 U	0.4 U	0.8 U	3.2 U
H12SU01	10/11/2007	50-77	2 U	200 U	0.8 U	0.4 U	13 J	0.62	2 U	4 U	0.4 U	0.8 U	3.2 U
H12SU01	10/11/2007	50-77	1 U	100 U	0.4 U	0.05 J	11 J	0.53	1 U	2 U	0.2 U	0.4 U	1.6 U
H12SU01 (FD)	10/11/2007	0-50	2 U	200 U	0.8 U	0.4 U	9.8 J	0.49	2 U	4 U	0.4 U	0.8 U	3.2 U
H12SU01 (FD)	10/11/2007	50-77	2 U	200 U	0.8 U	0.4 U	12 J	0.51	2 U	4 U	0.4 U	0.8 U	3.2 U
H12SU02	10/10/2007	50-77	2 U	200 U	0.8 U	0.4 U	13 J	0.51	2 U	4 U	0.4 U	0.8 U	3.2 U
H12SU02	10/10/2007	0-50	1 U	100 U	0.4 U	0.1 U	12 J	0.54	1 U	2 U	0.2 U	0.4 U	1.6 U
H12SU02	10/10/2007	0-50	2 U	200 U	0.8 U	0.4 U	9.5 J	0.54	2 U	4 U	0.4 U	0.8 U	3.2 U
H12SU02 (FD)	10/10/2007	0-50	1 U	100 U	0.4 U	0.1 U	11 J	0.51	1 U	2 U	0.2 U	0.4 U	1.6 U
H12SU02 (FD)	10/10/2007	50-77	1 U	100 U	0.4 U	0.1 U	11 J	0.49	1 U	2 U	0.2 U	0.4 U	1.6 U
PHASE III 4X HEAP LEACH PAD: Soil Boring Composite													
H3XSU01	10/16/2007	0-50	1 U	100 U	0.4 U	0.1 U	11 J	0.28	1 U	2 U	0.2 U	0.4 U	1.6 U
H3XSU01	10/16/2007	50-67	1 U	100 U	0.4 U	0.1 U	11 J	0.37	1 U	2 U	0.2 U	0.4 U	1.6 U
H3XSU02	10/17/2007	50-67	1 U	100 U	0.4 U	0.1 U	11 J	0.31	1 U	2 U	0.2 U	0.4 U	1.6 U
H3XSU02 (FD)	10/17/2007	50-67	1 U	100 U	0.4 U	0.1 U	11 J	0.3	1 U	2 U	0.2 U	0.4 U	1.6 U
PHASE III 4X HEAP LEACH PAD: Surface Discrete													
H3XSS07 (FD)	10/25/2007	0.25-0.75	0.5 U	50 U	0.2 U	0.1 U	10.1	0.17	0.5 U	---	0.1 U	0.2 U	0.8 U
PHASE III SOUTH HEAP LEACH PAD: Soil Boring Composite													
H3SSU01	9/25/2007	0-50	1 U	100 U	0.4 U	0.2 U	11 J	0.68	1 U	2 U	0.2 U	0.4 U	1.6 U
H3SSU01	9/25/2007	20-97	1 U	100 U	0.4 U	0.2 U	11 J	0.6	1 U	2 U	0.2 U	0.4 U	1.6 U
H3SSU02	10/7/2007	50-100	2 U	200 U	0.8 U	0.4 U	12 J	0.52	2 U	4 U	0.4 U	0.8 U	3.2 U
H3SSU02	10/7/2007	100-112	2 U	200 U	0.8 U	0.4 U	13 J	0.45	2 U	4 U	0.4 U	0.8 U	3.2 U
H3SSU03	10/6/2007	100-117	2 U	200 U	0.8 U	0.4 U	13 J	0.4	2 U	4 U	0.4 U	0.8 U	3.2 U
H3SSU04	9/26/2007	50-100	1 U	100 U	0.4 U	0.2 U	12 J	0.44	1 U	2 U	0.2 U	0.4 U	1.6 U
PHASE IV SLOT HEAP LEACH PAD: Soil Boring Composite													
H4SSU01	10/8/2007	0-50	2 U	200 U	0.8 U	0.4 U	11 J	0.41	2 U	4 U	0.4 U	0.8 U	3.2 U
H4SSU01	10/8/2007	50-97	2 U	200 U	0.8 U	0.4 U	12 J	1.2	2 U	4 U	0.4 U	0.8 U	3.2 U
H4SSU02	10/9/2007	0-50	2 U	200 U	0.8 U	0.4 U	11 J	0.49	2 U	4 U	0.4 U	0.8 U	3.2 U
H4SSU03	10/9/2007	50-77	1 U	100 U	0.4 U	0.1 U	12 J	0.57	1 U	2 U	0.2 U	0.4 U	1.6 U
PHASE IV VLT HEAP LEACH PAD: Soil Boring Composite													
H4VSU01	9/27/2007	50-107	1 U	100 U	0.4 U	0.2 U	13 J	0.72	1 U	2 U	0.2 U	0.4 U	1.6 U
H4VSU01	9/27/2007	0-50	1 U	100 U	0.4 U	0.2 U	12 J	0.3	1 U	2 U	0.2 U	0.4 U	1.6 U
H4VSU02	10/2/2007	0-50	2 U	200 U	0.8 U	0.4 U	11 J	0.3	2 U	4 U	0.4 U	0.8 U	3.2 U
H4VSU02	10/5/2007	50-107	2 U	200 U	0.8 U	0.4 U	12 J	0.37	2 U	4 U	0.4 U	0.8 U	3.2 U
H4VSU03	10/6/2007	0-50	2 U	200 U	0.8 U	0.4 U	9.4 J	0.26	2 U	4 U	0.4 U	0.8 U	3.2 U
H4VSU03	10/6/2007	50-87	2 U	200 U	0.8 U	0.4 U	12 J	0.44	2 U	4 U	0.4 U	0.8 U	3.2 U
H4VSU03 (FD)	10/6/2007	0-50	2 U	200 U	0.8 U	0.4 U	12 J	0.27	2 U	4 U	0.4 U	0.8 U	3.2 U
PHASE IV VLT HEAP LEACH PAD: Surface Discrete													
H4VSS04 (FD)	10/26/2007	0.25-0.75	0.5 U	50 U	0.2 U	0.1 U	12	0.05 U	0.5 U	---	0.1 U	0.2 U	0.8 U
VLT SOIL: Surface Discrete													
CAPSS02	10/26/2007	0.25-0.75	1 U	100 U	0.4 U	0.1 U	7.8 J	0.35	1 U	2 U	0.2 U	0.4 U	1.6 U

TABLE C-7
Synthetic Precipitate Leaching Procedure Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

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Notes:

Bolded values exceed Primary or Secondary Federal MCL
[1] - depth in feet below ground surface
mg/L - milligrams per Liter
J - Estimated result
U - Not detected at reporting limit
FD - Field Duplicate
MCL - Federal Maximum Contaminant Level
-- - no MCL available

TABLE C-8
Field Duplicate Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location ID	Sample Depth	Sample Date	Units	Analyte Name	Primary Result	Field Duplicate Result	RPD
Inorganic Results							
H12SS01	0.25-0.75	10/23/07	mg/Kg	Boron	18.2	18	1
H12SS01	0.25-0.75	10/23/07	mg/Kg	Calcium	3460	3970	14
H12SS01	0.25-0.75	10/23/07	mg/Kg	Chloride	43	38 J	12
H12SS01	0.25-0.75	10/23/07	mg/Kg	Magnesium	5630	5500	2
H12SS01	0.25-0.75	10/23/07	%	Moisture	3.6	3.7	3
H12SS01	0.25-0.75	10/23/07	mg/Kg	Nitrogen, Kjeldahl Total	250	180	33
H12SS01	0.25-0.75	10/23/07	pH units	pH	3.58	3.64	2
H12SS01	0.25-0.75	10/23/07	mg/Kg	Phosphorus, Total (as P)	849	730	15
H12SS01	0.25-0.75	10/23/07	mg/Kg	Potassium	592	648	9
H12SS01	0.25-0.75	10/23/07	mg/Kg	Sodium	173	202	15
H12SS01	0.25-0.75	10/23/07	NA	Sodium Absorption Ratio	0.041	0.046	11
H12SS01	0.25-0.75	10/23/07	mg/Kg	Total Nitrogen	250	180	33
H12SS01	0.25-0.75	10/23/07	mg/Kg	Total Oxidizable Nitrogen	3.6	2.3	44
H12SS02	0.25-0.75	10/23/07	mg/Kg	Boron	15.5	15.9	3
H12SS02	0.25-0.75	10/23/07	mg/Kg	Calcium	5850	5870	0
H12SS02	0.25-0.75	10/23/07	mg/Kg	Chloride	57	80 J	34
H12SS02	0.25-0.75	10/23/07	mg/Kg	Magnesium	6310	6200	2
H12SS02	0.25-0.75	10/23/07	%	Moisture	4.9	4.3	13
H12SS02	0.25-0.75	10/23/07	mg/Kg	Nitrogen, Kjeldahl Total	92	220	82
H12SS02	0.25-0.75	10/23/07	pH units	pH	3.46	3.84	10
H12SS02	0.25-0.75	10/23/07	mg/Kg	Phosphorus, Total (as P)	529	534	1
H12SS02	0.25-0.75	10/23/07	mg/Kg	Potassium	457	517	12
H12SS02	0.25-0.75	10/23/07	mg/Kg	Sodium	348	387	11
H12SS02	0.25-0.75	10/23/07	NA	Sodium Absorption Ratio	0.075	0.083	10
H12SS02	0.25-0.75	10/23/07	mg/Kg	Total Nitrogen	94	220	80
H12SS02	0.25-0.75	10/23/07	mg/Kg	Total Oxidizable Nitrogen	1.9	1.6	17
H12SS03	0.25-0.75	10/23/07	mg/Kg	Boron	10.1	8.8	14
H12SS03	0.25-0.75	10/23/07	mg/Kg	Calcium	8920	7270	20
H12SS03	0.25-0.75	10/23/07	mg/Kg	Chloride	13 J	13 J	0
H12SS03	0.25-0.75	10/23/07	mg/Kg	Magnesium	4400	4080	8
H12SS03	0.25-0.75	10/23/07	%	Moisture	2.9	2.4	19
H12SS03	0.25-0.75	10/23/07	mg/Kg	Nitrogen, Kjeldahl Total	110	110	0
H12SS03	0.25-0.75	10/23/07	pH units	pH	3.41	3.8	11
H12SS03	0.25-0.75	10/23/07	mg/Kg	Phosphorus, Total (as P)	519	300	53
H12SS03	0.25-0.75	10/23/07	mg/Kg	Potassium	908	543	50
H12SS03	0.25-0.75	10/23/07	mg/Kg	Sodium	146	93.1 J	44
H12SS03	0.25-0.75	10/23/07	NA	Sodium Absorption Ratio	0.032	0.021	42
H12SS03	0.25-0.75	10/23/07	mg/Kg	Total Nitrogen	110	110	0
H12SS03	0.25-0.75	10/23/07	mg/Kg	Total Oxidizable Nitrogen	0.74 J	0.66 U	NC
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Boron	23.1	20.6	11
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Calcium	2110	2130	1

TABLE C-8
Field Duplicate Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location ID	Sample Depth	Sample Date	Units	Analyte Name	Primary Result	Field Duplicate Result	RPD
Inorganic Results							
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Chloride	18 J	18 J	0
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Magnesium	4520	3820	17
H3SSS05	0.25-0.75	10/24/07	%	Moisture	7.8	8.1	4
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Nitrogen, Kjeldahl Total	250	81	102
H3SSS05	0.25-0.75	10/24/07	pH units	pH	3.44	3.44	0
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Phosphorus, Total (as P)	1370	1320	4
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Potassium	1380	1180	16
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Sodium	242	215	12
H3SSS05	0.25-0.75	10/24/07	NA	Sodium Absorption Ratio	0.063	0.062	2
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Total Nitrogen	250	81	102
H3SSS05	0.25-0.75	10/24/07	mg/Kg	Total Oxidizable Nitrogen	0.69 U	0.94 J	NC
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Boron	10.7	10.7	0
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Calcium	3800	4580	19
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Chloride	21	14 J	40
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Magnesium	3220	3240	1
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Nitrogen, Kjeldahl Total	120	1500	170
H3SSS04	0.25-0.75	10/25/07	pH units	pH	3.76	3.81	1
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Phosphorus, Total (as P)	409	416	2
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Potassium	1470	1460	1
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Sodium	322	373	15
H3SSS04	0.25-0.75	10/25/07	NA	Sodium Absorption Ratio	0.089	0.098	10
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Total Nitrogen	130	1400	166
H3SSS04	0.25-0.75	10/25/07	mg/Kg	Total Oxidizable Nitrogen	4.9	0.64 U	NC
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Boron	26.9	31.3	15
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Calcium	33500	57900	53
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Chloride	98 J	98 J	0
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Magnesium	10500	11700	11
H3XSS06	0.25-0.75	10/25/07	%	Moisture	22.7	22.6	0
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Nitrogen, Kjeldahl Total	390	420	7
H3XSS06	0.25-0.75	10/25/07	pH units	pH	3.28	3.29	0
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Phosphorus, Total (as P)	719	798	10
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Potassium	2550	3050	18
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Sodium	1030	1210	16
H3XSS06	0.25-0.75	10/25/07	NA	Sodium Absorption Ratio	0.11	0.1	10
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Total Nitrogen	400	420	5
H3XSS06	0.25-0.75	10/25/07	mg/Kg	Total Oxidizable Nitrogen	2	2.4	18
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Boron	18.6	25.4	31
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Calcium	14200	16000	12
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Chloride	120	120	0
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Magnesium	7180	6700	7
H4VSS04	0.25-0.75	10/26/07	%	Moisture	10.7	12.9	19

TABLE C-8
Field Duplicate Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location ID	Sample Depth	Sample Date	Units	Analyte Name	Primary Result	Field Duplicate Result	RPD
Inorganic Results							
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Nitrogen, Kjeldahl Total	110	130	17
H4VSS04	0.25-0.75	10/26/07	pH units	pH	3.25	3.26	0
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Phosphorus, Total (as P)	900	1260	33
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Potassium	3490	4990	35
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Sodium	578	719	22
H4VSS04	0.25-0.75	10/26/07	NA	Sodium Absorption Ratio	0.089	0.11	21
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Total Nitrogen	120	130	8
H4VSS04	0.25-0.75	10/26/07	mg/Kg	Total Oxidizable Nitrogen	2.8	2.4	15
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Alkalinity, Bicarbonate (as CACO3)	1200	1700	34
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Alkalinity, Total (as CACO3)	1200	1700	34
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Boron	11	14	24
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Calcium	11000	13900	23
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Chloride	37	37	0
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Magnesium	4400	4860	10
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Nitrogen, Kjeldahl Total	120	130	8
CAPSS01	0.25-0.75	10/29/07	pH units	pH	5.9	7.89	29
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Phosphorus, Total (as P)	374	559	40
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Potassium	1030	1060	3
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Sodium	252	207	20
CAPSS01	0.25-0.75	10/29/07	NA	Sodium Absorption Ratio	0.05	0.038	27
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Total Nitrogen	120	130	8
CAPSS01	0.25-0.75	10/29/07	mg/Kg	Total Oxidizable Nitrogen	2.8	2	33
CAPSS03	0.25-0.75	10/29/07	mg/Kg	Boron	28.3	28.3	0
CAPSS03	0.25-0.75	10/29/07	mg/Kg	Calcium	2180	2630	19
CAPSS03	0.25-0.75	10/29/07	mg/Kg	Chloride	32 J	24	29
CAPSS03	0.25-0.75	10/29/07	mg/Kg	Magnesium	674	1070	45
CAPSS03	0.25-0.75	10/29/07	%	Moisture	5.3	5	6
CAPSS03	0.25-0.75	10/29/07	mg/Kg	Nitrogen, Kjeldahl Total	300	270	11
CAPSS03	0.25-0.75	10/29/07	pH units	pH	2.7	2.66	1
CAPSS03	0.25-0.75	10/29/07	mg/Kg	Phosphorus, Total (as P)	305	303	1
CAPSS03	0.25-0.75	10/29/07	mg/Kg	Potassium	1690	1590	6
CAPSS03	0.25-0.75	10/29/07	mg/Kg	Sodium	913	674	30
CAPSS03	0.25-0.75	10/29/07	NA	Sodium Absorption Ratio	0.41	0.27	41
CAPSS03	0.25-0.75	10/29/07	mg/Kg	Total Nitrogen	300	270	11
Metal Results							
H4VSU03	0-50	10/06/07	mg/Kg	Aluminum	6370	6020	6
H4VSU03	0-50	10/06/07	mg/Kg	Antimony	0.58 J	0.9 J	43
H4VSU03	0-50	10/06/07	mg/Kg	Arsenic	3.8 J	4.4 J	15
H4VSU03	0-50	10/06/07	mg/Kg	Calcium	3020	2610	15
H4VSU03	0-50	10/06/07	mg/Kg	Chromium	4.1	3.7	10
H4VSU03	0-50	10/06/07	mg/Kg	Cobalt	6.2 J	6.2 J	0

TABLE C-8
Field Duplicate Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location ID	Sample Depth	Sample Date	Units	Analyte Name	Primary Result	Field Duplicate Result	RPD
Metal Results							
H4VSU03	0-50	10/06/07	mg/Kg	Copper	686	645	6
H4VSU03	0-50	10/06/07	mg/Kg	Iron	12100	12200	1
H4VSU03	0-50	10/06/07	mg/Kg	Lead	2.9	3.8	27
H4VSU03	0-50	10/06/07	mg/Kg	Magnesium	5820	5380	8
H4VSU03	0-50	10/06/07	mg/Kg	Manganese	75.9	73.5	3
H4VSU03	0-50	10/06/07	mg/Kg	Mercury	0.24	0.23	4
H4VSU03	0-50	10/06/07	mg/Kg	Nickel	3.5 J	3.7 J	6
H4VSU03	0-50	10/06/07	mg/Kg	Potassium	1320	1140	15
H4VSU03	0-50	10/06/07	mg/Kg	Selenium	0.47 J	3.9 UJ	NC
H4VSU03	0-50	10/06/07	mg/Kg	Sodium	227 J	211 J	7
H4VSU03	0-50	10/06/07	mg/Kg	Vanadium	16.5	18.5	11
H4SSU03	50-77	10/09/07	mg/Kg	Aluminum	5780	6280	8
H4SSU03	50-77	10/09/07	mg/Kg	Antimony	1.2 J	1.2 J	0
H4SSU03	50-77	10/09/07	mg/Kg	Arsenic	5.5 J	11.5 J	71
H4SSU03	50-77	10/09/07	mg/Kg	Barium	74.9	56.6	28
H4SSU03	50-77	10/09/07	mg/Kg	Calcium	3190	4630	37
H4SSU03	50-77	10/09/07	mg/Kg	Chromium	4.4	5.5	22
H4SSU03	50-77	10/09/07	mg/Kg	Cobalt	4 J	4.3 J	7
H4SSU03	50-77	10/09/07	mg/Kg	Copper	856	946	10
H4SSU03	50-77	10/09/07	mg/Kg	Iron	15400	21200	32
H4SSU03	50-77	10/09/07	mg/Kg	Lead	3.1	3.5	12
H4SSU03	50-77	10/09/07	mg/Kg	Magnesium	4770	4860	2
H4SSU03	50-77	10/09/07	mg/Kg	Manganese	57.7	63.2	9
H4SSU03	50-77	10/09/07	mg/Kg	Mercury	0.093 UJ	0.14	NC
H4SSU03	50-77	10/09/07	mg/Kg	Nickel	1.3 J	0.35 J	115
H4SSU03	50-77	10/09/07	mg/Kg	Potassium	1500	1590	6
H4SSU03	50-77	10/09/07	mg/Kg	Selenium	0.52 J	3.8 UJ	NC
H4SSU03	50-77	10/09/07	mg/Kg	Sodium	168 J	212 J	23
H4SSU03	50-77	10/09/07	mg/Kg	Vanadium	25.6	29	12
H12SU01	0-50	10/11/07	mg/Kg	Aluminum	5340	5160	3
H12SU01	0-50	10/11/07	mg/Kg	Antimony	1.7 J	0.85 J	67
H12SU01	0-50	10/11/07	mg/Kg	Arsenic	9.5 J	5.7 J	50
H12SU01	0-50	10/11/07	mg/Kg	Barium	55	62.5	13
H12SU01	0-50	10/11/07	mg/Kg	Cadmium	1.2 J	1 UJ	NC
H12SU01	0-50	10/11/07	mg/Kg	Calcium	3240	2690	19
H12SU01	0-50	10/11/07	mg/Kg	Chromium	5.7	4.8	17
H12SU01	0-50	10/11/07	mg/Kg	Cobalt	2.8 J	2.3 J	20
H12SU01	0-50	10/11/07	mg/Kg	Copper	1080	1040	4
H12SU01	0-50	10/11/07	mg/Kg	Iron	20300	19600	4
H12SU01	0-50	10/11/07	mg/Kg	Lead	3	2.4	22
H12SU01	0-50	10/11/07	mg/Kg	Magnesium	4310	4480	4

TABLE C-8
Field Duplicate Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location ID	Sample Depth	Sample Date	Units	Analyte Name	Primary Result	Field Duplicate Result	RPD
Metal Results							
H12SU01	0-50	10/11/07	mg/Kg	Manganese	43.9	41.6	5
H12SU01	0-50	10/11/07	mg/Kg	Mercury	0.13	0.15	14
H12SU01	0-50	10/11/07	mg/Kg	Potassium	1120	1260	12
H12SU01	0-50	10/11/07	mg/Kg	Sodium	120 J	115 J	4
H12SU01	0-50	10/11/07	mg/Kg	Vanadium	26.8	22.5	17
H3XSU02	50-67	10/17/07	mg/Kg	Aluminum	3910	4050	4
H3XSU02	50-67	10/17/07	mg/Kg	Antimony	0.47 J	0.7 J	39
H3XSU02	50-67	10/17/07	mg/Kg	Arsenic	3.7	6.8	59
H3XSU02	50-67	10/17/07	mg/Kg	Barium	34.2 J	32.1 J	6
H3XSU02	50-67	10/17/07	mg/Kg	Calcium	1990	2180	9
H3XSU02	50-67	10/17/07	mg/Kg	Chromium	2.7	2.6	4
H3XSU02	50-67	10/17/07	mg/Kg	Cobalt	2.1 J	2.2 J	5
H3XSU02	50-67	10/17/07	mg/Kg	Copper	554	617	11
H3XSU02	50-67	10/17/07	mg/Kg	Iron	10900	11100	2
H3XSU02	50-67	10/17/07	mg/Kg	Lead	1.8 J	1.7 J	6
H3XSU02	50-67	10/17/07	mg/Kg	Magnesium	2930	3210	9
H3XSU02	50-67	10/17/07	mg/Kg	Manganese	35.2	47.8	30
H3XSU02	50-67	10/17/07	mg/Kg	Mercury	0.33	0.22	40
H3XSU02	50-67	10/17/07	mg/Kg	Potassium	860 J	1310	41
H3XSU02	50-67	10/17/07	mg/Kg	Sodium	85.7 J	93.2 J	8
H3XSU02	50-67	10/17/07	mg/Kg	Vanadium	16	17.3	8
H3XSU02	50-67	10/17/07	mg/Kg	Zinc	6.1 J	8.7 J	35
SPLP Results							
H4VSU03	0-50	10/06/07	mg/L	Aluminum	36	39	8
H4VSU03	0-50	10/06/07	mg/L	Calcium	78	83	6
H4VSU03	0-50	10/06/07	mg/L	Copper	5	5.3	6
H4VSU03	0-50	10/06/07	mg/L	Magnesium	48	52	8
H4VSU03	0-50	10/06/07	mg/L	Manganese	1.4	1.6	13
H4VSU03	0-50	10/06/07	mg/L	Sodium	9.4 J	12 J	24
H4VSU03	0-50	10/06/07	mg/L	Strontium	0.26	0.27	4
H12SU02	0-50	10/10/07	mg/L	Aluminum	16 J	15	6
H12SU02	50-77	10/10/07	mg/L	Aluminum	17 J	17	0
H12SU02	0-50	10/10/07	mg/L	Calcium	110	110	0
H12SU02	50-77	10/10/07	mg/L	Calcium	100	100	0
H12SU02	0-50	10/10/07	mg/L	Copper	8.6	8.1	6
H12SU02	50-77	10/10/07	mg/L	Copper	7.2	7.2	0
H12SU02	0-50	10/10/07	mg/L	Iron	14 J	11	24
H12SU02	0-50	10/10/07	mg/L	Magnesium	35	34	3
H12SU02	50-77	10/10/07	mg/L	Magnesium	29	29	0
H12SU02	0-50	10/10/07	mg/L	Manganese	1	0.95	5
H12SU02	50-77	10/10/07	mg/L	Manganese	0.51 J	0.53	4

TABLE C-8
Field Duplicate Results, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location ID	Sample Depth	Sample Date	Units	Analyte Name	Primary Result	Field Duplicate Result	RPD
SPLP Results							
H12SU02	0-50	10/10/07	mg/L	Mercury	0.00015 J	0.0006 U	NC
H12SU02	50-77	10/10/07	mg/L	Mercury	0.00081	0.00041	66
H12SU02	0-50	10/10/07	mg/L	Sodium	9.5 J	11 J	15
H12SU02	50-77	10/10/07	mg/L	Sodium	13 J	11 J	17
H12SU02	0-50	10/10/07	mg/L	Strontium	0.54	0.51	6
H12SU02	50-77	10/10/07	mg/L	Strontium	0.51	0.49	4
H12SU01	50-77	10/11/07	mg/L	Aluminum	22	22	0
H12SU01	0-50	10/11/07	mg/L	Calcium	90	86	5
H12SU01	50-77	10/11/07	mg/L	Calcium	110	100	10
H12SU01	0-50	10/11/07	mg/L	Copper	3.4	3.3	3
H12SU01	50-77	10/11/07	mg/L	Copper	2.5	2.5	0
H12SU01	0-50	10/11/07	mg/L	Magnesium	17	17	0
H12SU01	50-77	10/11/07	mg/L	Magnesium	36	36	0
H12SU01	0-50	10/11/07	mg/L	Manganese	0.65 J	0.6 J	8
H12SU01	50-77	10/11/07	mg/L	Manganese	1.2	1.2	0
H12SU01	0-50	10/11/07	mg/L	Mercury	0.00015 J	0.0006 U	NC
H12SU01	50-77	10/11/07	mg/L	Mercury	0.0006 U	0.00021 J	NC
H12SU01	0-50	10/11/07	mg/L	Sodium	11 J	9.8 J	12
H12SU01	50-77	10/11/07	mg/L	Sodium	13 J	12 J	8
H12SU01	0-50	10/11/07	mg/L	Strontium	0.52	0.49	6
H12SU01	50-77	10/11/07	mg/L	Strontium	0.62	0.51	19
H3XSU02	50-67	10/17/07	mg/L	Aluminum	18	16	12
H3XSU02	50-67	10/17/07	mg/L	Calcium	83	77	8
H3XSU02	50-67	10/17/07	mg/L	Cobalt	0.1 J	0.4 U	NC
H3XSU02	50-67	10/17/07	mg/L	Copper	1.4	1.3	7
H3XSU02	50-67	10/17/07	mg/L	Magnesium	31	29	7
H3XSU02	50-67	10/17/07	mg/L	Manganese	0.89	0.86	3
H3XSU02	50-67	10/17/07	mg/L	Sodium	11 J	11 J	0
H3XSU02	50-67	10/17/07	mg/L	Strontium	0.31	0.3	3
Total Petroleum Hydrocarbon Results							
H12SU01	0-50	10/11/07	mg/Kg	TPH, as diesel	6.3	6.8	8
H3XSU02	50-67	10/17/07	mg/Kg	TPH, as motor oil	19 J	16 J	17

Notes:

RPD - Relative Percent Difference = { (Primary Sample - Field Duplicate) / (Primary Sample + Field Duplicate) / 2 } x 100
RPD is calculated and shown only when both the primary and Field Duplicate samples are detected above the Reporting Limit
NC - not calculated
mg/L - milligrams per Liter
mg/Kg - milligrams per kilogram
J - Estimated result
U - Not detected at reporting limit

TABLE C-9
Meteoric Water Mobilty Procedure Results and Dilutions, Surface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Dilution	Units
PHASE IV VLT HEAP LEACH PAD: Surface Discrete											
H4VSS03	10/26/2007	0.25-0.75	N	M6010B ICP	Silver	0.2 U	0.2	0.001	0.1		mg/L

Notes:

Screening Limit is lesser of the Primary or Secondary Federal MCL or NDEP Profile II Standards
[1] - depth in feet below ground surface
mg/L - milligrams per Liter
J - Estimated result
U - Not detected at reporting limit
CaCO3 - Calcium carbonate
N - Nitrogen
N - Normal sample
MCL - Federal Maximum Contaminant Level
-- - no MCL available

TABLE C-10
Metal Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Dilution	Units
PHASE I/II HEAP LEACH PAD: Surface Discrete											
H12SS01	10/23/2007	0.25-0.75	FD	SW6010B	Thallium	10 U	10	2.5	5.2	2	mg/Kg
PHASE III 4X HEAP LEACH PAD: Surface Discrete											
H3XSS08	10/25/2007	0.25-0.75	FD	SW6010B	Thallium	10 U	10	2.5	5.2	2	mg/Kg
PHASE III SOUTH HEAP LEACH PAD: Surface Discrete											
H3SSS04	10/25/2007	0.25-0.75	FD	SW6010B	Thallium	10 U	10	2.5	5.2	2	mg/Kg
PHASE IV SLOT HEAP LEACH PAD: Surface Discrete											
H4SSS06	10/24/2007	0.25-0.75	FD	SW6010B	Thallium	10 U	10	2.5	5.2	2	mg/Kg
PHASE IV VLT HEAP LEACH PAD: Surface Discrete											
H4VSS01	10/26/2007	0.25-0.75	FD	SW6010B	Thallium	10 U	10	2.5	5.2	2	mg/Kg

Notes:

Screening Limit is lesser of the Industrial or Residential PRG
[1] - depth in feet below ground surface
mg/Kg - milligrams per kilogram
J - Estimated result
U - Not detected at reporting limit
N - Normal sample
FD - Field Duplicate
PRG - Preliminary Remediation Goal (EPA, 2004)

TABLE C-11
Synthetic Precipitate Leaching Procedure Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Dilution	Units
PHASE I/II HEAP LEACH PAD: Soil Boring Composite											
H12SU01	10/11/2007	0-50	N	SW6010B	Aluminum	40 U	40	0.2	0.05	2	mg/L
				SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H12SU01	10/11/2007	0-50	FD	SW6010B	Aluminum	40 U	40	0.2	0.05	2	mg/L
				SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H12SU01	10/11/2007	50-77	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H12SU01	10/11/2007	50-77	MS	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
H12SU01	10/11/2007	50-77	FD	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L

TABLE C-11
Synthetic Precipitate Leaching Procedure Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Screening Reporting Limit	Screening Limit	Dilution	Units
PHASE I/II HEAP LEACH PAD: Soil Boring Composite											
H12SU01	10/11/2007	50-77	FD	SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H12SU02	10/10/2007	0-50	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H12SU02	10/10/2007	0-50	MS	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
H12SU02	10/10/2007	0-50	FD	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
H12SU02	10/10/2007	50-77	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L

TABLE C-11
Synthetic Precipitate Leaching Procedure Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Screening Reporting Limit	Limit	Dilution	Units
PHASE I/II HEAP LEACH PAD: Soil Boring Composite											
H12SU02	10/10/2007	50-77	N	SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H12SU02	10/10/2007	50-77	FD	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
PHASE III 4X HEAP LEACH PAD: Soil Boring Composite											
H3XSU01	10/16/2007	0-50	N	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
H3XSU01	10/16/2007	50-67	N	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
H3XSU02	10/17/2007	50-67	N	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L

TABLE C-11
Synthetic Precipitate Leaching Procedure Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Screening Reporting Limit	Screening Limit	Dilution	Units
PHASE III 4X HEAP LEACH PAD: Soil Boring Composite											
H3XSU02	10/17/2007	50-67	FD	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
PHASE III 4X HEAP LEACH PAD: Surface Discrete											
H3XSS07	10/25/2007	0.25-0.75	FD	SW6010B	Antimony	0.2 U	0.2	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.2 U	0.2	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.01 U	0.01	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.05 U	0.05	0.001	0.005	1	mg/L
				SW6010B	Iron	10 U	10	0.1	0.3	1	mg/L
				SW6010B	Lead	0.3 U	0.3	0.001	0.015	1	mg/L
				SW6010B	Nickel	0.5 U	0.5	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.2 U	0.2	0.005	0.05	1	mg/L
				SW6010B	Thallium	0.5 U	0.5	0.001	0.002	1	mg/L
PHASE III SOUTH HEAP LEACH PAD: Soil Boring Composite											
H3SSU01	9/25/2007	0-50	N	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Silver	0.2 U	0.2	0.001	0.1	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
H3SSU01	9/25/2007	20-97	N	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Silver	0.2 U	0.2	0.001	0.1	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
H3SSU02	10/7/2007	100-112	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L

TABLE C-11
Synthetic Precipitate Leaching Procedure Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Dilution	Units
PHASE III SOUTH HEAP LEACH PAD: Soil Boring Composite											
H3SSU02	10/7/2007	100-112	N	SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H3SSU02	10/7/2007	50-100	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H3SSU03	10/6/2007	100-117	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H3SSU04	9/26/2007	50-100	N	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Silver	0.2 U	0.2	0.001	0.1	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
PHASE IV SLOT HEAP LEACH PAD: Soil Boring Composite											
H4SSU01	10/8/2007	0-50	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L

TABLE C-11
Synthetic Precipitate Leaching Procedure Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Screening Reporting Limit	Screening Limit	Dilution	Units
PHASE IV SLOT HEAP LEACH PAD: Soil Boring Composite											
H4SSU01	10/8/2007	0-50	N	SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H4SSU01	10/8/2007	50-97	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H4SSU02	10/9/2007	0-50	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H4SSU03	10/9/2007	50-77	N	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
PHASE IV VLT HEAP LEACH PAD: Soil Boring Composite											
H4VSU01	9/27/2007	0-50	N	SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L

TABLE C-11
Synthetic Precipitate Leaching Procedure Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Dilution	Units
PHASE IV VLT HEAP LEACH PAD: Soil Boring Composite											
H4VSU01	9/27/2007	0-50	N	SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Silver	0.2 U	0.2	0.001	0.1	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
H4VSU01	9/27/2007	50-107	N	SW6010B	Aluminum	20 U	20	0.2	0.05	1	mg/L
				SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L
				SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Silver	0.2 U	0.2	0.001	0.1	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L
H4VSU02	10/2/2007	0-50	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H4VSU02	10/5/2007	50-107	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H4VSU03	10/6/2007	0-50	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L

TABLE C-11
Synthetic Precipitate Leaching Procedure Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Dilution	Units
PHASE IV VLT HEAP LEACH PAD: Soil Boring Composite											
H4VSU03	10/6/2007	0-50	N	SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H4VSU03	10/6/2007	0-50	FD	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
H4VSU03	10/6/2007	50-87	N	SW6010B	Antimony	0.8 U	0.8	0.002	0.006	2	mg/L
				SW6010B	Arsenic	0.8 U	0.8	0.001	0.01	2	mg/L
				SW6010B	Beryllium	0.04 U	0.04	0.001	0.004	2	mg/L
				SW6010B	Cadmium	0.2 U	0.2	0.001	0.005	2	mg/L
				SW6010B	Chromium	0.4 U	0.4	0.002	0.1	2	mg/L
				SW6010B	Iron	40 U	40	0.1	0.3	2	mg/L
				SW6010B	Lead	1.2 U	1.2	0.001	0.015	2	mg/L
				SW6010B	Nickel	2 U	2	0.001	0.1	2	mg/L
				SW6010B	Selenium	0.8 U	0.8	0.005	0.05	2	mg/L
				SW6010B	Silver	0.4 U	0.4	0.001	0.1	2	mg/L
				SW6010B	Thallium	2 U	2	0.001	0.002	2	mg/L
PHASE IV VLT HEAP LEACH PAD: Surface Discrete											
H4VSS04	10/26/2007	0.25-0.75	FD	SW6010B	Aluminum	10 U	10	0.2	0.05	1	mg/L
				SW6010B	Antimony	0.2 U	0.2	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.2 U	0.2	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.01 U	0.01	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.05 U	0.05	0.001	0.005	1	mg/L
				SW6010B	Iron	10 U	10	0.1	0.3	1	mg/L
				SW6010B	Lead	0.3 U	0.3	0.001	0.015	1	mg/L
				SW6010B	Manganese	0.5 U	0.5	0.001	0.05	1	mg/L
				SW6010B	Nickel	0.5 U	0.5	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.2 U	0.2	0.005	0.05	1	mg/L
				SW6010B	Thallium	0.5 U	0.5	0.001	0.002	1	mg/L
VLT SOIL: Surface Discrete											
CAPSS02	10/26/2007	0.25-0.75	N	SW6010B	Aluminum	20 U	20	0.2	0.05	1	mg/L
				SW6010B	Antimony	0.4 U	0.4	0.002	0.006	1	mg/L
				SW6010B	Arsenic	0.4 U	0.4	0.001	0.01	1	mg/L
				SW6010B	Beryllium	0.02 U	0.02	0.001	0.004	1	mg/L
				SW6010B	Cadmium	0.1 U	0.1	0.001	0.005	1	mg/L

TABLE C-11
Synthetic Precipitate Leaching Procedure Results and Dilutions, Surface and Subsurface Soils
Arimetco Heap Leach Pads, Anaconda Yerington Mine

Location	Sample Date	Depth [1]	Sample Type	Method	Parameter	Result	Lab Reporting Limit	Requested Reporting Limit	Screening Limit	Dilution	Units
VLT SOIL: Surface Discrete											
CAPSS02	10/26/2007	0.25-0.75	N	SW6010B	Chromium	0.2 U	0.2	0.002	0.1	1	mg/L
				SW6010B	Iron	20 U	20	0.1	0.3	1	mg/L
				SW6010B	Lead	0.6 U	0.6	0.001	0.015	1	mg/L
				SW6010B	Manganese	1 U	1	0.001	0.05	1	mg/L
				SW6010B	Nickel	1 U	1	0.001	0.1	1	mg/L
				SW6010B	Selenium	0.4 U	0.4	0.005	0.05	1	mg/L
				SW6010B	Thallium	1 U	1	0.001	0.002	1	mg/L

Notes:

Screening Limit is lesser of the Primary or Secondary Federal MCL
[1] - depth in feet below ground surface
mg/L - milligrams per Liter
J - Estimated result
U - Not detected at reporting limit
N - Normal sample
FD - Field Duplicate
MCL - Federal Maximum Contaminant Level

Attachment D
Group A HLP Statistical Analyses & ANOVA Analysis

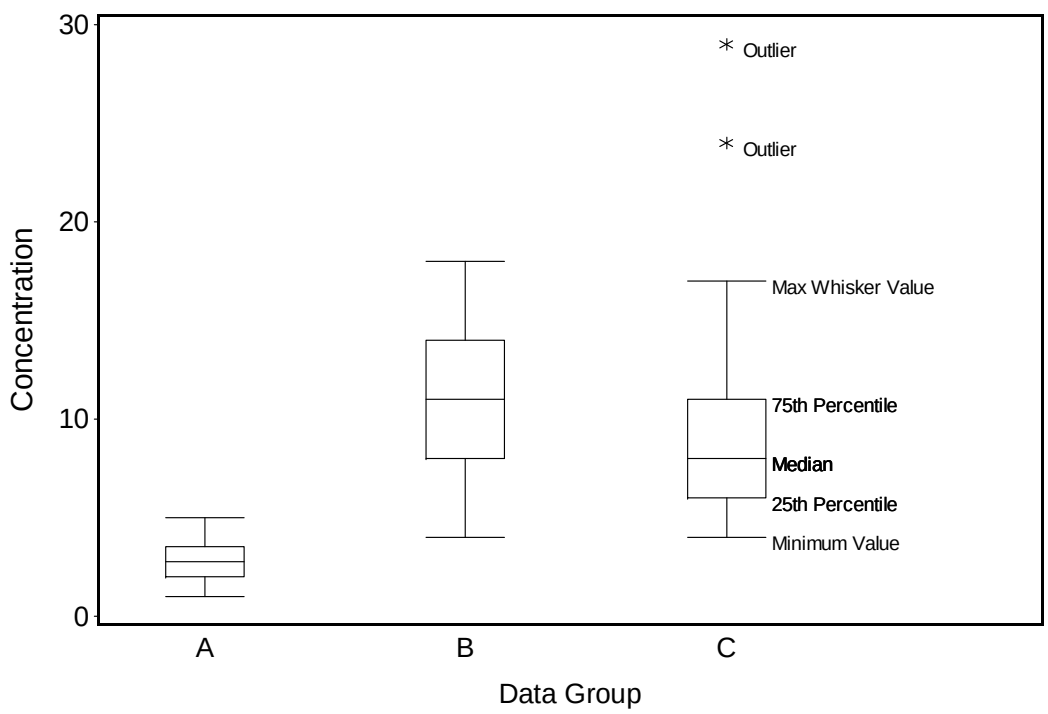
Box and Whisker Plots - Explanation

Box and whisker plots present information on the central tendency, variability, and skewness for a sample data set by sketching the center 50% of the concentrations with a box, and then illustrating the typical tail regions of the distribution with whiskers. For atypical concentrations that extend further from the center than the whiskers, individual data symbols are plotted. Specifically, these box and whisker plots are constructed as follows:

- The height of the box represents the interquartile range (IQR). The IQR is the distance between the 25th and the 75th percentiles.
- The horizontal line in the box interior represents the median.
- The vertical lines issuing from the box extend to the minimum and maximum measured values (as long as these minimum and maximum values do not extend further from the box than a distance of 1.5 times the interquartile range).
- Individual data symbols are used for concentrations that exceed the whiskers.

These principles are illustrated in the example plots shown in Figure 2. The upper and lower edges of the box and the ends of the whiskers all represent actual measured concentrations in the sample data set. Specifically for Data Group C, the 25th percentile, 75th percentile, and median are all labeled as part of the box. In this plot the overall minimum value overall serves as the end of the whisker since it is within a distance of 1.5 x IQR from the box. The maximum value (and the next to the largest value), however, are further from the box than a distance of 1.5 x IQR. Thus, they are labeled as outliers. The third largest overall value, that represents the largest value within a distance of 1.5 x IQR, serves as the end of the upper whisker.

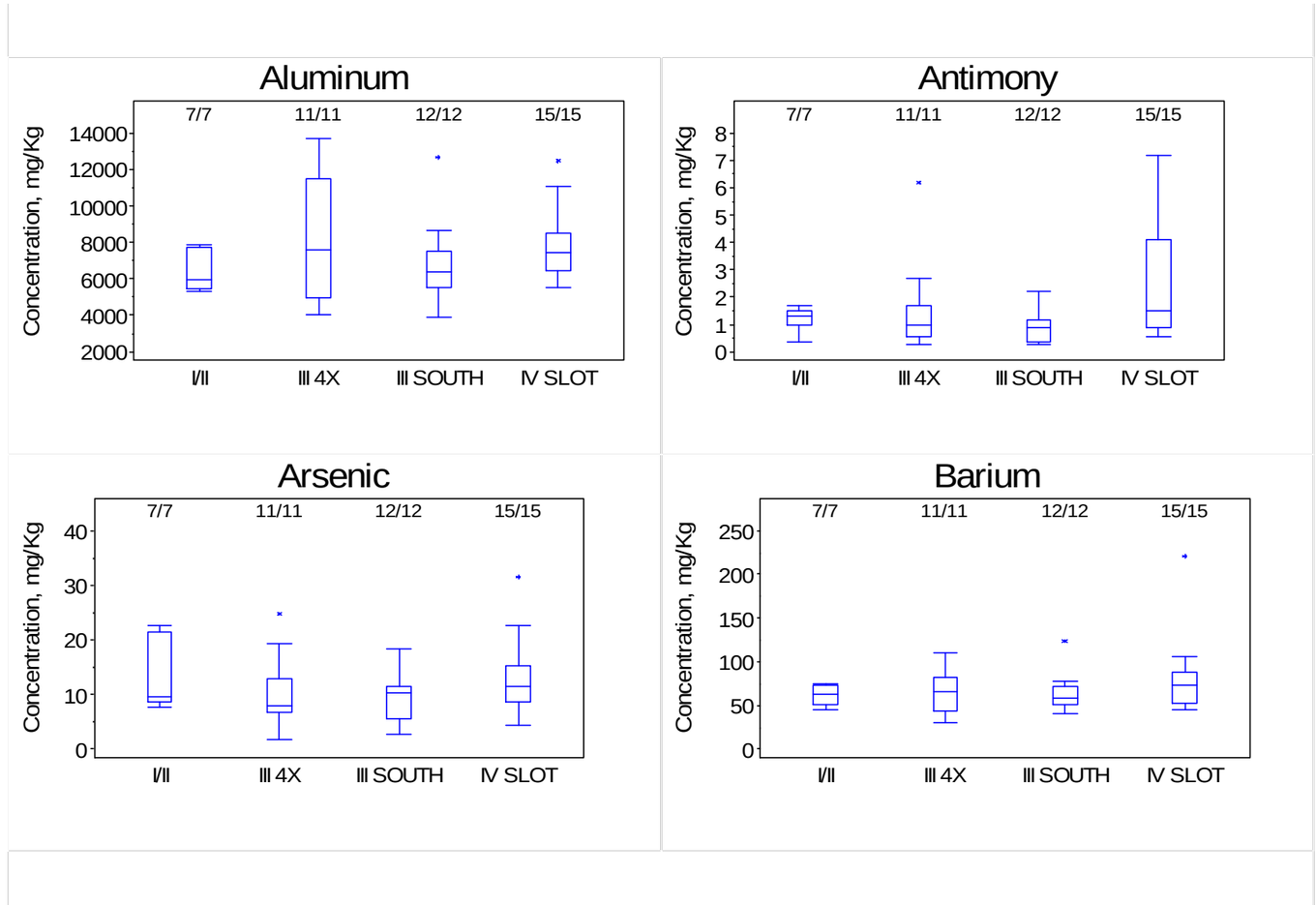
Figure 2: Example Box and Whisker Plots



Thus the lengths of the upper and lower whiskers will vary independently based on the location of the value furthest from the center that is still within 1.5 x IQR. Note in Figure 2 that the upper and lower whiskers (particularly for data group C) are not always similar lengths for a given plot. Furthermore, if the only points which fall outside the box extend further from the box than 1.5 x IQR, then no whisker will appear at all. (The whisker will have zero length.) If all of the sample results equal the same value, then the box and whiskers all collapse into a single horizontal line.

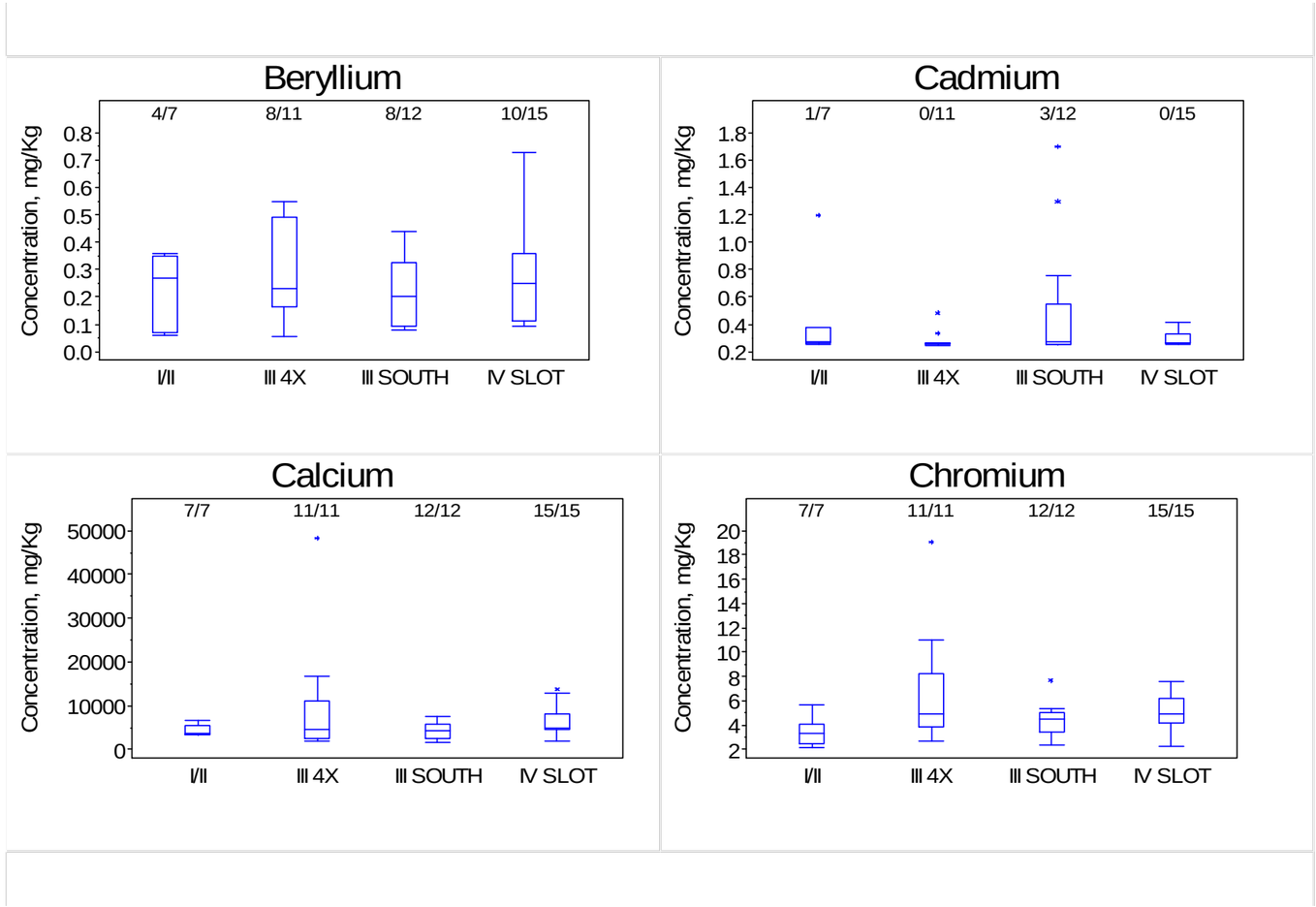
Various interpretations are possible by examining these box and whisker plots. For example, if extensive overlap exists between the box plots from different data groups, such as between data groups B and C, then the measurements from each group, on average, are very similar. Conversely, little overlap, as seen between data group A and the other two, suggests that the measurements from the groups are, on average, quite different. These visual observations are often best clarified with statistical tests (e.g. ANOVA).

Figure 1: Box and Whisker Plots Comparing Concentrations from Four Heap Leach Pads



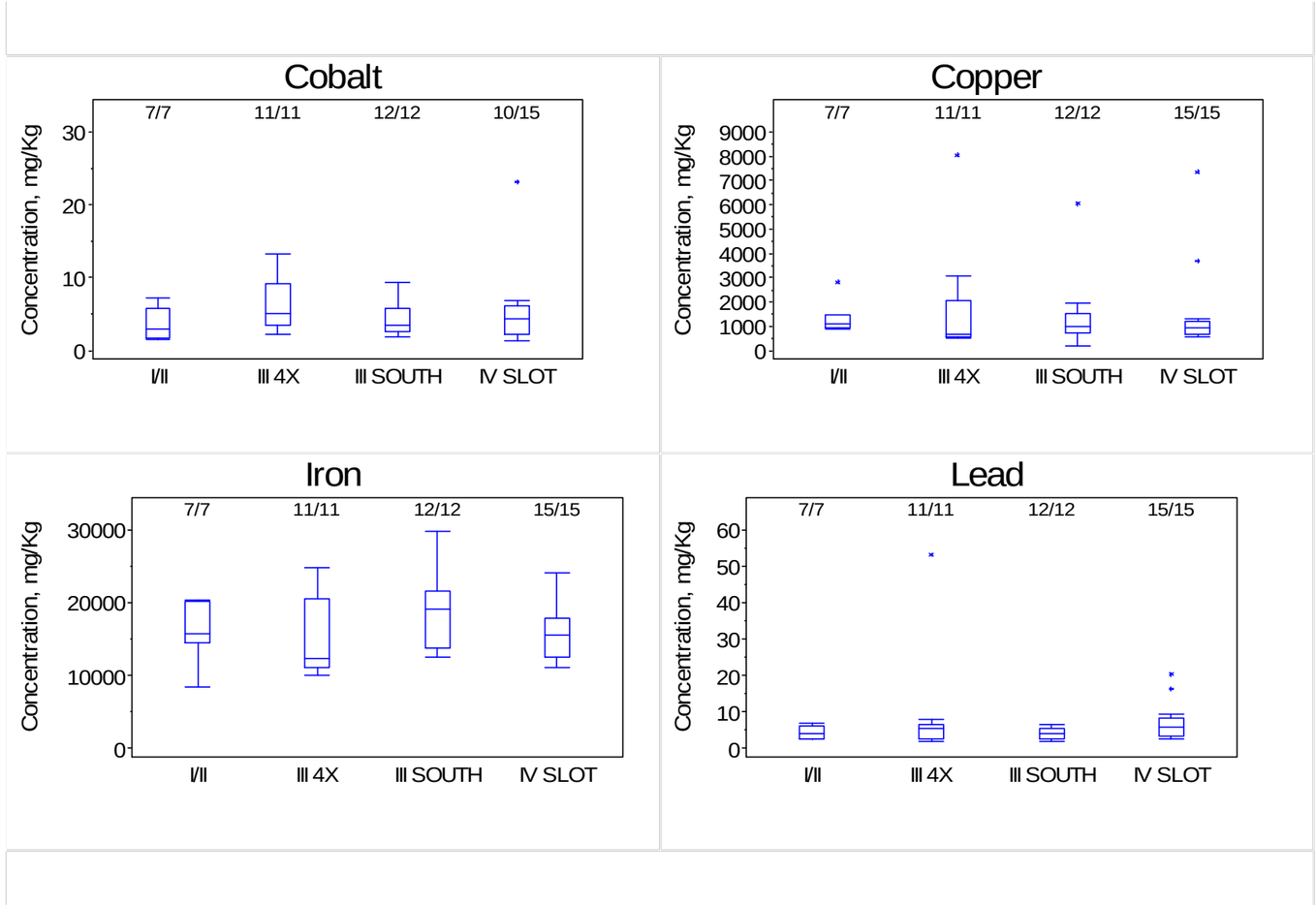
Frequency of Detection at Top of Each Plot

Figure 1: Box and Whisker Plots Comparing Concentrations from Four Heap Leach Pads



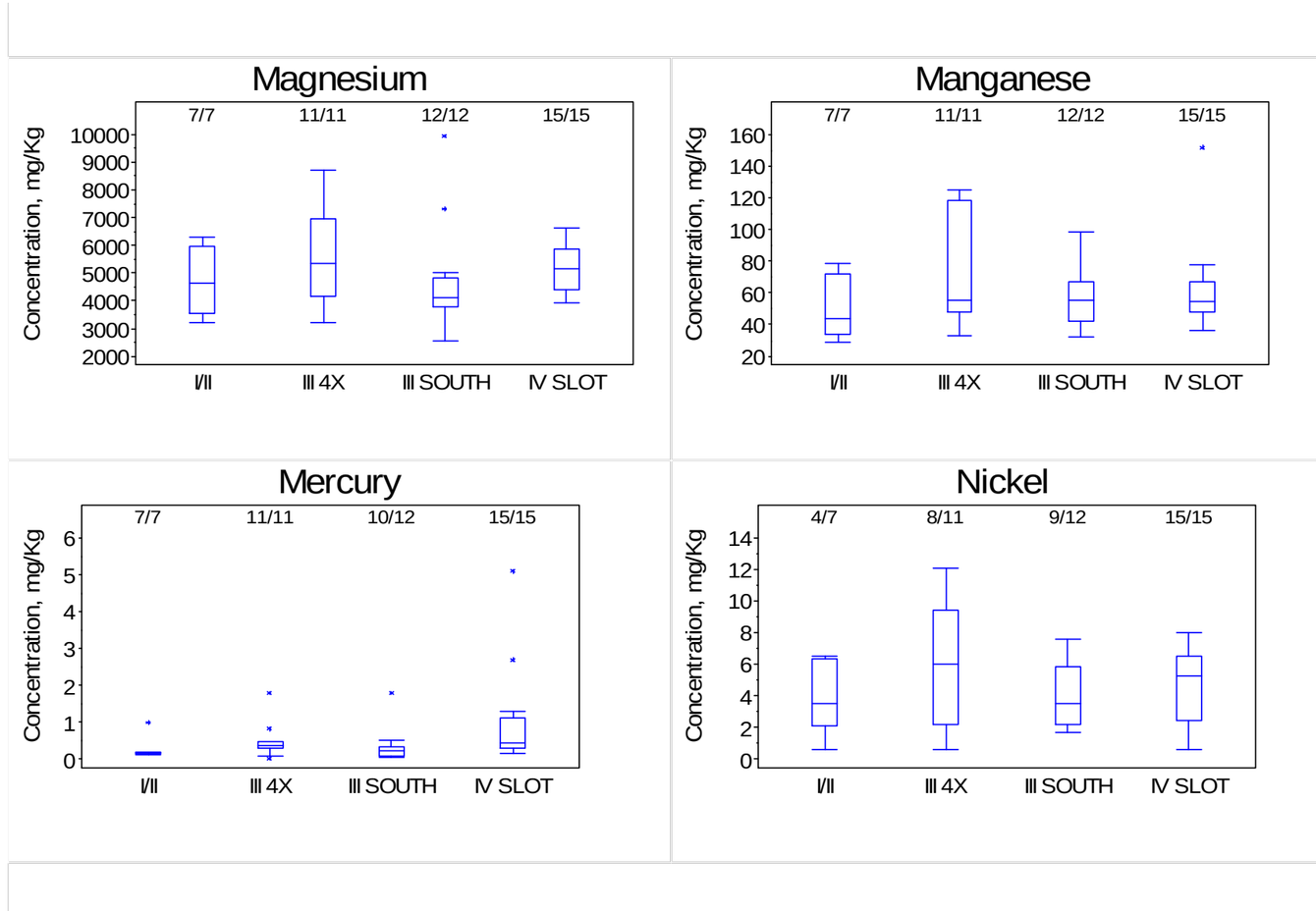
Frequency of Detection at Top of Each Plot

Figure 1: Box and Whisker Plots Comparing Concentrations from Four Heap Leach Pads



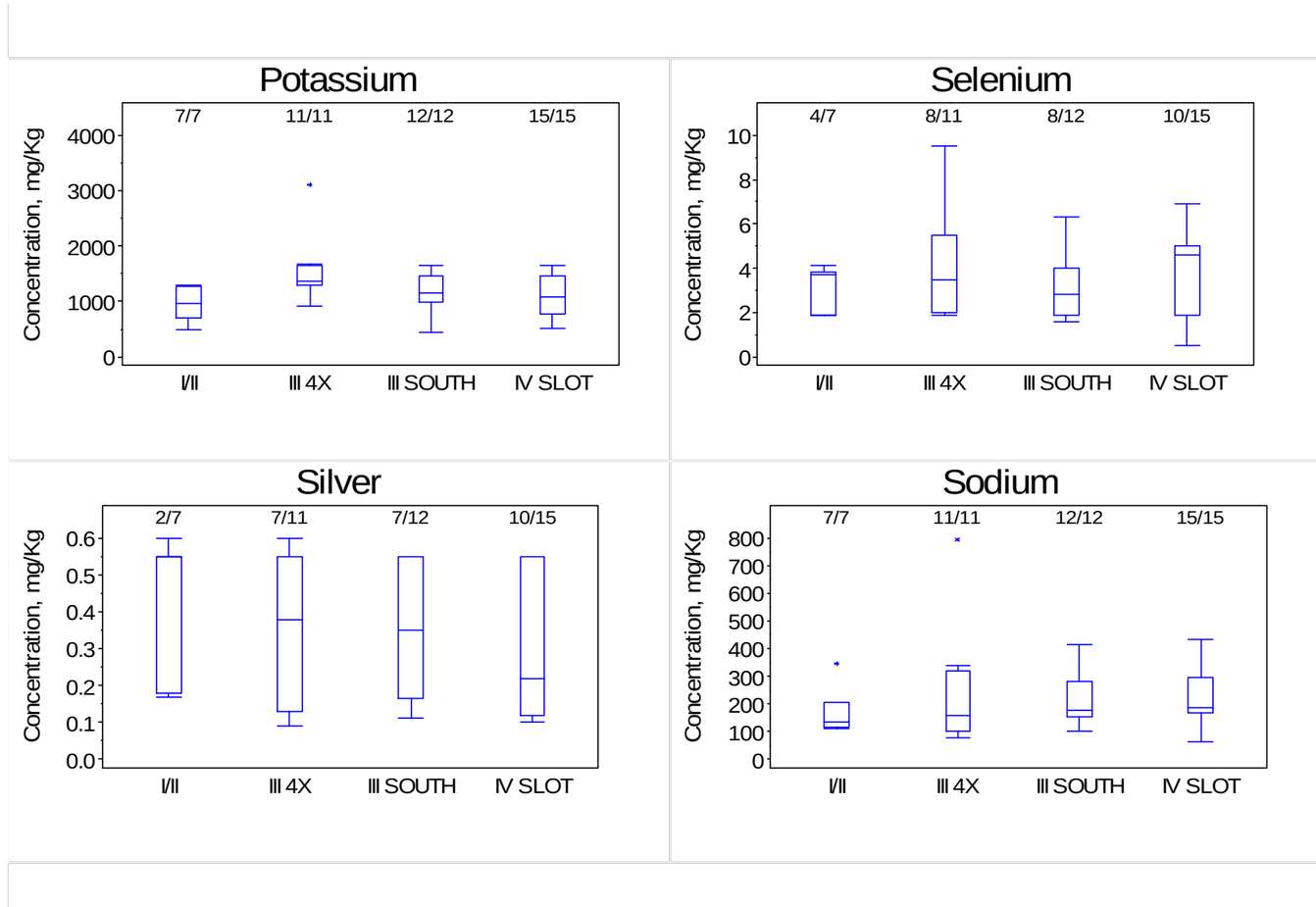
Frequency of Detection at Top of Each Plot

Figure 1: Box and Whisker Plots Comparing Concentrations from Four Heap Leach Pads



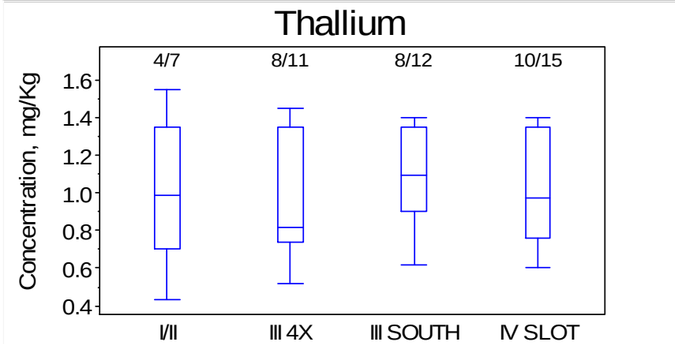
Frequency of Detection at Top of Each Plot

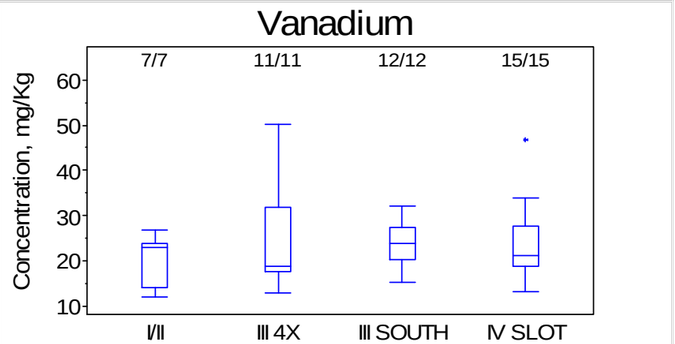
Figure 1: Box and Whisker Plots Comparing Concentrations from Four Heap Leach Pads

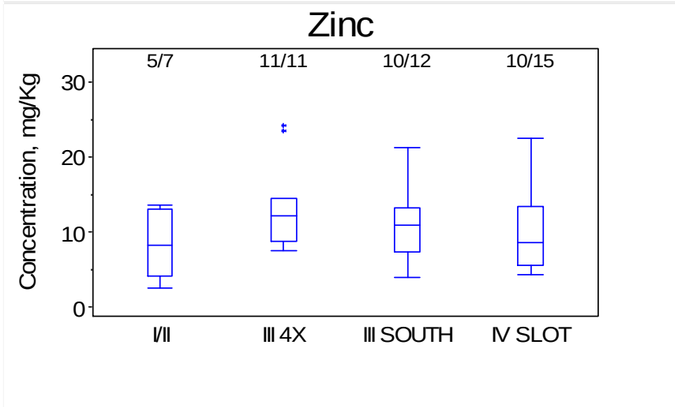


Frequency of Detection at Top of Each Plot

Figure 1: Box and Whisker Plots Comparing Concentrations from Four Heap Leach Pads







Frequency of Detection at Top of Each Plot

Table 1: Nonparametric ANOVA Comparing Concentrations from Different Heap I

Constituent	Percent Detects	Calculated Probability	Is there a significant difference between heap pads using a 0.05 signficance level?	Is there a significant difference between heap pads using a 0.01 signficance level?
Aluminum	100	0.286	no	no
Antimony	100	0.041	Yes	no
Arsenic	100	0.522	no	no
Barium	100	0.610	no	no
Beryllium	67	0.699	no	no
Calcium	100	0.318	no	no
Chromium	100	0.070	no	no
Cobalt	89	0.390	no	no
Copper	100	0.672	no	no
Iron	100	0.281	no	no
Lead	100	0.217	no	no
Magnesium	100	0.165	no	no
Manganese	100	0.530	no	no
Mercury	96	0.021	Yes	no
Nickel	80	0.497	no	no
Potassium	100	0.021	Yes	no
Selenium	67	0.505	no	no
Silver	58	0.386	no	no
Sodium	100	0.561	no	no
Thallium	67	0.805	no	no
Vanadium	100	0.678	no	no
Zinc	80	0.243	no	no