Addendum#1

Phase 2 Addendum to Sampling and Analysis Plan for Remedial Investigation/Feasibility Study Klau and Buena Vista Mines Superfund Site

Prepared for

Contract No. 68-W-98-225/WA No. 242-RICO-09FM
U.S. Environmental Protection Agency
Region 9

75 Hawthorne Street
San Francisco, California 94105

March 2008

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Project Number 349863

PHASE 2 ADDENDUM to
SAMPLING AND ANALYSIS PLAN FOR
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

KLAU AND BUENA VISTA MINES SUPERFIND SITE
SAN LUIS OBISPO COUNTY, CALIFORNIA

EPA CONTRACT NO. 68-W-98-225
EPA WORK ASSIGNMENT NO. 242-RICO-09FM
CH2M HILL PROJECT NO. 349863.FI.01

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Sample Plan Title:	Phase 2 Addendum to Sampling and Analysis Plan for RI/FS
Site Name:	Klau and Buena Vista Mines Superfund Site
Site Location:	780 Klau Mine Road; Sec 33 T.10E R.19E
City/State/Zip:	San Luis Obispo County, California
Site USEPA ID#:	CA1141190578
Anticipated Sampling Dates:	February 2008 - May 2008
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Contents

Acronyms and Abbreviations ..... **xi**

1.0 Introduction **1-1**
- 1.1 Klau and Buena Vista Mines Superfund Site Addendum to the Sampling and Analysis Plan 1-2
- 1.2 Description of the Remedial Investigation Study Area 1-2
- 1.3 Responsible Agency 1-2
- 1.4 Project Organization 1-2
- 1.5 Statement of Specific Problem 1-3

2 Background **2-1**

3 Project Data Quality Objectives **3-1**
- 3.1 Project Task and Problem Definition 3-1
- 3.2 Data Quality Objectives 3-1

4 Sampling Rationale **4-1**
- 4.1 Phase 1 Sampling 4-1
- 4.2 Phase 2 Sampling 4-2
  - 4.2.1 Stormwater Sampling 4-3
  - 4.2.2 Wet Season Sampling 4-5
  - 4.2.3 Biological Sampling 4-7
  - 4.2.4 Botanical Preliminary Survey 4-8

5 Request for Analyses **5-1**
- 5.1 Requests for Analyses 5-1
- 5.2 Offsite Laboratory Analyses 5-1

6 Field Methods and Procedures **6-1**
- 6.1 Phase 2 Field Activities 6-1

7.0 Investigation-Derived Waste **7-1**

8.0 Sample Documentation and Shipping **8-1**

9.0 Quality Control Requirements **9-1**
- 9.1 Field QC Procedures 9-1
  - 9.1.1 Field Duplicates 9-1
  - 9.1.2 Equipment Blanks 9-1
  - 9.1.3 Field Blanks 9-1
- 9.2 Laboratory QC Procedures 9-1

10.0 Field Change Management **10-1**

11.0 References **11-1**

Tables (located at the end of the document)

1-1 Location of Quality Assurance Project Plan Elements

3-1 Data Quality Objectives

4-1 Description and Rationale for Stormwater Sampling Activities

4-2 Description and Rationale for Wet Season Sampling Activities

5-1 Planned Sample Table—Stormwater

5-2 Planned Sample Table—Wet Season

6-1 Requirements for Containers, Preservation and Holding Times

Figures (located at the end of the document)

1-1 Site Location Map

4-1 Proposed Sample Locations – Stormwater Sampling

4-2 Proposed Sample Locations – Wet Season Sampling

Appendices

A XRF Field Screening Results—Phase 1 Summary Analytical Tables from Phase 1 Investigation

B Regional Sample Control Center Request for Analyses—Addendum

C Standard Operating Procedures—Addendum

D Laboratory Data Quality Indicator Tables for TSS Analysis

Acronyms and Abbreviations

µg/m^3	micrograms per cubic meter
ASTM	American Society for Testing and Materials
bgs	below ground surface
BLM	U.S. Bureau of Land Management
BVMI	Buena Vista Mines, Inc.
CDM	California Division of Mines
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CLP	Contract Laboratory Program
CNDDB	California Natural Diversity Database
COC	chain of custody
DQI	data quality indicator
DQO	data quality objective
E&E	Ecology & Environment, Inc.
FS	feasibility study
GPS	global positioning system
KBV	Klau and Buena Vista
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
NPDES	National Pollutant Discharge Elimination System
PARCC	precision, accuracy, representativeness, comparability, and completeness
ppb	parts per billion
PPE	personnel protective equipment
ppm	parts per million
QA	quality assurance
QC	quality control
RAO	remedial action objective

RI	remedial investigation
ROD	Record of Decision
RPD	relative percent difference
RSCC	Regional Sample Control Center
RSD	relative standard deviation
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act of 1986
SM	Site Manager
SOP	Standard Operating Procedure
SRM	standard reference material
TDS	total dissolved solids
TOC	total organic carbon
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WAM	Work Assignment Manager
Water Board	California Regional Water Quality Control Board, Central Coast Region
XRF	X-ray fluorescence

1.0 Introduction

The U.S. Environmental Protection Agency (USEPA) is conducting a Remedial Investigation (RI) to address releases of chemicals at and from the Klau and Buena Vista (KBV) Mines Superfund Site (USEPA ID: CA1141190578). The USEPA 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 (SARA).

The previously prepared and approved Sampling and Analysis Plan (SAP)(CH2M HILL 2007) addressed the methods, procedures, and requirements that will be applied to the RI, specifically the collection and analysis of soil, mining process and waste material, sediments, water and biological materials. The SAP and this addendum have been prepared in accordance with USEPA Region 9 *Sampling and Analysis Plan Guidance and template, Version 1, R9QA/0001.1* (USEPA, 2000). The KBV Mines RI will be conducted in phases, primarily to obtain information on site conditions during the dry and wet seasons.

Phase 1 sampling, as described in the SAP, consisted of dry season sampling activities. During the Phase 1 sampling activities soil, sediment, seep water, surface water, sediment in streams and ponds, and biota sampling occurred throughout the study area. In addition, *in situ* X-ray fluorescence (XRF) readings of metals were performed on a grid throughout the disturbed area, at selected number of locations in background areas, and along Cypress Mountain Drive. Section 2 of this addendum presents the results of the field XRF screening. Laboratory results for the Phase 1 sampling activities are pending and/or undergoing validation and will be presented separately.

This addendum for Phase 2 sampling activities specifically covers sampling proposed for the wet season. The Phase 2 activities included in this addendum are:

- **Storm water Sampling:** Sampling of storm water runoff from mine areas and surface water from selected creek locations. This sampling would occur during a rain event. The purpose of this sampling activity is to evaluate the quality of storm water runoff from areas of the mine with higher concentrations of mercury and other metals in surface soil.
- **Wet Season Sampling:** The sampling activity includes surface water and sediment for comparison with the Phase 1 dry season sampling. The sample locations will be the same as the dry season. The purpose of this sampling activity is to evaluate the seasonal variability metals concentrations in water and sediment. This activity includes the offsite downstream creek and water well locations that were not sampled during the Phase 1 event, and some supplemental locations added during the Phase 1 and for this event (U.S. Bureau of Land Management [BLM] Reservoir, Klau Branch and National Pollutant Discharge Elimination System [NPDES] conveyance ditch).

- **Biological Sampling:** This sampling activity includes sampling of species that were not observed during the dry season or are more abundant in the spring.
- **Preliminary Botanical Survey**: This activity includes a reconnaissance of the disturbed mine areas to identify any potentially sensitive or rare plant species that may require further assessment before or during potential remedial activities.

The overall goals of these activities are to characterize the nature and extent of metals at the KBV Mines that may be attributed to the former mining activities and to evaluate risk to human health and environment posed by conditions resulting from the former mining activities. A more detailed description of the goals of the RI is provided in the SAP.

1.1 Klau and Buena Vista Mines Superfund Site Addendum to the Sampling and Analysis Plan

This Addendum to the SAP has been prepared to support field and laboratory activities associated with the implementation of the Phase 2 (wet season) RI activities at the KBV Mines Superfund Site. Table 1-1 provides a cross-reference to the applicable sections in the SAP.

This Addendum includes a description of the Phase 2 sampling, sample request tables and any addition procedures or changes to the SAP. Where the SAP is applicable and there are no changes the SAP is referenced.

1.2 Description of the Remedial Investigation Study Area

The KBV Mines are located in San Luis Obispo County near Paso Robles, California (Figure 1-1). The KBV Mines properties consist of two adjacent, abandoned, mercury mines. The two mines include common ownership, similar operation histories, source materials, target populations, and water bodies. The KBV Mines study area (Study Area) is identified in Section 1.2 and Figure 1-2 of the SAP.

1.3 Responsible Agency

The USEPA is the lead agency for the KBV Mines Remedial Investigation/Feasibility Study (RI/FS).

1.4 Project Organization

CH2M HILL will provide the engineering services discussed in this report to support the environmental program at the KBV Mines Superfund Site under USEPA Contract No. 68-W-98-225, Work Assignment No. 242-RICO-09FM. CH2M HILL key project personnel are unchanged from those listed in Table 1-2 of the SAP. Mr. Jim Sickles has replaced Ms. Michele Dineyazhe as the USEPA Work Assignment Manager, otherwise the project organization chart, Figure 1-3 in the SAP is unchanged.

1.5 Statement of Specific Problem

The purpose of the RI sampling and analysis activities is to determine the nature and extent of mercury and other chemicals and support the development of human health and ecological risk assessment and remedial alternatives for the KBV Mines. This addendum is focused on assessing the potential seasonal variability in the nature and extent of mercury and other chemicals and includes some sampling that was not performed in Phase 1. The SAP, Section 1.5 provides an additional description of the specific problem.

The following summarizes the types of samples collected in Phase 1 and the types of samples proposed in this addendum:

- Surface water including water from seeps, creeks, and ponds (Phase 1 and 2);
- Sediment in creeks and ponds (Phase 1 and 2);
- Surface soil XRF measurements (Phase 1);
- Surface and near surface soil (Phase 1);
- Mine waste including mill tailings, waste rock, waste ore, calcines, and ash (Phase 1);
- Road surface material (Phase 1, XRF);
- Upland vegetation including grasses and plants (Phase 1 and 2);
- Fish (Phase 1 and Phase 2);
- Aquatic invertebrates (Phase 1 and 2);
- Bird eggs and potential terrestrial vertebrates (Phase 2);
- Terrestrial invertebrates (Phase 1 and 2): and
- Domestic well and spring box sampling (proposed for Phase 1 but to be complete in Phase 2)
- Air screening for mercury in accessible mine building and near specific potential outdoor sources (Phase 1 only)

The primary chemicals of concern for all media are metals, particularly mercury. Other analytes during the Phase 2 event include methyl mercury, pH, and total suspended solids described in this plan. Currently, site-specific clean up goals have not been established.

2.0 Background

A comprehensive description of the physical and historical background is presented in Section 2.0 of the SAP (CH2M HILL, 2007). As an addendum, this section presents a summary of the XRF field screening results completed during the Phase 1 investigation. Appendix A contains and summary of samples collected during Phase 1 (Table A-1), metals concentrations from XRF Screening (Table A-2) and a figure (designated Figure 2-1) that presents the XRF mercury concentrations at each location. Based on these XRF measurements, mercury concentrations in surface soil are higher in the following areas as compared with surrounding XRF readings:

- Buena Vista Mine:
  - Old Retort area in the northeast corner of the Buena Vista Mine. The Old Retort was not previously identified, but was found during the Phase 1 investigation. This structure is in an area of heavy vegetation.
  - Rotary Furnace area
  - Mine Shop area
  - Rock dump area below and north of the Buena Vista Open Pit
- Klau Mine
  - Western Retort area.
  - Former process area west and above Klau Pond
  - Western Mill Area
  - Area below and south of the Klau Open Pit
  - Undisturbed mineralized area in the western portion of the Klau Mine property. This area appears to be an area of naturally occurring mineralization visible at the ground surface.

Laboratory analysis results for the Phase 1 sampling are pending and/or in the process of validation. However, a summary of samples collected in Phase 1 investigation is presented in Appendix A, Table A-1. The laboratory results will be presented in a subsequent document when the analyses are completed and the results are validated.

3.0 Project Data Quality Objectives

The data quality objective (DQO) process has been used to guide the RI planning for the KBV Mines SAP. This process provides a framework within which to collect data to support defensible decision-making in a cost-effective manner and is based on *Guidance on Systematic Planning Using the Data Quality Objectives Process* (USEPA, 2006). Refer to the SAP for sections on objectives (Section 3.2), data quality indicators (Section 3.3), data review and validation (Section 3.4), data management (Section 3.5), and assessment oversight (3.6) that will be applied to the sample collection and analysis activities. This addendum section includes DQOs specific to this addendum.

3.1 Project Task and Problem Definition

The project is designed as two tasks, one dry season sampling and analysis event and one wet season sampling and analysis event. The data collected will be used to complete the RI of the KBV Mines Study Area, specifically, characterize the site, determine risk to human health and the environment, and provide data necessary to determine remedial alternatives and to conduct a feasibility study. This addendum presents the DQOs specific to the wet season event. Overall DQOs and DQOs for the dry season event are presented in Table 3-1 of the SAP.

3.2 Data Quality Objectives

The purpose of the DQO process is to:

- Define the type and quality of data that will be collected
- Clarify the objectives of the data collection
- Specify acceptable limits of uncertainty

Addendum Table 3-1 presents DQOs specific to the Phase 2 event for the KBV Mines Superfund Site.

4.0 Sampling Rationale

Data collected as part of the RI Field Sampling Program will be used to determine the nature and extent of chemicals within the Study Area and to support the preparation of Human Health and Ecological Risk Assessments, and provide data for a remedial alternatives analysis.

The sampling program for the KBV Mines Study Area was proposed to occur in two phases, a Phase 1 dry season sampling event (which occurred in October 2007 – November 2007) and a Phase 2 wet season sampling event (which is planned for March 2008 – May 2008). Phase 1 sampling and analysis activities were designed to more fully characterize current conditions of the Study Area during the dry season. The Phase 2 Sampling Event is designed to characterize surface water, sediment, and biota during the wet season. During the Phase 2 event additional samples will be taken to fill data gaps identified following the Phase 1 sampling event, and collect Phase 1 samples that were not collected due to access limitations.

4.1 Phase 1 Sampling

Phase 1 sampling occurred in October and November 2007. Results of the XRF screening for metals in soil are presented in Addendum Section 2.0, Background. Laboratory analytical results for surface water, sediment and biological samples are awaiting analysis results from the laboratory or are in the process of USEPA validation.

- Field XRF measurement of target metals in surface soil were recorded on a regular grid in undisturbed and disturbed areas of the mine properties and on road surfaces where mine derived rock may have been used as construction material.
- Surface and subsurface soil samples were collected spatially in the disturbed and undisturbed areas of the KBV Mines properties and submitted for laboratory analysis to compare with XRF measurements. Additional samples were collected near specific features at which historic activities may have resulted in elevated concentrations of constituents of interest.
- Surface water and sediment in ponds and streams within the mine properties and in stream locations adjacent to roads or on BLM property. Stream samples were collected in background (upstream), disturbed, and downstream portions of the study area.
- Seep water and in some cases sediment samples were collected from visible seeps in the disturbed areas of the Study Area.
- Biological samples were collected from the ponds, streams and upland areas.

The West Klau Pond and the Klau Branch upstream of the BLM reservoir and downstream of the disturbed portion of the Klau Mine property were dry and therefore no surface water samples were collected at these locations during Phase 1.

4.2 Phase 2 Sampling

The objectives of Phase 2 sampling are to obtain information on site conditions during the wet season in order to assess potential seasonal variability in water and sediment quality.

The Phase 2 event sampling rationale, sample locations, number of samples, and analytical parameters are described below and in Table 4-1 and Table 4-2. Proposed stormwater sampling locations are shown in Figure 4-1 and proposed wet season sampling locations are shown in Figure 4-2.

The Phase 2 sampling will consist of the following sampling activities:

- **Stormwater Sampling:** Observation and sampling of stormwater runoff from stream channels, gullies, overland flow, and drain pipes and ditches during a rainfall event. This sampling will occur in areas upstream of, downstream of, and within the mine areas. The purpose of this sampling activity is to evaluate the quality of stormwater runoff primarily from areas with higher concentrations of mercury in soil and to identify and characterize areas where the site runoff enters adjacent streams.

- **Wet Season Water and Sediment Sampling:** Sampling of surface water and surface sediment in streams and ponds, seeps, and wells at previously sampled Phase 1 locations. This sampling will include planned Phase 1 sampling of downstream locations on the North and South Fork of Las Tablas Creek and water wells for which USEPA needs to arrange access with property owners. In addition, this event will include sampling of the BLM reservoir, if the U.S. Geological Survey July 2007 sampling results will not be available for inclusion in the draft Remedial Investigation. These sampling activities will occur in April along with the biological sampling. The purpose of this sampling is to obtain information on the seasonal variability of metals concentrations in the previously sampled media and to provide specific water quality information for select water wells in the mine area.

- **Wet Season Biological Sampling:** Observations and sampling of species that were not observed in Phase 1 or are more abundant during the spring. Samples will be collected of aquatic and terrestrial invertebrates, growing vegetation, and wildfowl eggs. The purpose of this biological event will be to evaluate the metals concentrations in species that are present/more-abundant during the wet season and in actively growing plants for use in evaluating ecological risk. Aquatic invertebrates will be co-located with water and sediment samples as performed during the dry season.

- **Preliminary Botanical Survey**: A preliminary survey of plants will be performed in the disturbed mine areas where remedial activities have or may occur. The objective of this activity will be to identify the need for more detailed, jurisdictional or prescriptive surveys that may affect the Remedial Investigation results. Preliminary activities to identify jurisdictionally protected animal species has been completed.

Depending on weather conditions over the next two months (March and April), portions of the wet season sampling may be conducted concurrently with the storm water event.

4.2.1 Stormwater Sampling

Stormwater sampling will include the collection of rainwater, stormwater runoff from gullies and overland flow, and flow in streams during a storm event. Figure 4-1 shows proposed stormwater sampling locations or areas. Specific sampling locations are not presented for all proposed samples to allow the field team to collect some samples based on field judgmental observations. The areas proposed for sampling are described in the following sections. Stormwater sampling will include collection of rainwater, in-stream stormwater discharge, and runoff from gullies and overland flow.

Rain water

Rainwater collection locations will be set up near the Lower Containment Pond at the Buena Vista Mine, the Klau Mine Repository, and near Cypress Mountain Drive in the vicinity to the upper entrances to both mines. Rainwater collected from these three locations will be composited into a single sample (Rain-001) for analysis of trace mercury analysis, total metals, and field parameters.

Stream Samples

During a rainfall event, surface water samples will be collected from seven proposed locations along the Klau Branch and North Fork of the Las Tablas Creek. Stream sample locations were selected both upstream and downstream of potential runoff inputs to the creeks from the disturbed mine areas and at three locations within the disturbed Klau Mine Area. Stormwater stream samples will be analyzed for total metals, suspended solids, and field parameters (pH, electrical conductivity, temperature, and turbidity). A total of eight (8) grab surface water samples are proposed for collection from the following streams:

- Klau Branch at 5 locations:
  - Upstream (background) at location KBC-200
  - Disturbed Area at locations KBC-195 (new, below the BLM reservoir spillway), KBC-185 (new, just upstream of the Cypress Mountain Road crossing), and KBC-150 (in Klau Branch within the disturbed area).
  - Downstream at location KBC-130
- North Fork of Las Tablas Creek at 2 locations:
  - Upstream (background) at location LTC-150
  - Downstream at location LTC-135 (new, just upstream of the Cypress Mountain Road crossing).
- Santa Cruz Mill Site Branch at location SCM-145, just above Cypress Mountain Drive.

Runoff Samples

Stormwater runoff samples will be collected from gullies, drainage ditches, and overland flow primarily in areas where XRF results indicate metals concentrations in soil are higher than surrounding areas. Runoff observations such as nature of runoff (overland flow, erosion gullies and estimated flow) will be recorded. Up to 25 runoff samples will be

analyzed for total metals, suspended solids, and field parameters, the later including pH, electrical conductivity, temperature, and turbidity.

Samples will be collected at the following locations (See Table 4-1 and Figure 4-1). Note that where the sample is referred to as BRF-XX or KRF-XX, the sample ID will be sequential and the exact location will be determined in the field.

Klau Mine – 12 samples

- Drainage into Klau Pond (2 locations, north gully and furnace and retort area) as shown in Figure 4-1 (KRF-XX).
- Westward drainage from the graded parking area above Klau Pond (KRF-XX).
- Gully draining west from the Klau Pond dam (KRF-XX) to Klau Branch near Sedimentation Basin No. 4.
- Klau Pond drainage through open area south of pond and just above Klau Branch, (KRF-XX).
- West Klau Pond drainage just above Klau Branch (KRF-XX)
- Klau Mine disturbed area into the Klau Branch (4 judgmental locations based on field observations, KRF-XX)
- West Klau Undisturbed Area (2 locations where elevated background concentrations of mercury have been observed, KRF-XX).

Buena Vista Mine – 13 samples

- Buena Vista Repository including:
  - Perimeter drain discharge at the northeast (BRF-XX).
  - Perimeter drain discharge at the southwest (BRF-XX).
  - Discharge pipe from the subsurface drain (O21-2).
- Buena Vista Open Pit drainage including:
  - Lower edge of the open pit area (N23-2)
  - Location where drainage from BVM open pit and repository enters Las Tablas Creek in the vicinity of LTC 145 (BRF-XX).
- Buena Vista Mine NPDES permit discharge conveyance ditch to Las Tables Creek including:
  - The north end of culvert under Klau Mine Road, former NPDES discharge conveyance (NPD-001.
  - Culvert under Cypress Mountain Drive that directs flow from North Klau Undisturbed Area into NPDES conveyance ditch below BVM (BRF-XX).
  - Before the former NPDES discharge enters Las Tablas Creek (new, NPD-003).

- Buena Vista overland runoff into BLM reservoir area (BRF-XX) and below BLM reservoir spillway (BRF-XX).
- Erosion Gully on face of BLM Dam (BRF-XX)
- Buena Vista Mine operational area (up to 3 judgmental locations based on field observations, (BRF-XX).

In addition to these stormwater runoff samples, the stormwater event may include sampling of seeps as described below under Section 4.2.2.1.

4.2.2 Wet Season Sampling

4.2.2.1 Water and Sediment

Wet season sampling is planned for April 2008, near the end of the rainy season. It is anticipated that this sampling will occur when it is not raining. This sampling event will include:

- Surface water and shallow sediment sampling at stream and pond locations sampled during Phase 1,
- Surface water, surface sediment, and subsurface sediment sampling at stream locations that were not sampled during Phase 1,
- Surface water from observed flowing seeps
- Groundwater from on-site wells,
- Groundwater from selected off-site wells/spring box that were not sampled during the Phase 1 event
- Biological sampling at select locations

Wet Season Surface Water and Sediment Sampling

During the wet season water/sediment sampling activity, surface water and surface sediment samples will be collected from streams, ponds, and flowing drainages that were sampled during the Phase 1 event. Surface water, and surface and subsurface sediment samples will be collected at proposed Phase 1 locations (downstream locations on the Klau Branch, North Fork of Las Tablas Creek and Las Tablas Creek) that were not sampled in October 2007 because access arrangements were needed with property owners. A total of 39 locations are planned for this sampling event.

Wet season surface water samples will be analyzed for filtered and unfiltered metals, trace mercury, methyl mercury and field parameters (pH, electrical conductivity, and temperature). One surface water sample from each location will be analyzed for total suspended solids (TSS). Wet season sediment samples will be analyzed for total metals pH, and methyl mercury; one sediment samples from each area will be analyzed for total organic carbon (TOC) and grain size distribution.

Table 4-2 describes the wet season sampling and the proposed locations are presented on Figure 4-2. The following summarizes the wet season sampling:

- Klau Branch at locations:

  - Upstream (background) at locations KBC-200, KBC-210, and KBC-220,
  - Disturbed Area at locations KBC-140, KBC-150, KBC-160, KBC-170, KBC-180, KBC-190.
  - Downstream at locations KBC-110, KBC-120 (new), KBC-125 (new), KBC-130, and KBC-135 (new);
- Santa Cruz Mill Site Branch at location SCM-145, just above Cypress Mountain Drive.
- North Fork of Las Tablas Creek:
  - Upstream (background) at location LTC-150
  - Disturbed Area at locations LTC-140 and LTC-145
  - Downstream at locations LTC-100, LTC-120, and LTC-130 (LTC-100 and LTC-120 were proposed for sampling in Phase 1 but not sampled due to access limitations).
- South Fork of Las Tablas Creek:
  - Upstream (background) at locations SLT-080 and SLT-090
  - Downstream of the confluence of the Klau Branch at previously sampled location SLT-110, and locations SLT-120, SLT-130, and SLT-140 (proposed for Phase 1 but not sampled due to access limitations).
- Main Branch of Las Tablas Creek:
  - Downstream of the confluence of the North and South Forks of Las Tablas Creek at location LTC-090(proposed for Phase 1 but not sampled due to access limitations).
- Buena Vista Mine NPDES Permit Conveyance including locations NPD-001, NPD-002, and NPD-003 (new).
- Buena Vista Mine Lower Containment Pond at location LCP-001.
- Klau Pond at locations KPD-001, KPD-002, and KPD-003
- West Pond at location WKP-001.
- BLM Reservoir at three new locations: BLM-001, BLM-002, and BLM-003.

Seeps

Water samples will be collected from all previously sampled seep locations, plus some locations that were dry during the Phase 1 sampling event. Seep samples will be analyzed for total metals, total suspended solids, anions, sulfide, hardness, and field parameters. Nine (9) up to eleven (11) water samples will be collected from the following locations:

- Buena Vista Mine:
  - Adjacent to the Rotary Furnace, location M20-2
  - In the Regraded Clay Cap location L21-2
  - Buena Vista Open Pit, location O24-2

  - Buena Vista Repository perimeter drainage ditches O21-2 and N23-2.
  - Buena Vista Open Pit and Repository surface drainage at location M24-2.

- Klau Mine
  - From previously unsampled seep (dry during Phase 1) in the north hillslope just south of the Klau Branch crossing of Cypress Mountain Drive
  - In the north hillslope above Klau Branch below the No. 2 Tunnel Adit at location Q11-2,
  - In the hillslope below the Western Mill Area at location N07-2
- The plan includes an allowance for 2 additional seep samples for locations where seeps were not observed during the Phase 1, dry season sampling.

On-Site Wells/Sumps

Water samples will be collected from on-site wells/sumps during the wet season sampling activity. These samples will be analyzed for filter and unfiltered metals, methyl mercury, trace mercury, total suspended solids, and field parameters. The following on-site well/sumps will be sampled:

- At the Buena Vista Mine the sump/well located at the lower end of the Regraded Clay Cap (RCW).
- In the Buena Vista Mine shop area the sump that is located outside the collapsed No. 2 Tunnel Adit (MSP),
- Klau Mine the slant well/sump (KRP) located at the west end of the Klau Repository. This sump was dry during the October 2007 Phase 1 sampling event.

Wells and Spring Box

For the Phase 1 activity sampling was proposed for a select offsite wells and a spring box that are currently used for water supply. Because access arrangements were not completed this sampling is now included in this Phase 2 Addendum. These samples will be analyzed for filtered and unfiltered metals, methyl mercury, and field parameters. The following off-site wells will be sampled:

- Water supply well at the Dodd Ranch
- Water supply well at Camp Natoma
- The BVMI caretaker's spring box used for domestic water supply.

4.2.3 Biological Sampling

During the wet season sampling, biological samples will be collected from vegetation during the growth stage and from materials that are only available during the spring. The wet season sampling is designed to take advantage of the greater seasonal abundance of terrestrial and aquatic invertebrates.

Biological sampling will be performed to evaluate chemical bioavailability and food-web transfer, and to support the evaluation of risks to ecological receptors and human health.

Benthic organisms, turtles and bull frogs were also observed in Klau Pond, West Klau Pond and BLM reservoir. Birds and other mammals were also either observed or indications of their presence (scat) were noted. Direct measurement of the concentrations of metals particularly mercury and methyl mercury in biological media, will provide information for use in assessing risk to ecological and human receptors.

Biological sampling locations will include:

- Klau Pond, water fowl eggs as available and terrestrial invertebrates at 1 location each;
- West Klau Pond, water fowl eggs as available, aquatic invertebrates and local vegetation at 1 location each;
- Lower Containment Pond at Buena Vista Mine, water fowl eggs as available and terrestrial invertebrates at 1 location each;
- Klau Branch, aquatic invertebrates at 2 surface water and sediment sampling locations;
- North Fork of Las Tablas Creek, aquatic and terrestrial invertebrates at 1 surface water and sediment sampling location;
- Upland vegetation co-located with Phase 1 soil sampling locations, up to 6 composite samples;
- Terrestrial invertebrates co-located with Phase 1 soil sampling locations, up to 6 composite samples ;
- BLM Reservoir, fish and aquatic invertebrates at 3 locations.

All samples will be collected and submitted for analysis of metals and the aquatic invertebrates will also be analyzed for methyl mercury.

4.2.4 Botanical Preliminary Survey

To evaluate the potential for jurisdictionally protected plant species in areas where remedial action may occur, a botanist will conduct a preliminary survey in areas of highest mercury concentrations identified in the Phase 1 investigation. Specifically, the botanist will focus are areas identified in Section 2.0. A comprehensive delineation for protected species of plants and wildlife is not planned at this time, as potential remedial actions have not yet be defined.

5.0 Request for Analyses

This section presents the required methods and request for analyses (RFAs) tables for the environmental samples to be collected during the Phase 2 sampling at KBV Mines.

5.1 Requests for Analyses

The required reporting limits and regulatory comparison levels are presented in Table 3 of the SAP. For offsite laboratory analyses, analytical services will be provided by USEPA through the Regional Analytical Program. Specific analyses not available through the Contract Laboratory Program (CLP) will be provided through other Region 9 contracting mechanisms. Draft Regional Sample Control Center (RSCC) forms are presented in Appendix B of this Addendum. The RSCC form will be revised and finalized once this SAP receives USEPA approval. The following request for analysis tables list the planned samples and analyzes:

The following analytical request tables are presented in the tables section:

Table 5-1 Request for Analyses—Storm Event Water Sampling
Table 5-2 Request for Analyses—Wet Season Sediment, Water and Biota Sampling

The numbers presented in these tables represent the anticipated maximum number of samples for planning purposes. Modifications may be required based on actual field observations at the time of sampling.

5.2 Offsite Laboratory Analyses

The planned analytical methods for the offsite laboratory analyses are presented in the applicable request for analyses tables along with the sample holding time and preservation requirements. Where sample filtration is required, the plan is to filter the samples in the field using an in-line 0.45 um filter. Should the circumstance arise where samples cannot be filtered in the field, the samples will be collected unpreserved and shipped to the laboratory. The laboratory will filter the designated samples upon receipt and within the project holding time of 48 hours from collection.

6.0 Field Methods and Procedures

Section 6.0 of the SAP describes procedures for Sample Collection (Section 6.2), Sample Preservation (Section 6.3), Sample Labeling (Section 6.4), Chain of Custody (Section 6.5) and Equipment Decontamination (Section 6.6). This Addendum supplements the SAP with the addition of a standard operating procedure for collection of bird eggs and some additional observation activities. Table 6-1 Requirements for Containers, Preservation and Holding Times from the SAP is included in this Addendum for reference.

For reference, the following Standard Operating Procedures (SOPs) provided in Appendix C of the SAP are applicable to this Addendum.

- SOP 1: Aquatic Macroinvertebrate Sampling
- SOP 2: Calibration of Water Sampling Field Instruments
- SOP 3: Chain-of-Custody Procedures
- SOP 4: Clean Sampling for Trace Metals in Surface Water
- SOP 5: Decontamination of Sampling Equipment
- SOP 6: Digital Camera Use and Documentation Procedures
- SOP 7: Equipment Blank and Field Blank Preparation
- SOP 8: Field Filtering
- SOP 9: Field Logbook Preparation
- SOP 10: Field Measurement of pH
- SOP 11: Field Measurement of Water Quality Characteristics
- SOP 14: Flat Bottom Boat Sampling Operations
- SOP 15: GPS Location of Field Sampling Stations
- SOP 16: Investigation-Derived Waste Handling and Disposal
- SOP 17: Laboratory Shipping Instructions
- SOP 18: Sediment Sampling
- SOP 20: Streamflow Measurement and Wading Technique
- SOP 21: Surface Water Sampling

Appendix C of this Addendum provides the instructions for collection of bird eggs:

- SOP 22: Bird Egg Sampling

6.1 Phase 2 Field Activities

Previous reconnaissance and Phase 1 field activities have determined a number of activities and procedures that can be performed to streamline Phase 2 sampling efforts. These activities and procedures are described in the following paragraphs by objective.

GPS Usability: Previous site visits have determined the usability of the GPS units throughout the site. However in some areas, such as down in the streams and under dense vegetation, satellite reception may not be sufficient to record all locations with the standard Trimble GeoXT.

Where satellite coverage cannot be obtained at all locations, fixed points of reference will be identified and marked at the nearest associated location where GPS coverage is obtainable. Distance measurements from sample and/or feature location that cannot be located with the GPS unit to the reference points will be recorded. Georeferencing of sample and feature locations is the first critical step in identifying the nature and extent of contaminants of concern at the KBV Mines site. Therefore, care should be taken in recording a location for all points of interest.

Seep survey: During reconnaissance and Phase 1 activities, the location of seeps was recorded in the field notebook, along with information that would assist future sampling efforts. Characteristics that were observed included estimated flow rate, description of local conditions, and any additional sampling equipment requirements. The locations of the seeps were identified in the field using wooden stakes. If new seeps are encountered during the Phase 2 sampling effort, the location will be documented, local conditions will be described, the flow rate will be estimated and the seep will be sampled according to the procedures outlined in the original Phase 1 SAP.

Storm Water Flow conditions and Stream flow Conditions Survey: During Phase 2 storm water and wet season stream sampling activities, field crew should estimate streamflow and stormflow volumes of the Klau Branch, Santa Clara Mill Site Branch, the South Fork Las Tablas Creek, the North Fork Las Tablas Creek, Las Tablas Creek downstream of the confluence of the North and South Fork at sampling locations. Stormwater from site runoff may be estimated by catching the flow in a 5-gallon bucket and measuring the time to collect an appropriate volume.

Bird Eggs: Sampling of bird eggs includes the collection and analysis of eggs of birds that are likely to be available at the site and may include pied-billed grebes, American coots, mallards, and red-winged blackbirds. Areas where nesting behavior is observed will be searched for nests during April – May 2007. Samples will be collected by hand from the pond perimeters under appropriate state and federal permits. Only one egg is to be collected per nest. The egg will be removed and labeled with the date a unique nest ID and the site ID and placed in an egg container. The date, site, species, nest ID, Lat/Long of nest, collector's initials and the number of eggs in the nest will be recorded. Eggs collected should be whole and not cracked and kept cool until opened in the site laboratory. Each egg will be opened and the stage of development and condition of the embryo, if any, will be recorded. Egg contents will be placed in a container and frozen for shipment to the laboratory.

7.0 Investigation-Derived Waste

This Section is unchanged from the SAP, Section 7.0.

Minimal investigation-derived waste will be generated during these sample and analysis activities. The anticipated wastes include personnel protective equipment (PPE) and water from decontamination of reusable sampling equipment.

PPE and sampling equipment generated during the performance of the work will be cleaned off, bagged, and placed in a dumpster for disposal as municipal refuse. It is anticipated that only limited decontamination of sampling equipment will be needed. A decontamination station will be set up daily near the area to be sampled. Decontamination wastes will be containerized in 5-gallon buckets with lids as they are generated. If a sufficient quantity of liquids are generated from decontamination then the contents of the buckets will be transferred to a 55-gallon drum at the main staging area. Disposal of these liquid wastes will be in accordance with all local and federal regulations.

8.0 Sample Documentation and Shipping

Sample documentation and shipping will be performed in accordance with the approved SAP Sections on Sample Identification and Labeling (Section 8.1), Photographs (Section 8.2), Chain of Custody (Section 8.3), Field Notebooks (Section 8.4) and Corrections to Documentation (Section 8.5).

A sample is physical evidence collected from the immediate environment. Because of the potential evidentiary nature of samples, the possession of samples must be traceable from the time the samples are collected until they are introduced as evidence. In addition to field notebooks, a number of documents will be used for tracking sample custody.

Chain-of-custody procedures will be used to maintain and document sample collection and possession. Forms II Lite will be used to produce Chain of Custody records for all samples being shipped to a USEPA CLP laboratory. For samples being shipped to non-CLP laboratories either Forms II Lite, another field sample database, or a paper form my be used to generate a Chain-of-Custody form. Samples will be packaged in a manner consistent with method preservation requirements and shipped using a commercial carrier. Completed field quality assurance/quality control (QA/QC) summary forms will be sent to the RSCC in USEPA's Region 9 Quality Assurance Office at the conclusion of each sampling event.

9.0 Quality Control Requirements

The following sections present the field and laboratory QC requirements.

9.1 Field QC Procedures

Field QC samples include field duplicates, field blanks, and equipment blanks. Additional samples will be collected for preparation of matrix spike and matrix spike duplicates. QC samples will be collected immediately following collection of field samples, and identical procedures will be used.

9.1.1 Field Duplicates

Field duplicates will be collected at a frequency of one duplicate for each 10 field samples. For soil and sediments, the field duplicates will be prepared by homogenizing sufficient sample mass in a clean disposable plastic pan and dividing the material into two sampling containers. For water samples, duplicate containers will be collected consecutively from the same location at the same time. Field duplicates are not required for grain size, moisture content, or for samples that are analyzed as composites.

9.1.2 Equipment Blanks

Equipment blanks will be prepared at a frequency of one per day per piece of reusable sampling equipment. Equipment blanks will be prepared by pouring deionized water over reusable sampling equipment following decontamination. Equipment blanks will be analyzed for the suite of target analytes as presented in the Request for Analysis tables.

9.1.3 Field Blanks

Field blanks will be prepared for each batch of deionized water used for final equipment decontamination rinse and preparation of equipment blanks. Field blanks will be prepared in the field by pouring deionized water into an appropriate sampling container. Equipment blanks will be analyzed for the suite of target analytes as presented in the Request for Analysis tables.

9.2 Laboratory QC Procedures

Laboratory QC procedures will adhere to the requirements of the SAP. Appendix D contains the Region 9 laboratory data quality indicator tables for TSS analysis.

10.0 Field Change Management

The preparation of this SAP addendum is consistent with Section 10 of the SAP which anticipates the need for changes to the SAP based on this phased investigation.

11.0 References

CH2M HILL. 2007. *Sampling and Analysis Plan for Remedial Investigation/Feasibility Study Klau and Buena Vista Mines Superfund Site.* October.

U.S. Environmental Protection Agency (USEPA). 2000. *Sampling and Analysis Plan Guidance and Template, Version 1, R9QA/0001.1* USEPA Region IX.

_____. 2006. *Guidance on Systematic Planning Using the Data Quality Objectives Process*. February.

Tables

TABLE 1-1
Location of Quality Assurance Project Plan Elements
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

Group A Project Management/ Data Quality Objectives	SAP Section	Addendum Section	Group B Measurement Data Acquisition	SAP Section	Addendum Section	Group C Assessment/Oversight	SAP Section	Addendum Section	Group D Data Validation and Usability	SAP Section	Addendum Section
A.1 Title and Approval Sheet	Title and Approval Sheet	Revised	B1 Sampling Process Design (Experimental Design	Section 4.0	Revised	C1 Assessments and Response Actions	Section 3.5	Accepted, no change	D1 Data Review, Verification, and Validation	Section 3.4	Accepted, no change
A.2 Table of Contents	Table of Contents	Revised	B2 Sampling Methods	Section 6.0	Accepted, no change	C2 Reports to management	Section 3.5	Accepted, no change	D2 Verification and Validation Methods	Section 3.4	Accepted, no change
A.3 Distribution List	Distribution List	Revised	B3 Sample Handling and Custody	Section 8.0	Accepted, no change				D3 Reconciliation with User Requirements	Section 3.4	Accepted, no change
A.4 Project Task Organization	Section 1.4	Accepted, no change	B4 Analytical Methods	Section 5.0	Revised						
A.5 Problem Definition and Background	Section 2.0 and 3.0	Revised	B5 Quality Control	Section 9.0	Accepted, no change						
A.6 Project/Task Description	Section 3.1	Revised	B6 Instrument/ Equipment Testing, Inspection, and Maintenance	Section 6.0 and Appendix F	Accepted, no change						
A.7 Quality Objectives and Criteria	Section 3.2	Revised	B7 Instrument/ Equipment Calibration and Frequency	Section 6.0 and Appendix F	Accepted, no change						
A.8 Special Training/Certifications	Section 6.6, Health and Safety Plan	Accepted, No change	B8 Inspection/ Acceptance of Supplies and Consumables	Section 9.0	Accepted, no change						
A.9 Documentation and Records	Section 3.5, 3.6, 10.0, Data Management Plan	Accepted, no change	B9 Non-Direct Measurements	Section 2.2	Accepted, no change						
			B10 Data Management	Data Management Plan	Accepted, no change						

TABLE 3-1
Data Quality Objectives
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

Data Quality Objective	Outputs	DQO Statement
Problem Statement	Describe the problem and identify the general type of data needed	The proposed activities are designed to perform a remedial investigation of the Study Area defined in SAP Section 1.2. Insufficient data are available to conduct an RI/FS consistent with CERCLA and the following data are required to complete the RI/FS process: 1) Determine background metals concentrations; 2) Determine the nature, extent, and distribution of chemicals attributed to mining activities at the site; 3) Perform a human health and ecological risk assessment; 4) Support preparation of a feasibility study and development of remedial alternatives for the site. The available data are supplemented by information obtained during the Phase 1, dry season. Additional information from at least one stormwater event and under wet season conditions is required to characterize the study area conditions. This data will provide an indication of the seasonal variation in concentrations of metals in surface water and sediment. The stormwater sampling will provide information on the contribution of metals and particulates in stormwater runoff to surface water features.
	Develop a conceptual model of the environmental hazard to be investigated	The conceptual site model is presented in SAP Figures 1-4 and 1-5 and is discussed in SAP Section 1.5.
	Establish a Planning Team and Identify the team decision makers	The planning team includes Region 9 Superfund staff with support from CH2M HILL; the Klau-Buena Vista Mine Community Advisory Group; the U.S. Geological Survey (USGS); and the BLM.
	Resources and deadlines	At the direction of USEPA, CH2M HILL will provide the staff for field activities. USEPA will provide analytical and data review/validation services. The project will be conducted in Phases. The initial Phase, Phase 1 was conducted in October/November 2007 and included: • premobilization sampling area identification, location staking, and reconnaissance; • mobilization and implementation of sample collection and analysis; • data reduction, identification of data gaps, and preparation of the RI report. Phase 2 investigation activities will be conducted during the wet season, March through April 2008, and will include: • mobilization and implementation of stormwater sampling during a rainfall event in March 2008 • mobilization and implementation of Wet season sampling in April 2008 at surface water and sediment locations sampled in October/November 2007, locations planned but not sampled in Phase 1 and at BLM reservoir. • Groundwater sampling at water wells/springs from select offsite locations where USEPA obtains access. These activities are scheduled for completion spring of 2008.

TABLE 3-1
Data Quality Objectives
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

Data Quality Objective	Outputs	DQO Statement
Identify the Goal of the Study	Definition of the study question (Estimation)	The principal study questions and possible outcomes are: <u>Study Question 1</u> What is the quality of stormwater runoff from the disturbed mine areas and mineralized background area and where does it flow? <u>Anticipated Outcomes</u> It is anticipated that most if not all of the mercury and metals released from the mine properties is by soil/sediment transport. It is anticipated that storm water runoff from former process areas may carry surface soil to adjacent creeks or onsite containment structures. Some of the areas with high concentrations of metals in soil may not contribute storm water runoff to the adjacent creeks and therefore these areas may not present a risk to offsite receptors. Runoff from the undisturbed mineralized area may be similar to runoff from disturbed area and contribute mercury and other metals to the creeks at concentrations that exceed risk screening criteria. In this instance, background values may need to be established and remedial goals modified to reduce risk. <u>Study Question 2</u> Do the concentrations of mercury and other metals in surface water and sediment (creeks, ponds and seeps) vary significantly depending on the time of year (dry and wet season)? <u>Potential Outcomes</u> Surface water samples collected during the dry season are comparable with wet season (higher stream flow) samples and therefore, therefore the time of year of sampling is not important. This means one less variable when comparing 2007 and 2008 sampling with historic data. Surface water and sediment samples in the wet season have higher concentrations of mercury and metals in the wet season. This could mean that runoff from upland areas contributes metals to the creeks. <u>Study Question 3</u> Are there additional ecological receptors in the Spring as compared to October/November 2007? Do these ecological receptors uptake greater amounts of mercury and metals compared with other receptors or seasonally? <u>Potential Outcomes</u> The principal risk is assumed to be to ecological receptors. The risk assessment work plan will present a discussion of the process for evaluation of both human health and ecological risk. This data is necessary as a basis for the ecological risk assessment. <u>Study Question 4</u> What is the contribution of water features (Klau Pond and Western Klau Pond) associated with mining activities to seep drainage? What is the seasonal variation in seepage water quality and approximate flow.

TABLE 3-1
Data Quality Objectives
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

Data Quality Objective	Outputs	DQO Statement
Identify the Goal of the Study (continued)	Definition of the study question (Estimation) (continued)	Potential Outcomes Seepage and surface water runoff has been observed at several locations within the Study Area. It is assumed that some seepage originates with the Klau Pond. Additionally, groundwater intrusion into underground mine workings likely contribute to the seepage. Two approaches will be taken to determine if Klau pond is the primary source of the active seeps. First, samples from the seeps and from Klau pond will be characterized for metals and water quality parameters. These results will be compared for similarity to the results of the Klau pond analyses. Second, a water balance for Klau Pond based on rainfall and evapotranspiration will be performed and compared to the total measured flow from the seeps. Study Question 5 What is water quality in groundwater from features at the mine property and at offsite water wells? Potential Outcomes Metals in groundwater at the site do not appear to be affected by site activities and therefore groundwater with the possible exception of seepage discharge from mine workings is not a primary pathway of concern for evaluating risk. Or metals in groundwater at the site are significantly higher than offsite water sources which may suggest an potential link between historic mine activities and groundwater quality. If a possible link exists then additional investigation may be necessary.
Identify Information Inputs	Identify types and sources of information	The types of information that are needed include: • visual observations made during site reconnaissance • topographic and climatic information • concentrations of metals in sediment and water from areas impacted by mining operations • flow estimates for storm water runoff and seeps • biological information during spring time when terrestrial vertebrates and terrestrial and aquatic invertebrates are likely more abundant • concentrations of metals in groundwater from onsite features and select area water wells.
	Identify the basis of information that will guide or support choices to be made	The information collected as part of this activity will be combined with the Phase 1 information and available historical information to characterize the impact of mining activities on the Study Area. All information will be evaluated in terms of the requirements of the SAP and SAP Addendum; the limitations and usefulness of data that do not meet the SAP or SAP Addendum requirements will be determined. Inadequate data will not be used.
	Select appropriate sampling and analysis methods for generating the information	The sampling and analysis methods are presented in this SAP Addendum and in the October 2007 SAP. Field procedures for collection and sampling of bird eggs are included in this SAP Addendum. Storm water samples will be grab samples. Water in the ponds may be sampled from boats or directly from the shore; sediment, biota, and detritus will be collected using clamshell samplers or other applicable technique as described in the SAP or this SAP Addendum. Standard USEPA approved analytical methods will be used for chemical testing.

TABLE 3-1
Data Quality Objectives
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

Data Quality Objective	Outputs	DQO Statement
Define the Boundaries of the Study Develop Analytic Approach	Define target population of interest and relevant spatial boundaries	The target populations are the discreet samples composed of specific matrices collected in individual areas of concern. The spatial boundaries for the sampling areas within the Study Area are presented on Figures 4-1 and 4-2 of this SAP Addendum.
	Define what constitutes a sampling unit	A sampling unit is a single, discreet sample of a single, specific matrix collected at a known x,y,z coordinate.
	Specify temporal boundaries and other practical constraints associated with sample/data collection	Rough terrain or lack of access permission for off-property locations may restrict access to sampling locations. Storm conditions may also limit accessibility to some creek sample locations. Phase 2 sampling is planned for completion in April 2008 and the RI is scheduled for completion by July 2008.
	Specify smallest unit on which decisions will be made	Decisions will be made on individual sample results or on composites for biological samples or rainfall samples.
	Specify the value that will be used for decision making (e.g. mean or discrete sample value)	Within the specific areas of concern, discrete values will be used to characterize the nature and extent of contamination by matrix and parameter.
Develop the Analytical Approach	Specify appropriate population parameters for making decisions or estimation	The population parameters used to estimate the extent of contamination will be the target analyte results for individual samples.
	For estimation problems, specify the estimator and estimating procedure	For soil, the areal surface extent of chemicals within the areas of concern will be estimated based on the background concentrations established in the subsurface. Water within the study are will be characterized to estimate impacts based on the results of individual samples. Hydrogeologic conditions impacting the formation of active seeps and further attribution of site chemicals to the creek within the mine boundaries and the expanded Study Area will be evaluated by net loss calculation combined with seep flow measurement.
Develop the Detailed Plan for Obtaining Data	Compile information developed in Steps 1-6 Identify the possible sampling designs that meet the project requirements Select and justify the most appropriate sampling design	The plan for obtaining data including sampling rationale, identification of target analytes, and matrix is presented in this SAP Addendum, Section 4.0.

TABLE 4-1
Description and Rationale for Stormwater Sampling Activities
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

	Sampling Area	Description	Rationale/Data Need	Proposed Sampling Locations	Proposed Analysis (Estimated Number of Samples)
Background	Background or "Undisturbed" Areas	Rainfall Sample (Water)	Evaluates potential input of metals from rainfall	One 3 point composite sample. Aliquots collected at each location (Rain-01): • Lower entrance to BV Mine near Cypress Mt. Dr. • Cypress Mt. Dr. near entrances to K Mine and upper BV Mine. • Klau Repository	Water unfiltered (1 composite): • Trace Mercury (1 aliquot) • total metals (1 aliquot) • Field parameters (1 aliquot)
		Stream Sample Klau Branch Upstream of BLM reservoir	To evaluate inputs of mercury and other metals from areas outside the study area	1 location upstream of BLM reservoir (KBC-200)	Water unfiltered (6 stream and runoff samples): • Total metals • Suspended Solids • Field parameters
		Stream Sample North Fork Las Tablas Creek Upstream North East corner of property	To evaluate inputs of mercury and other metals from areas outside the study area	1 location on Las Tablas Creek near eastern KBV Mine Property (LTC-150)	
		Stream Sample Santa Cruz Mill Site Fork	To evaluate inputs of mercury and other metals from areas outside the study area	1 location just upstream of Cypress Mountain Rd., before entry into the Klau Branch (SCM-145)	
		Runoff from West Klau Undisturbed Area	To evaluate the contribution in stormwater runoff from an area with elevated mercury concentrations that has not been disturbed by mining activities.	2 locations of overland flow from below (south) of mineralized area in West Klau Undisturbed Area (2 each KRF-XX)	
		Runoff from North Klau Undisturbed Area	To evaluate inputs of mercury and other metals from areas outside the study area.	1 location where culvert under Cypress Mountain Drive drains North Klau Undisturbed area surface water to the BVM NPDES conveyance ditch (BRF-XXX).	

TABLE 4-1
Description and Rationale for Stormwater Sampling Activities
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

	Sampling Area	Description	Rationale/Data Need	Proposed Sampling Locations	Proposed Analysis (Estimated Number of Samples)
Disturbed Area	Klau Mine	Klau Mine disturbed area (Internal)	To evaluate stormwater erosion and movement of metals within the Klau Mine disturbed area. This will assist in evaluation of potential sources areas within the Klau Mine disturbed area.	• North gully into Klau Pond (KRF-XX) • Surface flow into Klau Pond that drains through Furnace & Retort area (KRF-XX) • Surface flow off parking area west [above] Klau Pond (KRF-XX)	Water unfiltered (13 stream and runoff samples): • Total metals • Suspended Solids • Field parameters
		Klau Mine stormwater runoff into Klau Branch	To evaluate potential metals inputs to Klau Branch from the Klau Mine disturbed area.	• Gully geographically below Klau Pond (KRF-XX)[a] • Klau Pond drainage [near Sedimentation Basin No. 4](KRF-XX) • West Klau Pond drainage [west of Western Retort](KRF-XX) • Based on field observation, up to 4 locations of significant runoff from the Klau Mine disturbed area before entry into the Klau (4 each KRF-XX)	
		Stream Samples Klau Branch stream channel within Klau Mine Disturbed Area	To evaluate water quality changes along the flow path of the Klau Branch	3 locations between just below the BLM spillway and the West Klau Pond inflow, including: • Discharge from the BLM reservoir spillway (KBC-195) • Just upstream of the Klau Branch crossing of Cypress Mountain Dr. (KBC-185) • Upstream of Klau Pond discharge into the Klau Branch (KBC-150)	

TABLE 4-1
Description and Rationale for Stormwater Sampling Activities
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

	Sampling Area	Description	Rationale/Data Need	Proposed Sampling Locations	Proposed Analysis (Estimated Number of Samples)
Disturbed Area	Buena Vista Mine	Buena Vista Mine disturbed area (Internal)	To evaluate stormwater erosion and movement of contaminants within the Buena Vista Mine disturbed area. This will assist in evaluation of potential sources areas within the Buena Vista Mine disturbed area.	• BVM Repository perimeter surface drain discharge (2 each BRF-XX) • BVM Repository sub-drain discharge (O21-2) • BVM open pit, 1 location at the discharge of the open pit (N23-2) and 1 location just before discharge to the North Fork of Las Tablas Creek (BRF-XX). • Based on field observation, up to 3 locations from BVM operations buildings area (3 each BRF-XX) • Discharge from NPDES conveyance ditch just downstream (north) of Klau Mine Rd. (NPD-2) and just before discharge into the North Fork of Las Tablas Creek (NPD-3) • 1 location of overland runoff into the BLM reservoir (BRF-XX) • 1 location from below BLM reservoir spillway before flow enters Klau branch • 1 location from erosion gully on face of BLM reservoir dam (BRF-XX)	Water unfiltered (13 stream and runoff samples): • Total metals • Suspended Solids • Field parameters
Downstream	Areas Downstream of Disturbed Areas	Stream Sample Klau Branch	To evaluate water quality downstream of the inflows from the disturbed areas at Klau Mine's and Buena Vista Mine's disturbed areas.	Klau Branch just before entry into the Klau Branch gorge, downstream of West Klau Pond inflow (KBC-130)	Water unfiltered (2 Samples) : • Total metals • Suspended Solids • Field parameters
		Stream Sample Las Tablas Branch		Las Tablas Branch just upstream of the crossing of Cypress Mt. Rd. (LTC-135)	

TABLE 4-2
Description and Rationale for Wet Season Sampling Activities
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

	Sampling Area	Description	Rationale/Data Need	Data Type/Sampling Media	Proposed Sampling Locations	Proposed Analysis (Estimated Number of Samples)
Background and Upstream	Background or "Undisturbed" Areas	Klau Branch Upstream of BLM reservoir	Current conditions of sediment and water during the dry season and wet season are needed to develop an understanding of the extent of metals in upstream water and sediment. Dry season sampling took place in October and November, 2007. Sample locations of surface water and surface sediment need to be collected at the same locations during the wet season to be able to understand the seasonal variation in surface water quality. All previous dry season sample points (surface water and surface sediment) will be collected again in the wet season.	Surface water and surface sediment	3 locations upstream of BLM reservoir (KBC-200, KBC-210, and KBC-220).	Water unfiltered (9) • Total metals • Suspended Solids (1 per area – total of 4) • Field Parameters • Water filtered (9) • Metals • Trace Mercury • Methyl Mercury Sediment (9) • Metals • Methyl Mercury • pH • TOC(1 per area – total of 4) • Grain Size (1 per area – total of 4)
		North Fork Las Tablas Creek Upstream North East corner of property			3 locations on KBV Mines property before creek crosses under Klau Mine Road east of the caretakers residence (LTC-140, LTC-145, and LTC-150).	
		South Fork Las Tablas Creek Upstream of confluence with Klau Branch			2 locations: one at property boundary approximately 50 feet upstream of confluence with Klau Branch and second in vicinity of prior sample MN-03-20-99-01 approximately 2,250 feet upstream from confluence with Klau Branch (SLT-080 and SLT-090).	
		Santa Cruz Millsite Fork Upstream of confluence with Klau Branch.			One location 50-100 feet upstream of Klau Branch (SCM-145).	
Disturbed Area Ponds	West Klau Pond	Approximately 0.2-acre, man-made surface water body that was dry during dry season sampling of 2007 and may be approximately 10 feet deep.	Sediment and water in the pond has not been adequately characterized. Samples of water and sediment that are representative of current conditions are needed. The pond provides biological habitat and the water and sediment may present an unacceptable risk to human health and ecological receptors. The pond was dry during the dry season sampling, so no water samples were collected.	Surface water and surface sediment (1)	Surface sediment and water at one previously sampled location (WKP-001).	Water unfiltered (5) • Total metals • Suspended Solids (1 per area – total of 3) • Field Parameters Water filtered (5) • Metals • Trace Mercury • Methyl Mercury Sediment (5) • Metals • Methyl Mercury • pH • TOC (1 per area – total of 3) • Grain Size (1 per area – total of 3)
	Klau Pond	Approximately 2-acre, man-made surface water feature that may be sustained by groundwater influx and could release water to underground workings that provide pathway for seeps into Klau Branch	Sediment and water in the pond had not been sampled for a number of years. The pond provides biological habitat and the water and sediment may present an unacceptable risk to human health and ecological receptors.	Surface water and surface sediment (3)	Surface sediment and water at the three previously sampled locations (KPD-001, KPD-002, and KPD-003).	
	Lower Containment Pond	Approximately 0.43 acre, man-made surface water body designed and utilized as a containment pond for capture and treatment of mine waste water.	Sediment and water in the pond has not been adequately characterized. The pond provides biological habitat and the water and sediment may present an unacceptable risk to human health and ecological receptors. Since the results of the 2 samples collected during the dry season sampling are similar only one location will be sampled in the wet season.	Surface water and surface sediment (1)	Surface sediment and water at one previously samples location (LCP-001).	
	BLM Reservoir	Approximately 2.5-acre, man-made reservoir with dam reportedly constructed with mine waste materials.	Sediment and water quality has not been adequately characterized. Current conditions of sediment and water not known. The pond provides biological habitat and the water and sediment may present an unacceptable risk to human health and ecological receptors. All previous dry season sample points will be collected again in the wet season.	Surface and subsurface sediment and surface water.	Dam material, sediment, water, and fish sampling collected by USGS on behalf of BLM in July 2007. USEPA may elect to collect split samples for more rapid analysis so that results can be incorporated into the RI. If samples are to be collected, surface and subsurface sediment and water at three locations spatially around the pond where surface water runoff enters or exits the pond will be collected (BLM-001, BLM-002, and BLM-003).	To be determined if USEPA elects to collect or analyze spilt samples for chemical analysis. Water unfiltered (3) • Total metals • Suspended Solids • Field Parameters Water filtered (3) • Metals • Trace Mercury • Methyl Mercury Sediment (6) • Metals • Methyl Mercury • pH • TOC • Grain Size

TABLE 4-2
Description and Rationale for Wet Season Sampling Activities
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

	Sampling Area	Description	Rationale/Data Need	Data Type/Sampling Media	Proposed Sampling Locations	Proposed Analysis (Estimated Number of Samples)
Disturbed Area - Seeps	Seeps	Eight seeps were sampled during the dry season sampling. At least three seeps were visible along the north bank of Klau Branch south of where Cypress Mountain Drive crosses the Klau Branch These seeps are likely associated with former underground workings. Hillside seeps are present in the Mill area and open pit at Buena Vista Mine and west of the West Mill Area of the Klau Mine. Two seeps from Buena Vista Repository were also observed.	Seeps had not been systematically identified or recently sampled until the dry season 2007 sampling. In addition, their flows have not been estimated. Seep locations were identified during the initial site reconnaissance and 2007 sampling. Dry season and wet season data are needed to evaluate the chemistry and flow of seeps for the RI as these seeps have the potential or are known to impact surface water quality. Seeps through mine workings and waste materials may and have exhibited a lower pH which results in higher concentrations of metals in seep water. All previous dry season sample points will be collected again in the wet season.	Seeps (water) and seep flow rate, at previously sampled seeps and seep (water), seep flow and surface sediment at new seeps	Seep water samples will be collected from the previously identified seeps. Surface water will be collected at a minimum of 8 previously located seeps (O21-2, O24-2, N23-2, M20-2, M24-2, L21-2, Q11-2, and N07-2). Seep water and surface sediment may be collected at new seeps.	Water unfiltered (9-11) • Total metals • Suspended Solids • Field Parameters • Hardness • Anions • Sulfide
Disturbed Area Streams and Downstream Areas	Klau Branch	Stream that begins upgradient of BLM reservoir, re-emerges downstream of reservoir is fed by seeps from Klau Mine area and then merges with South Fork of Las Tablas Creek at western mine property boundary. Klau Branch is approximately 5,800 feet long in the Study Area of which approximately 2,800 feet is upstream of the Klau Mine.	Sampling adjacent to seeps and the disturbed area of the Klau mine to assess changes in chemistry and downstream to assess the reduction in concentrations with distance from potential sources. Samples in the central portion of Klau branch in the seep area are proposed at a spacing of approximately 400 feet extending to the confluence with the South Fork of Las Tablas Creek. All nine previous dry season sample points will be collected again in the wet season. Two additional samples will be collected in areas of elevated historic stream samples	Surface sediment and surface water on dry season sample points. Surface water and surface and subsurface sediment on points not sampled during dry season.	Locations will be selected adjacent to mapped seeps from Klau Mine that are along the north embankment and samples will be collected approximately every 400 linear feet. Sediment samples collected at surface for 9 locations and surface and subsurface for 2 new locations (KBC-110, KBC-120, KBC-125 [new], KBC-130, KBC-135 [new], KBC-140, KBC-150, KBC-160, KBC-170, KBC-180, KBC-190).	Water unfiltered (up to 21) • Total metals • Suspended Solids (1 per area – total of 4) • Field Parameters Water filtered (up to 21) • Metals • Trace Mercury • Methyl Mercury Sediment (up to 29) • Metals • Methyl Mercury • pH • TOC (1 per area – total of 4) • Grain Size (1 per area – total of 4)
	North Fork of Las Tablas Creek	Stream begins east of Buena Vista Mine property and runs west-northwest along the northern boundary of KBV Mines for a distance of approximately 6,000 linear feet.	No comprehensive sampling results within the last 5 or more years, until recent 2007 dry season sampling event. Current conditions of sediment and water during the dry season and wet season are needed to develop an understanding of the extent of metals and methyl mercury in the creek. Prior sampling results and history indicate that sediment and surface water discharges from the Buena Vista Mine containment basins resulted in discharges of chemicals above NPDES permit conditions. Recent road work has possibly redirected the flow from the concrete swale on the mine property to Dodd's ditch. The elevated results of the subsurface downstream sample suggest the need for additional samples in the area. All previous dry season sample points will be collected again in the wet season.	Surface sediment and surface water. Surface water and surface and subsurface sediment on points not sampled during dry season.	Proposed sample locations: three samples upstream of the intersection of North Fork of Las Tablas Creek and Klau Mine Rd., one near the former NPDES discharge location near Dodd's ditch, one approximately 100-200 feet downstream of Former Buena Vista NPDES discharge prior to confluence with South Fork of Las Tablas Creek, a third sample between NPDES 1 and the North Fork of Las Tablas Creek, and three locations downstream (approximately every 800 feet) before the confluence with the South Fork of Las Tablas Creek. (LTC-100 [new], LTC-120 [new], LTC-130, NPD-001, NPD-002, and NPD-003 [new]).	
	South Fork of Las Tablas Creek	Stream is at southwest corner of Klau Mine property where Klau Branch joins and flows north to confluence with North Fork of Las Tablas Creek	No comprehensive sampling results within the last 5 or more years, until recent 2007 dry season sampling event. Current conditions of sediment and water during the dry season and wet season are needed to develop an understanding of the extent of mercury, methyl mercury and metals in the creek.	Surface sediment and surface water Surface water and surface and subsurface sediment on points not sampled during dry season	Three samples downstream of confluence with Klau Branch (SLT-110, SLT-120 [new], SLT-130 [new], and SLT-140 [new]).	
	Las Tablas Creek	Main creek that combines flows from Klau Branch and North and South forks of Las Tablas Creek	Current conditions of sediment and water during the dry season and wet season are needed to develop an understanding of the extent of mercury, methyl mercury, and metals in the creek at the edge of the Phase I Study Area.	Surface and subsurface sediment and surface water	One sample within 200 feet of confluence of north and south forks of Las Tablas Creek (LTC-090)	

TABLE 4-2
Description and Rationale for Wet Season Sampling Activities
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

	Sampling Area	Description	Rationale/Data Need	Data Type/Sampling Media	Proposed Sampling Locations	Proposed Analysis (Estimated Number of Samples)
Biological Sampling	West Klau Pond	Approximately 0.2-acre, man-made surface water body that was dry during dry season sampling of 2007 and may be approximately 10 feet deep.	No biological sampling had been performed prior to 2007. The pond provides biological habitat and the water and sediment may present an unacceptable risk to human health and ecological receptors. Bird eggs provide an effect endpoint in the determination of the ecological risk. Previous dry season samples did not provide sufficient biological diversity.	Terrestrial and aquatic Invertebrates, and vegetation	One each of aquatic invertebrate, terrestrial invertebrate, and local vegetation (WKP-001, WKP-002, and WKP-003).	Biota (up to 30) • Metals • Methyl Mercury • Moisture content
	Klau Pond	Approximately 2-acre pond within former active mine area.	Fish and pond organisms may contain metals that pose a risk to human health or the environment and have not been sampled. Aquatic invertebrates are consumed by the higher food chain biota. Previous dry season samples did not provide sufficient biological diversity.	Terrestrial invertebrates and bird eggs	One each of terrestrial invertebrates and bird eggs (KPD-001 and KPD-002).	
	Lower Containment Pond	Approximately 0.43 acre, man-made surface water body designed and utilized as a containment pond for capture and treatment of mine waste water.	No biological sampling had been performed prior to 2007. The pond provides biological habitat and the water and sediment may present an unacceptable risk to human health and ecological receptors. Aquatic invertebrates are consumed by the higher food chain biota and bird eggs provide an effect endpoint in the determination of the ecological risk. Previous dry season samples did not provide sufficient biological diversity.	Terrestrial invertebrates, and bird eggs	One each of terrestrial invertebrates and bird eggs (LCP-001 and LCP-002).	
	BLM Reservoir	Approximately 2.5-acre, man-made reservoir with dam reportedly constructed with mine waste materials.	The pond provides biological habitat that may present an unacceptable risk to human health and ecological receptors. Aquatic invertebrates are consumed by the higher food chain biota and bird eggs provide an effect endpoint in the determination of the ecological risk.	Fish and aquatic invertebrates.	Fish sampling collected by USGS on behalf of BLM in July 2007. USEPA may elect to collect split samples for more rapid analysis so that results can be incorporated into the RI. If samples are to be collected, fish and aquatic invertebrates will be collected at 3 locations (BLM-001, BLM-002, and BLM-003).	
	Klau Branch	Stream that begins upgradient of BLM reservoir, reemerges downstream of reservoir is fed by seeps from Klau Mine area and then merges with South Fork of Las Tablas Creek at western mine property boundary. Klau Branch is approximately 5,800 feet long in the Study Area of which approximately 2,800 feet is upstream of the Klau Mine.	Invertebrate samples collected upstream and 1 location close to the area of orange seepage, will provide information for ecological risk assessment.	Aquatic invertebrates	2 locations: 1 upstream of BLM reservoir and 1 along Klau Branch close to area of orange seepage. Co-located with sediment and surface water samples listed above (KBC-210 and KBC-160).	
	North Fork Las Tablas Creek	Upstream and downstream of former discharge location from Buena Vista Mine	No biological had been performed; data are needed to provide information for ecological risk assessment.	Aquatic invertebrates and terrestrial vegetation	1 downstream of former discharge location to Dodd's Ditch. Co-located with sediment and surface water samples listed above (NPD-003).	
	Disturbed Area	Former mine areas of Klau and Buena Vista Mines	No biological has been performed; data are needed to provide information for ecological risk assessment. Observe the conditions at the Western Retort, Former Mill Site, Klau Pond processing area, on Klau mine, and the Rotary Furnace and downstream of the repository on Buena Vista Mine to assess the presence and/or abundance of organisms not seen and/or sampled during the dry season sampling.	Upland Vegetation and Terrestrial Invertebrates	4-6 discretionary composite samples of upland vegetation. 4-6 discretionary composite samples of terrestrial invertebrates	

TABLE 4-2
Description and Rationale for Wet Season Sampling Activities
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

	Sampling Area	Description	Rationale/Data Need	Data Type/Sampling Media	Proposed Sampling Locations	Proposed Analysis (Estimated Number of Samples)
Additional Sampling	Water sources for Camp Natoma, Buena Vista Mine caretaker and Dodd Ranch	Grab samples of water sources for select nearby facilities.	Determine concentration of mercury in these water sources for comparison with drinking water criteria and goals. If mercury is detected in these samples additional data or investigation may be needed to evaluate if mine activities have impacted this water source.	Water	3 samples of water from spigot (1 each from Camp Natoma, caretaker spring box and Dodd Ranch) with permission (DRW-001, CSW-001, and CNW-001).	Water unfiltered (3) • Total metals • Suspended Solids • Field Parameters
	Vertical pipe	Grab samples of water in black drainage wells	Drainage wells may contain water that collects as runoff from disturbed areas. Drainage through mine workings and waste materials may and have exhibited a lower pH which results in higher concentrations of metals in the collected water.	Water	3 samples of water from vertical pipes/sumps located in Buena Vista at the Mine Shop area and below the Lower Containment pond, and at Klau in the Repository (MSP-001, RCW-001, and KRP-001)	Water unfiltered (3) • Total metals • Suspended Solids • Field Parameters Water filtered (3) • Metals • Trace Mercury • Methyl Mercury

KLAU BUENA VISTA MINES- PLANNED SAMPLE TABLE

Date: Spring 2008 Event: 2008 Stormwater KBVM RI

				Sample Container	500 mL PTFE	100 mL Glass or HDPE	1Liter glass or HDPE		
				Preservatives	HCl to pH<2	4°C	HNO3 to pH<2		
				Filtered	NA	NA	NA		
				Lab	ACOE	R9	CLP		
				Analysis Holding Time	28	7	180		
Sample Location	Sample ID	Matrix	Sampling System	Sample Type	MercuryTrace (E1631)	TSS (E160.2)	Metals Total (ILM05.3/ILM05.4)	Hold	MS/MSD
BV Mine									
BRF-01	BRF-001-Storm08	RainFall	Grab	N	x		x		☐
BRF-02	BRF-002-Storm08	RainFall	Grab	N	x		x		☐
BRF-03	BRF-003-Storm08	RainFall	Grab	N	x		x		☐
BRF-04	BRF-004-Storm08	RainFall	Grab	N	x		x		☐
BRF-05	BRF-005-Storm08	RainFall	Grab	N	x		x		☐
BRF-06	BRF-006-Storm08	RainFall	Grab	N	x		x		☐
BRF-07	BRF-007-Storm08	RainFall	Grab	N	x		x		☐
BRF-08	BRF-008-Storm08	RainFall	Grab	N	x		x		☐
BRF-09	BRF-009-Storm08	RainFall	Grab	N	x		x		☐
BRF-10	BRF-010-Storm08	RainFall	Grab	N	x		x		☐
BRF-11	BRF-011-Storm08	RainFall	Grab	N	x		x		☐
BRF-12	BRF-012-Storm08	RainFall	Grab	N	x		x		☐
BRF-13	BRF-013-Storm08	RainFall	Grab	N	x		x		☐
BRF-14	BRF-014-Storm08	RainFall	Grab	N	x		x		☐
BV NPDES Discharge									
NPD-1	NPD-001-Storm08	RainFall	Grab	N	x		x		☐
NPD-2	NPD-002-Storm08	RainFall	Grab	N	x		x		☐
NPD-3	NPD-003-Storm08	RainFall	Grab	N	x		x		☐
BV Repository									
N23-3	N23-003-Storm08	RainFall	Grab	N	x		x		☐
O21-2	O21-002-Storm08	RainFall	Grab	N	x		x		☐
P21-2	P21-002-Storm08	RainFall	Grab	N	x		x		☐
Klau Branch									
KBC-130	KBC-130-Storm08	RainFall	Grab	N	x		x		☐
KBC-185	KBC-185-Storm08	RainFall	Grab	N	x		x		☐
KBC-195	KBC-195-Storm08	RainFall	Grab	N	x		x		☐
KBC-200	KBC-200-Storm08	RainFall	Grab	N	x		x		☐

KLAU BUENA VISTA MINES- PLANNED SAMPLE TABLE

Date: Spring 2008 Event: 2008 Stormwater KBVM RI

				Sample Container	500 mL PTFE	100 mL Glass or HDPE	1Liter glass or HDPE		
				Preservatives	HCl to pH<2	4°C	HNO3 to pH<2		
				Filtered	NA	NA	NA		
				Lab	ACOE	R9	CLP		
				Analysis Holding Time	28	7	180		
Sample Location	Sample ID	Matrix	Sampling System	Sample Type	MercuryTrace (E1631)	TSS (E160.2)	Metals Total (ILM05.3/ILM05.4)	Hold	MS/MSD
Klau Mine									
KRF-01	KRF-001-Storm08	RainFall	Grab	N	x		x		☐
KRF-02	KRF-002-Storm08	RainFall	Grab	N	x		x		☐
KRF-03	KRF-003-Storm08	RainFall	Grab	N	x		x		☐
KRF-04	KRF-004-Storm08	RainFall	Grab	N	x		x		☐
KRF-05	KRF-005-Storm08	RainFall	Grab	N	x		x		☐
KRF-06	KRF-006-Storm08	RainFall	Grab	N	x		x		☐
KRF-07	KRF-007-Storm08	RainFall	Grab	N	x		x		☐
KRF-08	KRF-008-Storm08	RainFall	Grab	N	x		x		☐
KRF-09	KRF-009-Storm08	RainFall	Grab	N	x		x		☐
KRF-10	KRF-010-Storm08	RainFall	Grab	N	x		x		☐
Las Tablas									
LTC-135	LTC-135-Storm08	RainFall	Grab	N	x		x		☐
LTC-150	LTC-150-Storm08	RainFall	Grab	N	x		x		☐
SCM Fork									
SCM-145	SCM-145-Storm08	RainFall	Grab	N	x		x		☐
Various									
Rain-01	Rain-001-Storm08	RainWater	Grab	N		x			☐

NOTES:

CLP	CLP
R9	Region 9 lab
ACOE	Army Corps of Engineers
MS/MSD	Collect one every twenty samples or one every batch (SDG)
FD	Collect ten percent field duplicate samples

Table: 5-2

KLAU BUENA VISTA MINES- PLANNED SAMPLE TABLE

Date: Spring 2008 Event: 2008 Wet Season KBVM RI

Sample Container						1Liter glass or HDPE	500 mL HDPE	500 mL HDPE	1Liter glass or HDPE	500 mL PTFE	500 mL PTFE	4 oz plastic wide mouth jars	250 mL HDPE	250 mL HDPE	500 mL HDPE	500 mL HDPE	4 oz plastic wide mouth jars	100 mL Glass or HDPE	Ziplock bag	500 mL HDPE		
Preservatives						HNO3 to pH<2	4℃	4℃	HNO3 to pH<2	HCl to pH<2	HCl to pH<2	Freeze	Ice	HNO3 pH<2, 4℃	NaOH zinc acetate	4℃	4℃	4℃	Freeze	4℃		
Filtered						Field	NA	NA	NA	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Anticipated Laboratory						CLP	CLP	TBD	CLP	TBD	TBD	TBD	R9	R9	R9	R9	R9	R9	TBD	TBD		
Analysis Holding Time						180	180	180	180	28	28	NA	1	180	7	28	28	7	NA	180		
Sample Location	Sample ID	Depth	Matrix	Sampling System	Sample Type	Metals (ILM05.3/ILM05.4) Field Filtered	Metals (ILM05.3/ILM05.4)	Metals (ILM05.3/ILM05.4)	Metals Total (ILM05.3/ILM05.4)	MercuryTrace (E1631) Field Filtered	MethylMercury (E1630) Field Filtered	MethylMercury (E1630)	pH (SW9045D)	Hardness (E130.2)	Sulfide (SW9030)	Anions (E300/SW9056)	TOC-Solid (SW9060)	TSS (E160.2)	Grain Size (ASTMD422/C136)	Percent Moisture (E160.3)	comment	MS/MSD
Background and Upstream																						
KBC-200	KBC-200-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
KBC-200	KBC-200-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
KBC-210	KBC-210-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-210	KBC-210-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-210	KBC-210-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-210	KBC-210-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-220	KBC-220-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-220	KBC-220-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
LTC-140	LTC-140-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
LTC-140	LTC-140-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
LTC-145	LTC-145-SD0-WET08		Sediment	Grab	N		x					x	x									☐
LTC-145	LTC-145-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
LTC-150	LTC-150-SD0-WET08		Sediment	Grab	N		x					x	x									☐
LTC-150	LTC-150-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
SCM-145	SCM-145-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
SCM-145	SCM-145-SD8-WET08		Sediment	Grab	FD		x					x	x				x		x			☐
SCM-145	SCM-145-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
SCM-145	SCM-145-SW8-WET08		Surfacewater	Grab	FD	x			x	x	x							x				☐
SLT-080	SLT-080-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
SLT-080	SLT-080-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
SLT-090	SLT-090-SD0-WET08		Sediment	Grab	N		x					x	x									☐
SLT-090	SLT-090-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
Biological Sampling																						
BIO-1	BIO-001-TS1-WET08		Tissue	Composite	N			x				x								x		☐
BIO-1	BIO-001-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-2	BIO-002-TS1-WET08		Tissue	Composite	N			x				x								x		☐
BIO-2	BIO-002-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-3	BIO-003-TS1-WET08		Tissue	Composite	N			x				x								x		☐

Table: 5-2

KLAU BUENA VISTA MINES- PLANNED SAMPLE TABLE

Date: Spring 2008 Event: 2008 Wet Season KBVM RI

						1Liter glass or HDPE	500 mL HDPE	500 mL HDPE	1Liter glass or HDPE	500 mL PTFE	500 mL PTFE	4 oz plastic wide mouth jars	250 mL HDPE	250 mL HDPE	500 mL HDPE	500 mL HDPE	4 oz plastic wide mouth jars	100 mL Glass or HDPE	Ziplock bag	500 mL HDPE		
Sample Container																						
Preservatives						HNO3 to pH<2	4℃	4℃	HNO3 to pH<2	HCl to pH<2	HCl to pH<2	Freeze	Ice	HNO3 pH<2, 4℃	NaOH zinc acetate	4℃	4℃	4℃	Freeze	4℃		
Filtered						Field	NA	NA	NA	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Anticipated Laboratory						CLP	CLP	TBD	CLP	TBD	TBD	TBD	R9	R9	R9	R9	R9	R9	TBD	TBD		
Analysis Holding Time						180	180	180	180	28	28	NA	1	180	7	28	28	7	NA	180		
Sample Location	Sample ID	Depth	Matrix	Sampling System	Sample Type	Metals (ILM05.3/ILM05.4) Field Filtered	Metals (ILM05.3/ILM05.4)	Metals (ILM05.3/ILM05.4)	Metals Total (ILM05.3/ILM05.4)	MercuryTrace (E1631) Field Filtered	MethylMercury (E1630) Field Filtered	MethylMercury (E1630)	pH (SW9045D)	Hardness (E130.2)	Sulfide (SW9030)	Anions (E300/SW9056)	TOC-Solid (SW9060)	TSS (E160.2)	Grain Size (ASTMD422/C136)	Percent Moisture (E160.3)	comment	MS/MSD
BIO-3	BIO-003-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-4	BIO-004-TS1-WET08		Tissue	Composite	N			x				x								x		☐
BIO-4	BIO-004-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-5	BIO-005-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-6	BIO-006-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-7	BIO-007-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-8	BIO-008-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-9	BIO-009-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-10	BIO-010-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-11	BIO-011-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-12	BIO-012-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BIO-13	BIO-013-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
BLM-1	BLM-001-TS1-WET08		Tissue	Composite	N			x				x								x		☐
BLM-1	BLM-001-TS2-WET08		Tissue	Composite	N			x				x								x		☐
BLM-2	BLM-002-TS1-WET08		Tissue	Composite	N			x				x								x		☐
BLM-3	BLM-003-TS1-WET08		Tissue	Composite	N			x				x								x		☐
BLM-3	BLM-003-TS2-WET08		Tissue	Composite	N			x				x								x		☐
BLM-2	BLM-02-TS2-WET08		Tissue	Composite	N			x				x								x		☐
KBC-160	KBC-160-TS1-WET08		Tissue	Composite	N			x				x								x		☐
KBC-210	KBC-210-TS1-WET08		Tissue	Composite	N			x				x								x		☐
KPD-1	KPD-001-TS1-WET08		Tissue	Composite	N			x				x								x		☐
KPD-1	KPD-001-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
KPD-2	KPD-002-TS1-WET08		Tissue	Composite	N			x				x								x		☐
LCP-1	LCP-001-TS1-WET08		Tissue	Composite	N			x				x								x		☐
LCP-1	LCP-001-TS2-WET08		Tissue	Composite	N			x				x								x		☐
LTC-1	LTC-001-TS1-WET08		Tissue	Composite	N			x				x								x		☐
LTC-1	LTC-001-VG1-WET08		Vegetation	Composite	N			x				x								x		☐

Table: 5-2

KLAU BUENA VISTA MINES- PLANNED SAMPLE TABLE

Date: Spring 2008 Event: 2008 Wet Season KBVM RI

						Metals (ILM05.3/ILM05.4) Field Filtered	Metals (ILM05.3/ILM05.4)	Metals (ILM05.3/ILM05.4)	Metals Total (ILM05.3/ILM05.4)	MercuryTrace (E1631) Field Filtered	MethylMercury (E1630) Field Filtered	MethylMercury (E1630)	pH (SW9045D)	Hardness (E130.2)	Sulfide (SW9030)	Anions (E300/SW9056)	TOC-Solid (SW9060)	TSS (E160.2)	Grain Size (ASTMD422/C136)	Percent Moisture (E160.3)		
Sample Container						1Liter glass or HDPE	500 mL HDPE	500 mL HDPE	1Liter glass or HDPE	500 mL PTFE	500 mL PTFE	4 oz plastic wide mouth jars	250 mL HDPE	250 mL HDPE	500 mL HDPE	500 mL HDPE	4 oz plastic wide mouth jars	100 mL Glass or HDPE	Ziplock bag	500 mL HDPE		
Preservatives						HNO3 to pH<2	4℃	4℃	HNO3 to pH<2	HCl to pH<2	HCl to pH<2	Freeze	Ice	HNO3 pH<2, 4℃	NaOH zinc acetate	4℃	4℃	4℃	Freeze	4℃		
Filtered						Field	NA	NA	NA	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Anticipated Laboratory						CLP	CLP	TBD	CLP	TBD	TBD	TBD	R9	R9	R9	R9	R9	R9	TBD	TBD		
Analysis Holding Time						180	180	180	180	28	28	NA	1	180	7	28	28	7	NA	180		
Sample Location	Sample ID	Depth	Matrix	Sampling System	Sample Type																comment	MS/MSD
NPD-3	NPD-003-TS1-WET08		Tissue	Composite	N			x				x								x		☐
NPD-3	NPD-003-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
WKP-1	WKP-001-TS1-WET08		Tissue	Composite	N			x				x								x		☐
WKP-1	WKP-001-TS2-WET08		Tissue	Composite	N			x				x								x		☐
WKP-1	WKP-001-VG1-WET08		Vegetation	Composite	N			x				x								x		☐
Disturbed Area Ponds																						
BLM-1	BLM-001-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
BLM-1	BLM-001-SD1-WET08	01	Sediment	Grab	N		x					x	x				x		x			☐
BLM-1	BLM-001-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
BLM-2	BLM-002-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
BLM-2	BLM-002-SD1-WET08	01	Sediment	Grab	N		x					x	x				x		x			☐
BLM-2	BLM-002-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
BLM-3	BLM-003-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
BLM-3	BLM-003-SD1-WET08	01	Sediment	Grab	N		x					x	x				x		x			☐
BLM-3	BLM-003-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
Disturbed Area Ponds, Containment Pond																						
LCP-1	LCP-001-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
LCP-1	LCP-001-SD8-WET08		Sediment	Grab	FD		x					x	x				x		x			☐
LCP-1	LCP-001-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
LCP-1	LCP-001-SW8-WET08		Surfacewater	Grab	FD	x			x	x	x							x				☐
Disturbed Area Ponds, Klau Pond																						
KPD-1	KPD-001-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
KPD-1	KPD-001-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
KPD-2	KPD-002-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KPD-2	KPD-002-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KPD-3	KPD-003-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KPD-3	KPD-003-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐

Table: 5-2

KLAU BUENA VISTA MINES- PLANNED SAMPLE TABLE

Date: Spring 2008 Event: 2008 Wet Season KBVM RI

						1Liter glass or HDPE	500 mL HDPE	500 mL HDPE	1Liter glass or HDPE	500 mL PTFE	500 mL PTFE	4 oz plastic wide mouth jars	250 mL HDPE	250 mL HDPE	500 mL HDPE	500 mL HDPE	4 oz plastic wide mouth jars	100 mL Glass or HDPE	Ziplock bag	500 mL HDPE		
					Sample Container																	
					Preservatives	HNO3 to pH<2	4℃	4℃	HNO3 to pH<2	HCl to pH<2	HCl to pH<2	Freeze	Ice	HNO3 pH<2, 4℃	NaOH zinc acetate	4℃	4℃	4℃	Freeze	4℃		
					Filtered	Field	NA	NA	NA	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA		
					Anticipated Laboratory	CLP	CLP	TBD	CLP	TBD	TBD	TBD	R9	R9	R9	R9	R9	R9	TBD	TBD		
					Analysis Holding Time	180	180	180	180	28	28	NA	1	180	7	28	28	7	NA	180		
Sample Location	Sample ID	Depth	Matrix	Sampling System	Sample Type	Metals (ILM05.3/ILM05.4) Field Filtered	Metals (ILM05.3/ILM05.4)	Metals (ILM05.3/ILM05.4)	Metals Total (ILM05.3/ILM05.4)	MercuryTrace (E1631) Field Filtered	MethylMercury (E1630) Field Filtered	MethylMercury (E1630)	pH (SW9045D)	Hardness (E130.2)	Sulfide (SW9030)	Anions (E300/SW9056)	TOC-Solid (SW9060)	TSS (E160.2)	Grain Size (ASTMD422/C136)	Percent Moisture (E160.3)	comment	MS/MSD
Disturbed Area Ponds, West Klau Pond																						
WKP-1	WKP-001-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
WKP-1	WKP-001-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
Disturbed Area-Seep																						
L21-2	L21-002-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
L21-2	L21-002-SP8-WET08		Surfacewater	Grab	FD				x					x	x	x		x				☐
M20-2	M20-002-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
M24-2	M24-002-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
N07-2	N07-002-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
N23-2	N23-002-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
O21-2	O21-002-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
O24-2	O24-002-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
Q11-2	Q11-002-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
SEP-1	SEP-001-SD0-WET08		Sediment	Grab	N		x															☐
SEP-1	SEP-001-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
SEP-2	SEP-002-SD0-WET08		Sediment	Grab	N		x															☐
SEP-2	SEP-002-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
SEP-3	SEP-003-SD0-WET08		Sediment	Grab	N		x															☐
SEP-3	SEP-003-SP0-WET08		Surfacewater	Grab	N				x					x	x	x		x				☐
Disturbed Streams, Downstream Areas																						
KBC-110	KBC-110-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
KBC-110	KBC-110-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
KBC-120	KBC-120-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-120	KBC-120-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-125	KBC-125-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-125	KBC-125-SD1-WET08	01	Sediment	Grab	N		x					x	x									☐
KBC-125	KBC-125-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐

Table: 5-2

KLAU BUENA VISTA MINES- PLANNED SAMPLE TABLE

Date: Spring 2008 Event: 2008 Wet Season KBVM RI

						1Liter glass or HDPE	500 mL HDPE	500 mL HDPE	1Liter glass or HDPE	500 mL PTFE	500 mL PTFE	4 oz plastic wide mouth jars	250 mL HDPE	250 mL HDPE	500 mL HDPE	500 mL HDPE	4 oz plastic wide mouth jars	100 mL Glass or HDPE	Ziplock bag	500 mL HDPE		
Sample Container																						
Preservatives						HNO3 to pH<2	4℃	4℃	HNO3 to pH<2	HCl to pH<2	HCl to pH<2	Freeze	Ice	HNO3 pH<2, 4℃	NaOH zinc acetate	4℃	4℃	4℃	Freeze	4℃		
Filtered						Field	NA	NA	NA	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Anticipated Laboratory						CLP	CLP	TBD	CLP	TBD	TBD	TBD	R9	R9	R9	R9	R9	R9	TBD	TBD		
Analysis Holding Time						180	180	180	180	28	28	NA	1	180	7	28	28	7	NA	180		
Sample Location	Sample ID	Depth	Matrix	Sampling System	Sample Type	Metals (ILM05.3/ILM05.4) Field Filtered	Metals (ILM05.3/ILM05.4)	Metals (ILM05.3/ILM05.4)	Metals Total (ILM05.3/ILM05.4)	MercuryTrace (E1631) Field Filtered	MethylMercury (E1630) Field Filtered	MethylMercury (E1630)	pH (SW9045D)	Hardness (E130.2)	Sulfide (SW9030)	Anions (E300/SW9056)	TOC-Solid (SW9060)	TSS (E160.2)	Grain Size (ASTMD422/C136)	Percent Moisture (E160.3)	comment	MS/MSD
KBC-130	KBC-130-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-130	KBC-130-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-135	KBC-135-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-135	KBC-135-SD1-WET08	01	Sediment	Grab	N		x					x	x									☐
KBC-135	KBC-135-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-140	KBC-140-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-140	KBC-140-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-150	KBC-150-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-150	KBC-150-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-160	KBC-160-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-160	KBC-160-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-170	KBC-170-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-170	KBC-170-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-180	KBC-180-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-180	KBC-180-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
KBC-190	KBC-190-SD0-WET08		Sediment	Grab	N		x					x	x									☐
KBC-190	KBC-190-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
LTC-090	LTC-090-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
LTC-090	LTC-090-SD1-WET08	01	Sediment	Grab	N		x					x	x									☐
LTC-090	LTC-090-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
LTC-100	LTC-100-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
LTC-100	LTC-100-SD1-WET08	01	Sediment	Grab	N		x					x	x									☐
LTC-100	LTC-100-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
LTC-120	LTC-120-SD0-WET08		Sediment	Grab	N		x					x	x									☐
LTC-120	LTC-120-SD1-WET08	01	Sediment	Grab	N		x					x	x									☐
LTC-120	LTC-120-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
LTC-130	LTC-130-SD0-WET08		Sediment	Grab	N		x					x	x									☐

Table: 5-2

KLAU BUENA VISTA MINES- PLANNED SAMPLE TABLE

Date: Spring 2008 Event: 2008 Wet Season KBVM RI

Sample Container						1Liter glass or HDPE	500 mL HDPE	500 mL HDPE	1Liter glass or HDPE	500 mL PTFE	500 mL PTFE	4 oz plastic wide mouth jars	250 mL HDPE	250 mL HDPE	500 mL HDPE	500 mL HDPE	4 oz plastic wide mouth jars	100 mL Glass or HDPE	Ziplock bag	500 mL HDPE		
Preservatives						HNO3 to pH<2	4℃	4℃	HNO3 to pH<2	HCl to pH<2	HCl to pH<2	Freeze	Ice	HNO3 pH<2, 4℃	NaOH zinc acetate	4℃	4℃	4℃	Freeze	4℃		
Filtered						Field	NA	NA	NA	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Anticipated Laboratory						CLP	CLP	TBD	CLP	TBD	TBD	TBD	R9	R9	R9	R9	R9	R9	TBD	TBD		
Analysis Holding Time						180	180	180	180	28	28	NA	1	180	7	28	28	7	NA	180		
Sample Location	Sample ID	Depth	Matrix	Sampling System	Sample Type	Metals (ILM05.3/ILM05.4) Field Filtered	Metals (ILM05.3/ILM05.4)	Metals (ILM05.3/ILM05.4)	Metals Total (ILM05.3/ILM05.4)	MercuryTrace (E1631) Field Filtered	MethylMercury (E1630) Field Filtered	MethylMercury (E1630)	pH (SW9045D)	Hardness (E130.2)	Sulfide (SW9030)	Anions (E300/SW9056)	TOC-Solid (SW9060)	TSS (E160.2)	Grain Size (ASTMD422/C136)	Percent Moisture (E160.3)	comment	MS/MSD
LTC-130	LTC-130-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
NPD-1	NPD-001-SD0-WET08		Sediment	Grab	N		x					x	x									☐
NPD-1	NPD-001-SD8-WET08		Sediment	Grab	FD		x					x	x									☐
NPD-1	NPD-001-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
NPD-1	NPD-001-SW8-WET08		Surfacewater	Grab	FD	x			x	x	x											☐
NPD-2	NPD-002-SD0-WET08		Sediment	Grab	N		x					x	x									☐
NPD-2	NPD-002-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
NPD-3	NPD-003-SD0-WET08		Sediment	Grab	N		x					x	x									☐
NPD-3	NPD-003-SD1-WET08	01	Sediment	Grab	N		x					x	x									☐
NPD-3	NPD-003-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
SLT-110	SLT-110-SD0-WET08		Sediment	Grab	N		x					x	x				x		x			☐
SLT-110	SLT-110-SW0-WET08		Surfacewater	Grab	N	x			x	x	x							x				☐
SLT-120	SLT-120-SD0-WET08		Sediment	Grab	N		x					x	x									☐
SLT-120	SLT-120-SD1-WET08	01	Sediment	Grab	N		x					x	x									☐
SLT-120	SLT-120-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
SLT-130	SLT-130-SD0-WET08		Sediment	Grab	N		x					x	x									☐
SLT-130	SLT-130-SD1-WET08	01	Sediment	Grab	N		x					x	x									☐
SLT-130	SLT-130-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐
SLT-140	SLT-140-SD0-WET08		Sediment	Grab	N		x					x	x									☐
SLT-140	SLT-140-SD1-WET08	01	Sediment	Grab	N		x					x	x									☐
SLT-140	SLT-140-SW0-WET08		Surfacewater	Grab	N	x			x	x	x											☐

Equipment Blank

EB-1	EB-001-WET08		Water	Grab	EB				x	x	x											☐
EB-2	EB-002-WET08		Water	Grab	EB				x	x	x											☐
EB-3	EB-003-WET08		Water	Grab	EB				x	x	x											☐
EB-4	EB-004-WET08		Water	Grab	EB				x	x	x											☐
EB-5	EB-005-WET08		Water	Grab	EB				x	x	x											☐

Table: 5-2

KLAU BUENA VISTA MINES- PLANNED SAMPLE TABLE

Date: Spring 2008 Event: 2008 Wet Season KBVM RI

Sample Container						1Liter glass or HDPE	500 mL HDPE	500 mL HDPE	1Liter glass or HDPE	500 mL PTFE	500 mL PTFE	4 oz plastic wide mouth jars	250 mL HDPE	250 mL HDPE	500 mL HDPE	500 mL HDPE	4 oz plastic wide mouth jars	100 mL Glass or HDPE	Ziplock bag	500 mL HDPE		
Preservatives						HNO3 to pH<2	4℃	4℃	HNO3 to pH<2	HCl to pH<2	HCl to pH<2	Freeze	Ice	HNO3 pH<2, 4℃	NaOH zinc acetate	4℃	4℃	4℃	Freeze	4℃		
Filtered						Field	NA	NA	NA	Field	Field	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Anticipated Laboratory						CLP	CLP	TBD	CLP	TBD	TBD	TBD	R9	R9	R9	R9	R9	R9	TBD	TBD		
Analysis Holding Time						180	180	180	180	28	28	NA	1	180	7	28	28	7	NA	180		
Sample Location	Sample ID	Depth	Matrix	Sampling System	Sample Type	Metals (ILM05.3/ILM05.4) Field Filtered	Metals (ILM05.3/ILM05.4)	Metals (ILM05.3/ILM05.4)	Metals Total (ILM05.3/ILM05.4)	MercuryTrace (E1631) Field Filtered	MethylMercury (E1630) Field Filtered	MethylMercury (E1630)	pH (SW9045D)	Hardness (E130.2)	Sulfide (SW9030)	Anions (E300/SW9056)	TOC-Solid (SW9060)	TSS (E160.2)	Grain Size (ASTMD422/C136)	Percent Moisture (E160.3)	comment	MS/MSD
EB-6	EB-006-WET08		Water	Grab	EB				x	x	x											☐
EB-7	EB-007-WET08		Water	Grab	EB				x	x	x											☐
EB-8	EB-008-WET08		Water	Grab	EB				x	x	x											☐
EB-9	EB-009-WET08		Water	Grab	EB				x	x	x											☐
EB-10	EB-010-WET08		Water	Grab	EB				x	x	x											☐
Sump Pipes																						
KRP-1	KRP-001-SW0-WET08		Groundwater	Grab	N	x			x	x	x							x				☐
MSP-1	MSP-001-SW0-WET08		Groundwater	Grab	N	x			x	x	x							x				☐
MSP-1	MSP-001-SW8-WET08		Groundwater	Grab	FD	x			x	x	x							x				☐
RCW-1	RCW-001-SW0-WET08		Groundwater	Grab	N	x			x	x	x							x				☐
Water Wells																						
CNW-1	CNW-0001-SW8-WET08		Groundwater	Grab	FD				x									x				☐
CNW-1	CNW-001-SW0-WET08		Groundwater	Grab	N				x									x				☐
CSW-1	CSW-001-SW0-WET08		Groundwater	Grab	N				x									x				☐
DRW-1	DRW-001-SW0-WET08		Groundwater	Grab	N				x									x				☐

NOTES:

CLP	CLP
R9	Region 9 lab
TBD	To be determined
MS/MSD	Collect one every twenty samples or one every batch (SDG)
FD	Field duplicates (Collect ten percent field duplicate samples)
EB	Equipment blank

Locations for collection for additional sample volume for MS/MSD will be assigned prior to field implementation. MS/MSD samples will be assigned at a frequency of 1 per 20 field samples.

TABLE 6-1
Requirements for Containers, Preservation and Holding Times
Phase 2 Addendum to the Sampling and Analysis Plan
Buena Vista and Klau Mines Superfund Site

Parameter	Analytical Methods	Sample Container		Preservation		Holding Time	
		Aqueous	Solid	Aqueous	Solid	Aqueous	Solid
Inorganic Compounds							
Metals (except Cr+6 and Hg)	ILM05.3/ILM05.4[a]	1 liter glass or HDPE bottle	250 mL wide-mouth glass jar	HNO3 to pH < 2	Cool to 4°C	180 days	180 days
Mercury		250 mL glass or HDPE bottle	250 mL wide-mouth glass jar	HNO3 to pH < 2	Cool to 4°C	28 days	28 days
Mercury - trace	E1631[b]	500 mL PTFE	N/A	HCl to pH < 2	N/A	28 days	N/A
Mercury - methyl	E1630[c]	500 mL PTFE	N/A	HCl to pH < 2	N/A	28 days	N/A
TSS/TDS	E160.1/E160.2[e]	100 mL glass or HDPE bottle	N/A	Cool to 4°C.	N/A	7 days	N/A
Hydrogen ion (pH)	SW9040B [d] SW9045D [d]	60 mL glass or HDPE bottle	125 mL wide-mouth glass bottle	None required	Cool to 4°C	24 hours	As soon as possible
Total organic carbon	SW9060 [d]	125 mL amber glass or HDPE bottle	125 mL wide-mouth glass bottle	Cool to 4°C. HCl, H_2SO_4, or H_3PO_4 to pH < 2. Store in dark.	Cool to 4°C.	28 days	28 days

Notes:
[a] USEPA. Statement of Work, Multi-Media, Multi Concentration Inorganic Analyses, Update March 2007.
[b] USEPA Method 1631, Revision E: Mercury in Water by Oxidation, Purge and trap, and Cold Vapor Atomic Fluorescence Spectrometry, August 2002. EPA-821-R-02-019.
[c] USEPA Method 1630, Methyl Mercury in Water by Distillation, Aqueous Ethylation, Purge and Trap, and CVAFS, Draft, January, 2001.
[d] USEPA. 1996. *Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846, 3rd Edition, Update III, Section 1.*
[e] USEPA. 1983. *Methods for Chemical Analysis of Water and Wastes*. Revised March.

PTFE = Polytetrafluoroethylene (Teflon®), HDPE = high density polyethylene, VOA = volatile organic analysis, H_2SO_4 = sulfuric acid, HCl = hydrochloric acid, H_3PO_4 = phosphoric acid, $Na_2S_2O_3$ = sodium thiosulfate, NaOH = sodium hydroxide, $NaHSO_4$ = sodium bisulfate, N/A = not applicable.

Figures

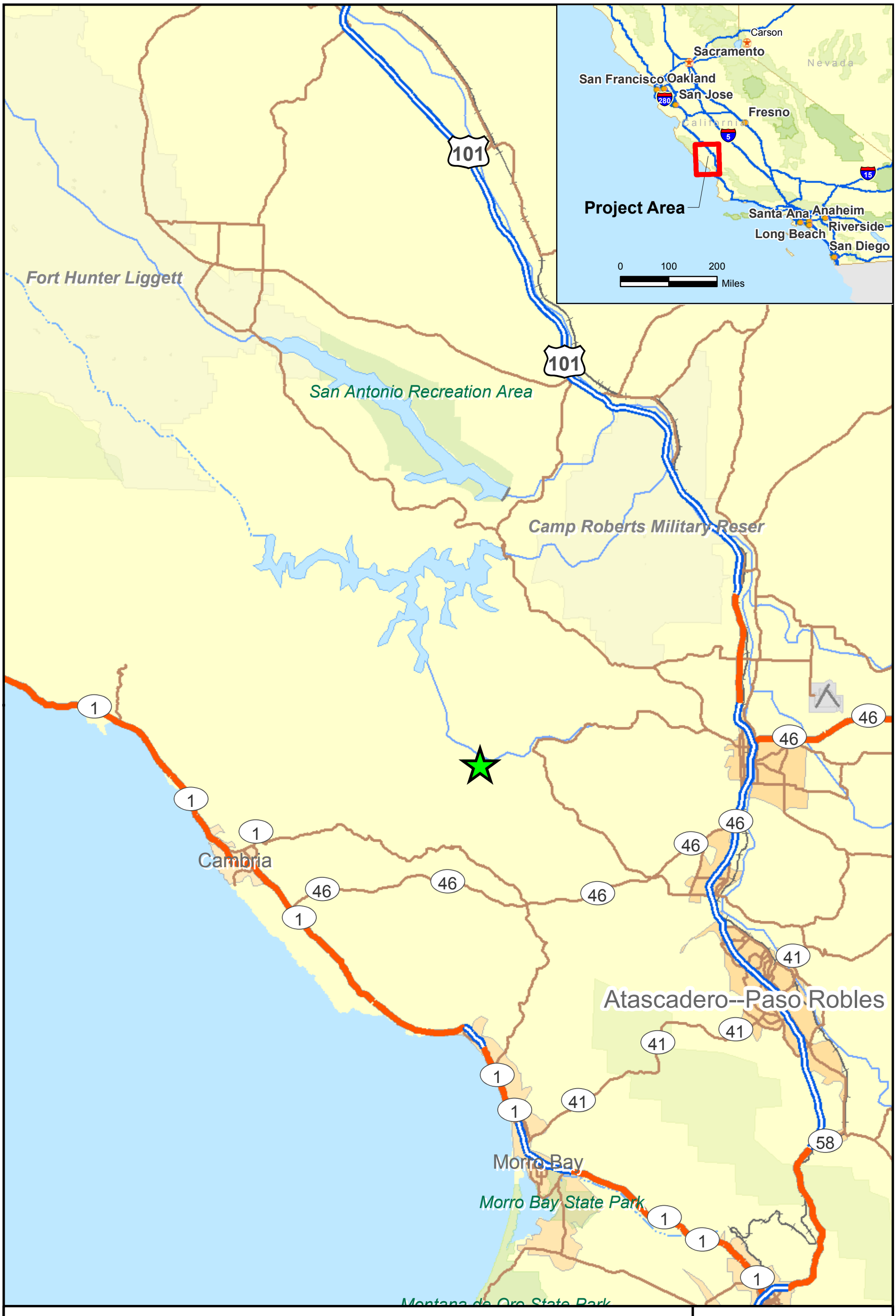
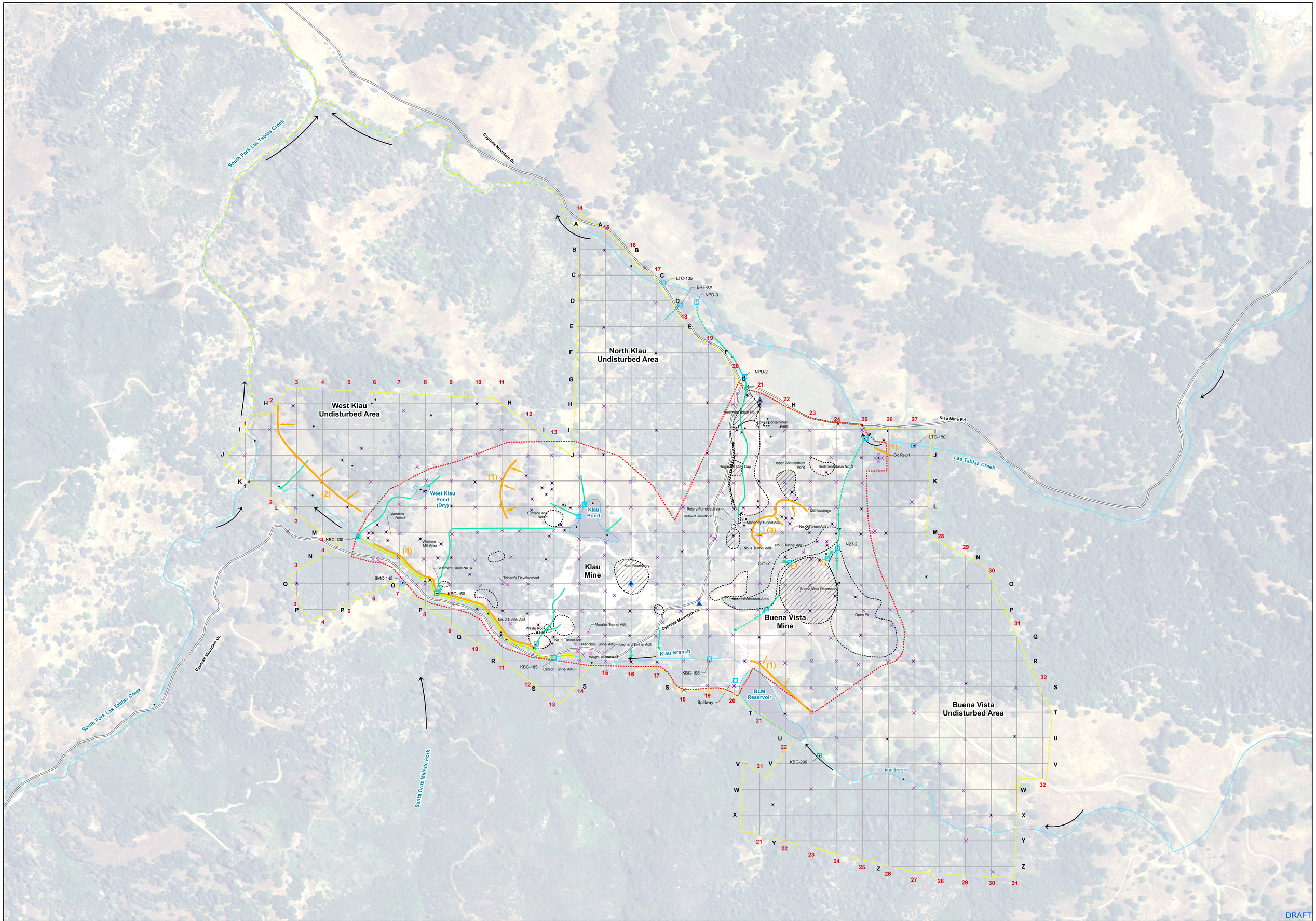


FIGURE 1-1
LOCATION MAP

REMEDIAL INVESTIGATION
KLAU AND BUENA VISTA MINES
SAN LUIS OBISPO COUNTY, CALIFORNIA

CH2MHILL



LEGEND

N11
16.04

- Previous XRF Metals Screening Location
- Previous Sample Collected
- Adit
- Water Flow Direction
- Approximate Boundary of Disturbed Area
- Study Area
- Klau and Buena Vista Mine Parcel Boundaries
- Discrete Stormwater Sampling Location
- Proposed Judgemental Stormwater Sampling Area with Down Slope Arrow (Maximum Number for Area)
- Rainfall Sampling Location
- Approximate Drainage Paths
- Open Pipe

N

0 150 300 Feet

Data sources:
1. Tetra Tech, "Environmental Assessment of the Buena Vista and Klau Mines, San Luis Obispo County, California," June, 1998.
2. Aerial Source: National Agricultural Imagery Program August, 2005

FIGURE 4-1
PROPOSED STORMWATER SAMPLING LOCATIONS

SAP ADDENDUM
KLAU AND BUENA VISTA MINES
SAN LUIS OBISPO COUNTY, CALIFORNIA

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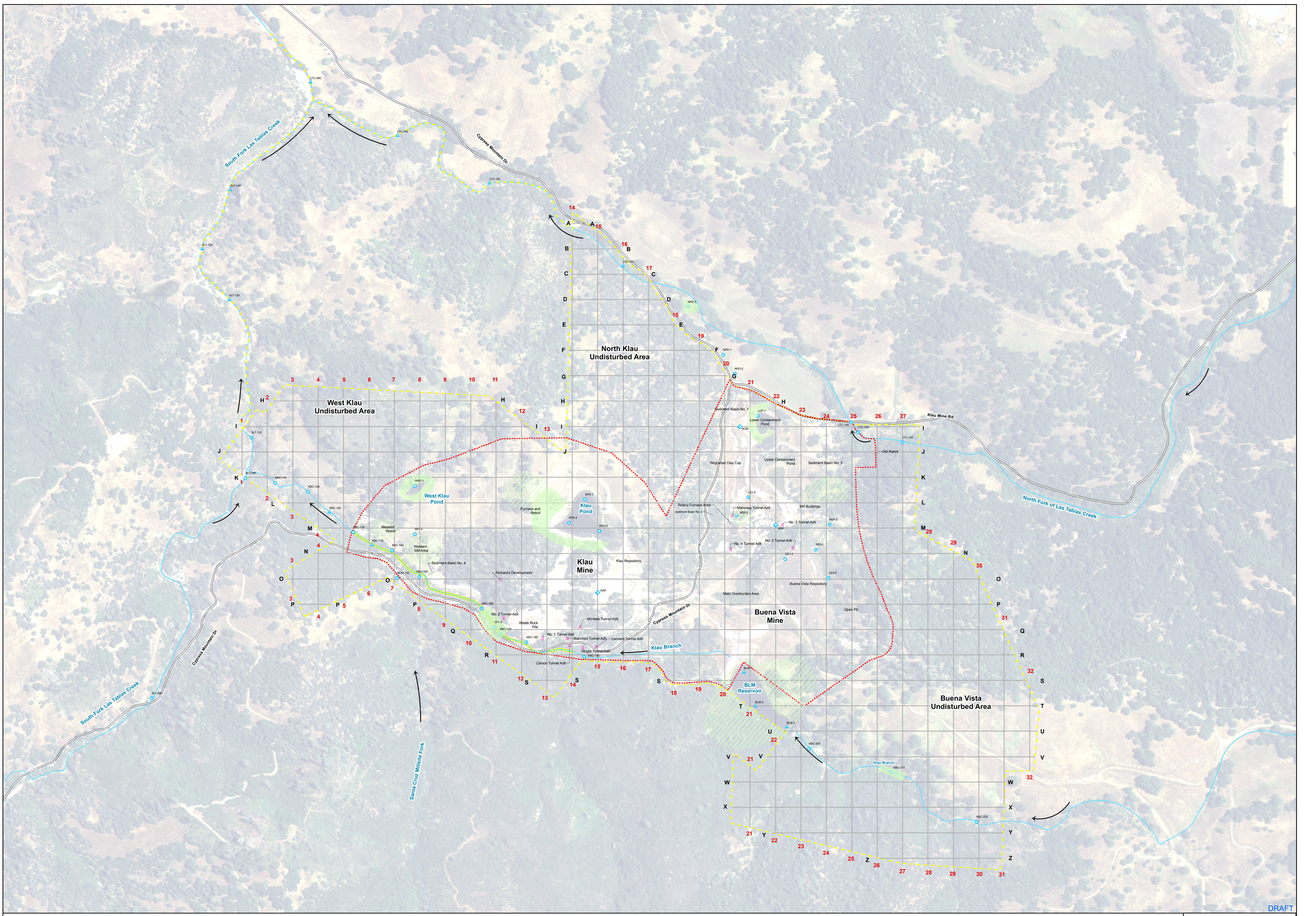

DRAFT

LEGEND

- Surface Sediment and Surface Water Sampling Location
- Surface Water Sampling Location
- Surface and Subsurface Sediment and Surface Water Location
- Planned Biota Sampling
- Possible Biota Sampling
- Adit
- Water Flow Direction
- Approximate Boundary of Disturbed Area
- Study Area
- Klau and Buena Vista Mine Parcel Boundaries

N

0 150 300 Feet

Data sources:
1. Tetra Tech, "Environmental Assessment of the Buena Vista and Klau Mines, San Luis Obispo County, California," June, 1998.
2. Aerial Source: National Agricultural Imagery Program August, 2005

FIGURE 4-2
PROPOSED WET SEASON SAMPLING LOCATIONS

SAP ADDENDUM
KLAU AND BUENA VISTA MINES
SAN LUIS OBISPO COUNTY, CALIFORNIA

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Appendix A
XRF Field Screening Results – Phase 1 Summary

TABLE A-1
Summary of Sample Information and Descriptions
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
BVM						
BRF-1	10/19/2007	0	Soil	JUD	BRF-001-SL0-1007	BV Rotary Furnace
BRF-1	10/19/2007	1	Soil	JUD	BRF-001-SL1-1007	BV Rotary Furnace
BRF-1	10/31/2007	0	VEG	JUD	BRF-001-GRS-1007	BV Rotary Furnace - Terrestrial Grasses
BRF-1	11/1/2007	0	VEG	JUD	BRF-001-ACN-1107	BV Rotary Furnace - Terrestrial Acorns
BRF-1	11/1/2007	0	TIS	JUD	BRF-001-CRK-1107	BV Rotary Furnace - Terrestrial Crickets
BRF-2	10/19/2007	0	Soil	JUD	BRF-002-SL0-1007	BV Rotary Furnace
BRF-2	10/19/2007	1	Soil	JUD	BRF-002-SL1-1007	BV Rotary Furnace
BVR-1	10/18/2007	0	Soil	JUD	BVR-001-SL8-1007	Buena Vista Repository
BVR-1	10/18/2007	0	Soil	JUD	BVR-001-SL0-1007	Buena Vista Repository
BVR-2	10/20/2007	0	Soil	JUD	BVR-002-SL0-1007	Buena Vista Repository
BVU	10/31/2007	0	VEG	BIO	BVU-001-GRS-1007	Buena Vista Undisturbed: in the U29 grid - Terrestrial Grasses
BVU	10/31/2007	0	VEG	BIO	BVU-001-ACN-1007	Buena Vista Undisturbed: in the U29 grid - Terrestrial Acorns
BVU	11/3/2007	0	TIS	BIO	BVU-001-CRK-1107	Buena Vista Undisturbed: in the U29 grid - Terrestrial Crickets
BVU	11/3/2007	0	TIS	BIO	BVU-001-SOW-1107	Buena Vista Undisturbed: in the U29 grid - Terrestrial Sowbugs
H20	10/13/2007	0	Soil	SYS	H20-001-SL0-1007	Buena Vista Disturbed
H21	10/10/2007	0	Soil	SYS	H21-001-SL0-1007	Buena Vista Disturbed Random
I20	10/9/2007	0	Soil	SYS	I20-001-SL0-1007	Buena Vista Disturbed Random
I21	10/9/2007	0	Soil	SYS	I21-001-SL0-1007	Buena Vista Disturbed
I22	10/9/2007	0	Soil	SYS	I22-001-SL0-1007	Buena Vista Disturbed
I23	10/9/2007	0	Soil	SYS	I23-001-SL0-1007	Buena Vista Disturbed
I24	10/22/2007	0	Soil	SYS	I24-001-SL0-1007	Buena Vista Disturbed Random
I24	10/22/2007	0	Soil	SYS	I24-001-SL8-1007	Buena Vista Disturbed Random
I24	11/12/2007	1	Soil	SYS	I24-001-SL1-1107	Buena Vista Disturbed Random
I25	10/22/2007	0	Soil	SYS	I25-001-SL0-1007	Buena Vista Disturbed
I26	11/12/2007	0	Soil	SYS	I26-001-SL0-1107	Buena Vista Undisturbed
I26	11/12/2007	1	Soil	SYS	I26-001-SL1-1107	Buena Vista Undisturbed
IJ26	11/12/2007	0	Soil	SYS	IJ26-001-SL0-1107	Buena Vista North of Old Retort
J20	10/13/2007	0	Soil	SYS	J20-001-SL0-1007	Buena Vista Disturbed
J21	10/9/2007	0	Soil	SYS	J21-001-SL0-1007	Buena Vista Disturbed
J22	10/18/2007	0	Soil	SYS	J22-001-SL0-1007	Buena Vista Disturbed
J23	10/9/2007	0	Soil	SYS	J23-001-SL0-1007	Buena Vista Disturbed
J24	10/9/2007	0	Soil	SYS	J24-001-SL0-1007	Buena Vista Disturbed
J25	10/9/2007	0	Soil	SYS	J25-001-SL0-1007	Buena Vista Disturbed Random
J26-1	10/9/2007	0	Soil	JUD	J26-001-SL0-1007	Buena Vista NE Old Retort
J26-1	10/15/2007	1	Soil	JUD	J26-001-SL9-1007	Buena Vista NE Old Retort
J26-1	10/15/2007	1	Soil	JUD	J26-001-SL1-1007	Buena Vista NE Old Retort
J26-2	10/15/2007	0	Soil	SYS	J26-002-SL0-1007	Buena Vista NE Old Retort - East 25' from J-26-1
J26-3	10/15/2007	0	Soil	SYS	J26-003-SL0-1007	Buena Vista NE Old Retort - North 25' from J-26-1
J26-4	10/15/2007	0	Soil	SYS	J26-004-SL0-1007	Buena Vista NE Old Retort - South 25' from J-26-1
J26-5	10/15/2007	0	Soil	SYS	J26-005-SL0-1007	Buena Vista NE Old Retort - West 25' from J-26-1
K20	10/10/2007	0	Soil	SYS	K20-001-SL0-1007	Buena Vista Disturbed

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
BVM						
K21	10/18/2007	0	Soil	SYS	K21-001-SL0-1007	Buena Vista Disturbed Random
K22	10/18/2007	0	Soil	SYS	K22-001-SL0-1007	Buena Vista Disturbed
K23	10/18/2007	0	Soil	SYS	K23-001-SL0-1007	Buena Vista Disturbed
K24	10/18/2007	0	Soil	SYS	K24-001-SL0-1007	Buena Vista Disturbed
K25	10/9/2007	0	Soil	SYS	K25-001-SL0-1007	Buena Vista Disturbed
KUP-1	10/15/2007	0	Soil	JUD	KUP-001-SL0-1007	Buena Vista waste pile in undisturbed area near M25
KUP-2	10/15/2007	0	Soil	JUD	KUP-002-SL0-1007	Buena Vista waste pile in undisturbed area near M25
L20	10/18/2007	0	Soil	SYS	L20-001-SL0-1007	Buena Vista Disturbed Random
L21-1	10/18/2007	0	Soil	SYS	L21-001-SL0-1007	Buena Vista Disturbed Random
L22	10/18/2007	0	Soil	SYS	L22-001-SL0-1007	Buena Vista Disturbed
L23	10/18/2007	0	Soil	SYS	L23-001-SL0-1007	Buena Vista Disturbed
L24	10/18/2007	0	Soil	SYS	L24-001-SL0-1007	Buena Vista Disturbed
L25	10/25/2007	0	Soil	SYS	L25-001-SL0-1007	Buena Vista Disturbed Random
L27	10/9/2007	0	Soil	SYS	L27-001-SL0-1007	Buena Vista Undisturbed
M20-1	10/25/2007	0	Soil	SYS	M20-001-SL0-1007	Buena Vista Disturbed Random
M21	10/19/2007	0	Soil	SYS	M21-001-SL0-1007	Buena Vista Disturbed Random
M21	10/19/2007	0	Soil	SYS	M21-001-SL8-1007	Buena Vista Disturbed Random
M22	10/19/2007	0	Soil	SYS	M22-001-SL0-1007	Buena Vista Disturbed
M23	10/19/2007	0	Soil	SYS	M23-001-SL0-1007	Buena Vista Disturbed Random
M24-1	10/19/2007	0	Soil	SYS	M24-001-SL0-1007	Buena Vista Disturbed Random
M25	10/15/2007	0	Soil	SYS	M25-001-SL0-1007	Buena Vista Disturbed Random
M26	10/9/2007	0	Soil	SYS	M26-001-SL0-1007	Buena Vista Undisturbed Random
M26	10/15/2007	1	Soil	SYS	M26-001-SL1-1007	Buena Vista Undisturbed Random
MAD	10/19/2007	0	Soil	JUD	MAD-001-SL0-1007	Buena Vista Mine Area Drainage
MAD	10/19/2007	1	Soil	JUD	MAD-001-SL1-1007	Buena Vista Mine Area Drainage
MOA-1	10/18/2007	0	Soil	JUD	MOA-001-SL0-1007	Buena Vista Main Overburden Area
MOA-1	10/18/2007	1	Soil	JUD	MOA-001-SL1-1007	Buena Vista Main Overburden Area
MOA-2	10/18/2007	0	Soil	JUD	MOA-002-SL0-1007	Buena Vista Main Overburden Area
MOA-2	10/18/2007	1	Soil	JUD	MOA-002-SL1-1007	Buena Vista Main Overburden Area
MOA-3	10/18/2007	0	Soil	JUD	MOA-003-SL0-1007	Buena Vista Main Overburden Area
MSA	10/19/2007	0	Soil	JUD	MSA-001-SL8-1007	Buena Vista Mine Shop Area
MSA	10/19/2007	0	Soil	JUD	MSA-001-SL0-1007	Buena Vista Mine Shop Area
N20	10/22/2007	0	Soil	SYS	N20-001-SL0-1007	Buena Vista Disturbed
N21	10/22/2007	0	Soil	SYS	N21-001-SL0-1007	Buena Vista Disturbed
N22	10/22/2007	0	Soil	SYS	N22-001-SL0-1107	Buena Vista Disturbed Random
N23-1	10/18/2007	0	Soil	SYS	N23-001-SL0-1007	Buena Vista Disturbed
N24	10/25/2007	0	Soil	SYS	N24-001-SL0-1007	Buena Vista Disturbed
N25	10/25/2007	0	Soil	SYS	N25-001-SL0-1007	Buena Vista Disturbed
O24-1	10/18/2007	0	Soil	SYS	O24-001-SL0-1007	Buena Vista Disturbed Random
O25	10/25/2007	0	Soil	SYS	O25-001-SL0-1007	Buena Vista Disturbed
O27	10/15/2007	0	Soil	SYS	O27-001-SL0-1007	Buena Vista Undisturbed Random

TABLE A-1
Summary of Sample Information and Descriptions
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
BVM						
O27	10/15/2007	1	Soil	SYS	O27-001-SL1-1007	Buena Vista Undisturbed Random
O27	10/15/2007	1	Soil	SYS	O27-001-SL9-1007	Buena Vista Undisturbed Random
O29	10/15/2007	0	Soil	SYS	O29-001-SL0-1007	Buena Vista Undisturbed
OCT-1	10/19/2007	0	Soil	JUD	OCT-001-SL0-1007	Buena Vista Ore Cart Trestel
OCT-1	10/19/2007	1	Soil	JUD	OCT-001-SL1-1007	Buena Vista Ore Cart Trestel
OCT-2	10/19/2007	0	Soil	JUD	OCT-002-SL0-1007	Buena Vista Ore Cart Trestel
OCT-3	10/19/2007	0	Soil	JUD	OCT-003-SL0-1007	Buena Vista Ore Cart Trestel
OPT	10/20/2007	0	Soil	JUD	OPT-001-SL8-1007	Buena Vista Open Pit
OPT	10/20/2007	0	Soil	JUD	OPT-001-SL0-1007	Buena Vista Open Pit
OPT	10/20/2007	1	Soil	JUD	OPT-001-SL1-1007	Buena Vista Open Pit
P18	10/13/2007	0	Soil	SYS	P18-001-SL0-1007	Buena Vista Disturbed
P19	10/22/2007	0	Soil	SYS	P19-001-SL0-1007	Buena Vista Disturbed
P20	10/22/2007	0	Soil	SYS	P20-001-SL0-1007	Buena Vista Disturbed
P21	10/18/2007	0	Soil	SYS	P21-001-SL0-1007	Buena Vista Disturbed
P22	10/18/2007	0	Soil	SYS	P22-001-SL0-1007	Buena Vista Disturbed
P23	10/18/2007	0	Soil	SYS	P23-001-SL0-1007	Buena Vista Disturbed Random
P24	10/18/2007	0	Soil	SYS	P24-001-SL0-1007	Buena Vista Disturbed
P25	10/25/2007	0	Soil	SYS	P25-001-SL0-1007	Buena Vista Disturbed
P26	10/25/2007	0	Soil	SYS	P26-001-SL0-1007	Buena Vista Disturbed
P27	10/15/2007	0	Soil	SYS	P27-001-SL0-1007	Buena Vista Undisturbed
PAR	10/19/2007	0	Soil	JUD	PAR-001-SL0-1007	Buena Vista Possible Adit Road
PAR	10/19/2007	1	Soil	JUD	PAR-001-SL1-1007	Buena Vista Possible Adit Road
PAS	10/19/2007	0	Soil	JUD	PAS-001-SL0-1007	Buena Vista Possible Assay Shed
PAS	10/19/2007	1	Soil	JUD	PAS-001-SL1-1007	Buena Vista Possible Assay Shed
Q17	10/13/2007	0	Soil	SYS	Q17-001-SL0-1007	Buena Vista Disturbed
Q18	10/22/2007	0	Soil	SYS	Q18-001-SL0-1007	Buena Vista Disturbed
Q19	10/22/2007	0	Soil	SYS	Q19-001-SL0-1007	Buena Vista Disturbed
Q20	10/20/2007	0	Soil	SYS	Q20-001-SL0-1007	Buena Vista Disturbed
Q21	10/22/2007	0	Soil	SYS	Q21-001-SL0-1007	Buena Vista Disturbed Random
Q22	10/22/2007	0	Soil	SYS	Q22-001-SL0-1007	Buena Vista Disturbed
Q23	10/11/2007	0	Soil	SYS	Q23-001-SL0-1007	Buena Vista Disturbed
Q24	10/25/2007	0	Soil	SYS	Q24-001-SL0-1007	Buena Vista Disturbed
Q25	10/25/2007	0	Soil	SYS	Q25-001-SL0-1007	Buena Vista Disturbed Random
Q26	10/25/2007	0	Soil	SYS	Q26-001-SL0-1007	Buena Vista Disturbed
R14	10/26/2007	0	Soil	SYS	R14-001-SL0-1007	Buena Vista Disturbed
R15	10/13/2007	0	Soil	SYS	R15-001-SL0-1007	Buena Vista Disturbed
R16	10/22/2007	0	Soil	SYS	R16-001-SL0-1007	Buena Vista Disturbed Random
R17	10/22/2007	0	Soil	SYS	R17-001-SL0-1007	Buena Vista Disturbed Random
R18	10/22/2007	0	Soil	SYS	R18-001-SL0-1007	Buena Vista Disturbed
R19	10/22/2007	0	Soil	SYS	R19-001-SL0-1007	Buena Vista Disturbed
R20	10/22/2007	0	Soil	SYS	R20-001-SL0-1007	Buena Vista Disturbed Random

TABLE A-1
Summary of Sample Information and Descriptions
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
BVM						
R21	10/22/2007	0	Soil	SYS	R21-001-SL0-1007	Buena Vista Disturbed
R22	10/22/2007	0	Soil	SYS	R22-001-SL0-1007	Buena Vista Disturbed
R23	10/22/2007	0	Soil	SYS	R23-001-SL0-1007	Buena Vista Disturbed
R24	10/25/2007	0	Soil	SYS	R24-001-SL0-1007	Buena Vista Disturbed
R25	10/25/2007	0	Soil	SYS	R25-001-SL0-1007	Buena Vista Disturbed
R26	10/25/2007	0	Soil	SYS	R26-001-SL0-1007	Buena Vista Disturbed
R27	10/15/2007	0	Soil	SYS	R27-001-SL0-1007	Buena Vista Undisturbed Random
R27	10/15/2007	1	Soil	SYS	R27-001-SL1-1007	Buena Vista Undisturbed Random
RCC-1	10/18/2007	0	Soil	JUD	RCC-001-SL0-1007	Buena Vista Regraded Clay Cap
RCC-1	10/18/2007	1	Soil	JUD	RCC-001-SL9-1007	Buena Vista Regraded Clay Cap
RCC-1	10/18/2007	1	Soil	JUD	RCC-001-SL1-1007	Buena Vista Regraded Clay Cap
RCC-2	10/18/2007	0	Soil	JUD	RCC-002-SL0-1007	Buena Vista Regraded Clay Cap
RCC-2	10/18/2007	1	Soil	JUD	RCC-002-SL1-1007	Buena Vista Regraded Clay Cap
RCW	11/14/2007	0	GW	GW	RCW-001-GW0-1107	Buena Vista Regraded Clay Cap Well
RPB	10/18/2007	0	Soil	JUD	RPB-001-SL0-1007	Buena Vista Regraded Upper Containment Bottom Pond
RPB	10/18/2007	1	Soil	JUD	RPB-001-SL1-1007	Buena Vista Regraded Upper Containment Bottom Pond
S18	10/22/2007	0	Soil	SYS	S18-001-SL0-1007	Buena Vista Disturbed
S19	10/22/2007	0	Soil	SYS	S19-001-SL0-1007	Buena Vista Disturbed
S20	10/22/2007	0	Soil	SYS	S20-001-SL0-1007	Buena Vista Disturbed Random
S22	10/22/2007	0	Soil	SYS	S22-001-SL0-1007	Buena Vista Disturbed
S23	10/22/2007	0	Soil	SYS	S23-001-SL0-1007	Buena Vista Disturbed
S24	10/11/2007	0	Soil	SYS	S24-001-SL0-1007	Buena Vista Disturbed
S25	10/11/2007	0	Soil	SYS	S25-001-SL0-1007	Buena Vista Undisturbed
S29	10/11/2007	0	Soil	SYS	S29-001-SL0-1007	Buena Vista Undisturbed Random
S29	10/16/2007	1	Soil	SYS	S29-001-SL1-1007	Buena Vista Undisturbed Random
S31	10/11/2007	0	Soil	SYS	S31-001-SL0-1007	Buena Vista Undisturbed
SB1-1	10/8/2007	0	Soil	JUD	SB1-001-SL0-1007	Buena Vista Sedimentation Basin 1
SB1-1	10/18/2007	1	Soil	JUD	SB1-001-SL1-1007	Buena Vista Sedimentation Basin 1
SB1-2	10/9/2007	0	Soil	JUD	SB1-002-SL0-1007	Buena Vista Sedimentation Basin 1
SB3	10/18/2007	0	Soil	JUD	SB3-001-SL0-1007	Buena Vista Sedimentation Basin 3
SB3	10/18/2007	1	Soil	JUD	SB3-001-SL1-1007	Buena Vista Sedimentation Basin 3
T22	10/16/2007	0	Soil	SYS	T22-001-SL0-1007	Buena Vista Undisturbed Random
T22	10/16/2007	1	Soil	SYS	T22-001-SL1-1007	Buena Vista Undisturbed Random
T23	10/22/2007	0	Soil	SYS	T23-001-SL0-1007	Buena Vista Disturbed Border
T27	10/11/2007	0	Soil	SYS	T27-001-SL0-1007	Buena Vista Undisturbed
U24	10/12/2007	0	Soil	SYS	U24-001-SL0-1007	Buena Vista Undisturbed
U26	10/11/2007	0	Soil	SYS	U26-001-SL8-007	Buena Vista Undisturbed Random
U26	10/11/2007	0	Soil	SYS	U26-001-SL0-007	Buena Vista Undisturbed Random
U26	10/15/2007	1	Soil	SYS	U26-001-SL1-007	Buena Vista Undisturbed Random
U29	10/11/2007	0	Soil	SYS	U29-001-SL0-1007	Buena Vista Undisturbed
U31	10/11/2007	0	Soil	SYS	U31-001-SL0-1007	Buena Vista Undisturbed Random

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
BVM						
U31	10/15/2007	1	Soil	SYS	U31-001-SL1-1007	Buena Vista Undisturbed Random
V28	10/26/2007	0	Soil	SYS	V28-001-SL0-1007	Buena Vista Undisturbed
W23	10/12/2007	0	Soil	SYS	W23-001-SL0-1007	Buena Vista Undisturbed
W27	10/12/2007	0	Soil	SYS	W27-001-SL0-1007	Buena Vista Undisturbed
W29	10/11/2007	0	Soil	SYS	W29-001-SL0-1007	Buena Vista Undisturbed
X22	10/15/2007	0	Soil	SYS	X22-001-SL0-1007	Buena Vista Undisturbed Random
X22	10/15/2007	1	Soil	SYS	X22-001-SL1-1007	Buena Vista Undisturbed Random
X30	10/26/2007	0	Soil	SYS	X30-001-SL0-1007	Buena Vista Undisturbed Random
X30	10/26/2007	1	Soil	SYS	X30-001-SL1-1007	Buena Vista Undisturbed Random
Y29	10/12/2007	0	Soil	SYS	Y29-001-SL0-1007	Buena Vista Undisturbed
Z30	10/12/2007	0	Soil	SYS	Z30-001-SL0-1007	Buena Vista Undisturbed
BVM- Lower Containment Pond, Seeps						
L21-2	11/13/2007	0	Sed	SYS	L21-002-SD0-1107	Buena Vista Disturbed Dry Seep
LCP-1	11/1/2007	0	TIS	JUD	LCP-001-COR-1107	Buena Vista Lower Containment Pond - Aquatic Invertebrate (bug)
LCP-1	11/1/2007	0	Sed	JUD	LCP-001-SD0-1107	Buena Vista Lower Containment Pond
LCP-1	11/1/2007	0	TIS	JUD	LCP-001-DRG-1107	Buena Vista Lower Containment Pond - Aquatic Dragonflies
LCP-1	11/1/2007	1	Sed	JUD	LCP-001-SD1-1107	Buena Vista Lower Containment Pond
LCP-1	11/5/2007	0	SW	JUD	LCP-001-SW0-1107	Buena Vista Lower Containment Pond
LCP-2	11/5/2007	0	SW	JUD	LCP-002-SW0-1107	Buena Vista Lower Containment Pond
LCP-3	11/1/2007	0	Sed	JUD	LCP-002-SD0-1107	Buena Vista Lower Containment Pond
LCP-3	11/1/2007	1	Sed	JUD	LCP-002-SD1-1107	Buena Vista Lower Containment Pond
M20-2	11/13/2007	0	Sed	SYS	M20-002-SD0-1107	Buena Vista Disturbed Seep
M20-2	11/13/2007	0	SW	SYS	M20-002-SP0-1107	Buena Vista Disturbed Seep
M20-2	11/13/2007	1	Sed	SYS	M20-002-SD1-1107	Buena Vista Disturbed Seep
M24-2	11/13/2007	0	Sed	SYS	M24-002-SD0-1107	Buena Vista Disturbed Seep
M24-2	11/13/2007	0	SW	SYS	M24-002-SP0-1107	Buena Vista Disturbed Seep
N23-2	11/13/2007	0	Sed	SYS	N23-002-SD0-1107	Buena Vista Disturbed Dry Seep
O21-2	11/13/2007	0	SW	SYS	O21-002-SP0-1107	Buena Vista Disturbed
O21-2	11/13/2007	0	Sed	SYS	O21-002-SD0-1107	Buena Vista Disturbed
O24-2	11/13/2007	0	Sed	SYS	O24-002-SD0-1107	Buena Vista Disturbed Seep
O24-2	11/13/2007	0	SW	SYS	O24-002-SP0-1107	Buena Vista Disturbed Seep
Creeks - BV Tributaries						
LTC-130	11/3/2007	0	Sed	BIAS	LTC-130-SD8-1107	Las Tablas Creek
LTC-130	11/3/2007	0	TIS	BIAS	LTC-130-INV-1107	Las Tablas Creek - Aquatic Mixed Inverts Dragonfly larva, beetles, toebiter
LTC-130	11/3/2007	0	Sed	BIAS	LTC-130-SD0-1107	Las Tablas Creek
LTC-130	11/3/2007	1	Sed	BIAS	LTC-130-SD1-1107	Las Tablas Creek
LTC-130	11/12/2007	0	SW	BIAS	LTC-130-SW0-1107	Las Tablas Creek
LTC-140	11/2/2007	0	Sed	BIAS	LTC-140-SD0-1107	Las Tablas Creek
LTC-140	11/2/2007	1	Sed	BIAS	LTC-140-SD1-1107	Las Tablas Creek
LTC-140	11/12/2007	0	SW	BIAS	LTC-140-SW0-1107	Las Tablas Creek
LTC-145	11/2/2007	0	TIS	BIAS	LTC-145-FSH-1107	Las Tablas Creek - Aquatic Mixed Fish

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
Creeks - BV Tributaries						
LTC-145	11/2/2007	0	Sed	BIAS	LTC-145-SD0-1107	Las Tablas Creek
LTC-145	11/2/2007	1	Sed	BIAS	LTC-145-SD1-1107	Las Tablas Creek
LTC-145	11/13/2007	0	SW	BIAS	LTC-145-SW0-1107	Las Tablas Creek
LTC-145A	11/2/2007	0	Soil	BIAS	LTC-145A-SL0-1107	Las Tablas Creek - soil samples beside creek
LTC-145A	11/2/2007	1	Soil	BIAS	LTC-145A-SL1-1107	Las Tablas Creek - soil samples beside creek
LTC-150	11/2/2007	0	Sed	BIAS	LTC-150-SD0-1107	Las Tablas Creek
LTC-150	11/2/2007	1	Sed	BIAS	LTC-150-SD1-1107	Las Tablas Creek
LTC-150	11/12/2007	0	SW	BIAS	LTC-150-SW0-1107	Las Tablas Creek
NPD-1	10/30/2007	0	Sed	BIAS	NPD-001-SD8-1007	Buena Vista Historic NPDES point area
NPD-1	10/30/2007	0	Sed	BIAS	NPD-001-SD0-1007	Buena Vista Historic NPDES point area
NPD-1	10/30/2007	1	Sed	BIAS	NPD-001-SD1-1007	Buena Vista Historic NPDES point area
NPD-2	10/30/2007	0	Sed	BIAS	NPD-002-SD0-1007	Buena Vista Historic NPDES point area
Creeks - Klau Tributaries						
KBC-110	10/31/2007	0	Sed	BIAS	KBC-110-SD0-1007	Klau Branch Creek
KBC-110	10/31/2007	1	Sed	BIAS	KBC-110-SD1-1007	Klau Branch Creek
KBC-120	10/30/2007	0	Sed	BIAS	KBC-120-SD0-1007	Klau Branch Creek
KBC-120	10/30/2007	1	Sed	BIAS	KBC-120-SD1-1007	Klau Branch Creek
KBC-130	10/30/2007	0	Sed	BIAS	KBC-130-SD0-1007	Klau Branch Creek
KBC-130	10/30/2007	1	Sed	BIAS	KBC-130-SD1-1007	Klau Branch Creek
KBC-140	11/2/2007	0	Sed	BIAS	KBC-140-SD0-1107	Klau Branch Creek
KBC-140	11/2/2007	1	Sed	BIAS	KBC-140-SD1-1107	Klau Branch Creek
KBC-140	11/13/2007	0	SW	JUD	KBC-140-SW0-1107	Klau Branch Creek
KBC-150	11/2/2007	0	Sed	BIAS	KBC-150-SD8-1107	Klau Branch Creek
KBC-150	11/2/2007	0	Sed	BIAS	KBC-150-SD0-1107	Klau Branch Creek
KBC-150	11/2/2007	1	Sed	BIAS	KBC-150-SD1-1107	Klau Branch Creek
KBC-150	11/13/2007	0	SW	BIAS	KBC-150-SW0-1107	Klau Branch Creek
KBC-155	11/13/2007	0	SW	JUD	KBC-155-SW0-1107	Klau Branch Creek
KBC-160	11/2/2007	0	TIS	JUD	KBC-160-INV-1107	Klau Branch Creek - Aquatic Mixed Inverts Inverts collected from creek length KBC-140 th
KBC-160	11/2/2007	0	Sed	BIAS	KBC-160-SD0-1107	Klau Branch Creek
KBC-160	11/2/2007	1	Sed	BIAS	KBC-160-SD1-1107	Klau Branch Creek
KBC-160	11/13/2007	0	SW	JUD	KBC-160-SW0-1107	Klau Branch Creek
KBC-170	11/2/2007	0	Sed	BIAS	KBC-170-SD0-1107	Klau Branch Creek
KBC-170	11/2/2007	1	Sed	BIAS	KBC-170-SD1-1107	Klau Branch Creek
KBC-170	11/13/2007	0	SW	JUD	KBC-170-SW0-1107	Klau Branch Creek
KBC-180	11/2/2007	0	Sed	BIAS	KBC-180-SD0-1107	Klau Branch Creek
KBC-180	11/2/2007	1	Sed	BIAS	KBC-180-SD1-1107	Klau Branch Creek
KBC-180	11/13/2007	0	SW	JUD	KBC-180-SW0-1107	Klau Branch Creek
KBC-190	11/3/2007	0	Sed	BIAS	KBC-190-SD0-1107	Klau Branch Creek 200 feet upstream from CMD
KBC-190	11/3/2007	1	Sed	BIAS	KBC-190-SD1-1107	Klau Branch Creek 200 feet upstream from CMD
KBC-200	10/30/2007	0	Sed	BIAS	KBC-200-SD0-1007	Klau Branch Creek
KBC-210	10/30/2007	0	Sed	BIAS	KBC-210-SD0-1007	Klau Branch Creek

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
Creeks - Klau Tributaries						
KBC-210	10/30/2007	1	Sed	BIAS	KBC-210-SD1-1007	Klau Branch Creek
KBC-220	10/30/2007	0	Sed	BIAS	KBC-220-SD0-1007	Klau Branch Creek
KBC-220	10/30/2007	1	Sed	BIAS	KBC-220-SD1-1007	Klau Branch Creek
SCM-145	10/31/2007	0	Sed	BIAS	SCM-145-SD0-1007	South Klau Santa Cruz Mill Site
SCM-145	10/31/2007	1	Sed	BIAS	SCM-145-SD1-1007	South Klau Santa Cruz Mill Site
SLT-080	10/31/2007	0	TIS	JUD	SLT-080-INV-1007	South Fork Las Tablas Creek - Aquatic Mixed Inverts
SLT-080	10/31/2007	0	Sed	BIAS	SLT-080-SD0-1007	South Fork Las Tablas Creek
SLT-080	10/31/2007	1	Sed	BIAS	SLT-080-SD1-1007	South Fork Las Tablas Creek
SLT-080	11/5/2007	0	SW	JUD	SLT-080-SW0-1107	South Fork Las Tablas Creek
SLT-090	10/31/2007	0	Sed	BIAS	SLT-090-SD0-1007	South Fork Las Tablas Creek
SLT-090	10/31/2007	0	Sed	BIAS	SLT-090-SD8-1007	South Fork Las Tablas Creek
SLT-090	11/5/2007	0	SW	JUD	SLT-090-SW8-1107	South Fork Las Tablas Creek
SLT-090	11/5/2007	0	SW	JUD	SLT-090-SW0-1107	South Fork Las Tablas Creek
SLT-090	11/13/2007	1	Sed	BIAS	SLT-090-SD1-1107	South Fork Las Tablas Creek
SLT-110	10/31/2007	0	Sed	BIAS	SLT-110-SD0-1007	South Fork Las Tablas Creek
SLT-110	10/31/2007	0	TIS	JUD	SLT-110-INV-1007	South Fork Las Tablas Creek - Aquatic Mixed Inverts
SLT-110	10/31/2007	0	TIS	JUD	SLT-110-TDP-1007	South Fork Las Tablas Creek - Aquatic Tadpoles
SLT-110	10/31/2007	1	Sed	BIAS	SLT-110-SD1-1007	South Fork Las Tablas Creek
SLT-110	11/5/2007	0	SW	JUD	SLT-110-SW0-1107	South Fork Las Tablas Creek
Cypress Mountain Drive						
CMD-040	10/13/2007	0	Soil	JUD	CMD-040-SL0-1007	Cypress Mountain Drive
CMD-080	10/13/2007	0	Soil	JUD	CMD-080-SL0-1007	Cypress Mountain Drive
CMD-120	10/13/2007	0	Soil	JUD	CMD-120-SL0-1007	Cypress Mountain Drive
CMD-160	10/13/2007	0	Soil	JUD	CMD-160-SL0-1007	Cypress Mountain Drive
CMD-200	10/13/2007	0	Soil	JUD	CMD-200-SL0-1007	Cypress Mountain Drive
CMD-240	10/13/2007	0	Soil	JUD	CMD-240-SL0-1007	Cypress Mountain Drive - 400 feet from CMD-200
CMD-280	10/13/2007	0	Soil	JUD	CMD-280-SL0-1007	Cypress Mountain Drive
CMD-320	10/13/2007	0	Soil	JUD	CMD-320-SL0-1007	Cypress Mountain Drive
CMD-360	10/13/2007	0	Soil	JUD	CMD-360-SL0-1007	Cypress Mountain Drive
CMD-400	10/13/2007	0	Soil	JUD	CMD-400-SL0-1007	Cypress Mountain Drive
CMD-440	10/13/2007	0	Soil	JUD	CMD-440-SL0-1007	Cypress Mountain Drive
CMD-480	10/13/2007	0	Soil	JUD	CMD-480-SL0-1007	Cypress Mountain Drive
CMD-520	10/13/2007	0	Soil	JUD	CMD-520-SL0-1007	Cypress Mountain Drive
CMD-560	10/13/2007	0	Soil	JUD	CMD-560-SL0-1007	Cypress Mountain Drive
CMD-600	10/13/2007	0	Soil	JUD	CMD-600-SL0-1007	Cypress Mountain Drive
CMD-640	10/13/2007	0	Soil	JUD	CMD-640-SL0-1007	Cypress Mountain Drive
CMD-680	10/13/2007	0	Soil	JUD	CMD-680-SL0-1007	Cypress Mountain Drive
CMD-720	10/13/2007	0	Soil	JUD	CMD-720-SL0-1007	Cypress Mountain Drive
CMD-760	10/13/2007	0	Soil	JUD	CMD-760-SL0-1007	Cypress Mountain Drive
Cypress Mountain Drive - Regional						
RD4	9/25/2007	0	Soil	SYS	RD4-001-SL0-0907	Cypress Mountain Road between Chimney Rock and Klau Mine Roads

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
Cypress Mountain Drive - Regional						
RD6	9/25/2007	0	Soil	SYS	RD6-001-SL0-0907	Cypress Mountain Road between Chimney Rock and Klau Mine Roads
IDW						
IDW	11/13/2007	0	SW	IDW	IDW-001-SW0-1107	IDW-001-SL0-1007 Investigation Derived Waste
IDW	11/13/2007	0	Soil	IDW	IDW-001-SL0-1107	IDW-001-SL0-1007 Investigation Derived Waste
KLAU						
B15	10/16/2007	0	Soil	SYS	B15-001-SL8-1007	Klau North Undisturbed Random
B15	10/16/2007	0	Soil	SYS	B15-001-SL0-1007	Klau North Undisturbed Random
B15	10/16/2007	1	Soil	SYS	B15-001-SL1-1007	Klau North Undisturbed Random
C14	10/16/2007	0	Soil	SYS	C14-001-SL0-1007	Klau North Undisturbed
CWA	10/26/2007	0	Soil	JUD	WCA-001-SL0-1007	Carson Wright Adit
D17	10/16/2007	0	Soil	SYS	D17-001-SL0-1007	Klau North Undisturbed
E15	10/16/2007	0	Soil	SYS	E15-001-SL0-1007	Klau North Undisturbed Random
E15	10/16/2007	1	Soil	SYS	E15-001-SL1-1007	Klau North Undisturbed Random
F17	10/16/2007	0	Soil	SYS	F17-001-SL0-1007	Klau North Undisturbed Random
F17	10/16/2007	1	Soil	SYS	F17-001-SL1-1007	Klau North Undisturbed Random
FMS-1	10/19/2007	0	Soil	JUD	FMS-001-SL0-1007	Klau Former Millsite
FMS-1	10/19/2007	0	Soil	JUD	FMS-001-SL8-1007	Klau Former Millsite
FMS-1	10/20/2007	1	Soil	JUD	FMS-001-SL1-1007	Klau Former Millsite
FMS-1	10/30/2007	0	TIS	JUD	FMS-001-CRK-1007	Klau Former Millsite - Terrestrial Crickets
FMS-1	10/30/2007	0	VEG	JUD	FMS-001-ACN-1007	Klau Former Millsite - Terrestrial Acorns
FMS-2	10/19/2007	0	Soil	JUD	FMS-002-SL0-1007	Klau Former Millsite
FMS-2	10/20/2007	1	Soil	JUD	FMS-002-SL1-1007	Klau Former Millsite
H03	10/16/2007	0	Soil	SYS	H03-001-SL0-1007	Klau West Undisturbed Random
H03	10/16/2007	1	Soil	SYS	H03-001-SL1-1007	Klau West Undisturbed Random
H06	11/12/2007	0	Soil	SYS	H06-001-SL0-1107	Klau West Undisturbed Random
H06	11/12/2007	1	Soil	SYS	H06-001-SL1-1107	Klau West Undisturbed Random
H07	10/17/2007	0	Soil	SYS	H07-001-SL0-1007	Klau West Undisturbed
H10	10/17/2007	0	Soil	SYS	H10-001-SL0-1007	Klau West Undisturbed Random
H10	10/17/2007	0	Soil	SYS	H10-001-SL8-1007	Klau West Undisturbed Random
H10	10/17/2007	1	Soil	SYS	H10-001-SL1-1007	Klau West Undisturbed Random
H15	10/10/2007	0	Soil	SYS	H15-001-SL0-1007	Klau North Undisturbed
H19	10/13/2007	0	Soil	SYS	H19-001-SL0-1007	Klau North Undisturbed Random
H19	10/16/2007	1	Soil	SYS	H19-001-SL1-1007	Klau North Undisturbed Random
H6B	11/12/2007	0	Soil	SYS	H6B-001-SL0-1107	Klau West Undisturbed Random
H6B	11/12/2007	0	Soil	SYS	H6B-001-SL8-1107	Klau West Undisturbed Random
H6B	11/12/2007	1	Soil	SYS	H6B-001-SL1-1107	Klau West Undisturbed Random
I02	10/16/2007	0	Soil	SYS	I02-001-SL0-1007	Klau West Undisturbed
I05	11/14/2007	0	Soil	SYS	I05-001-SL0-1107	Klau West Undisturbed Random
I08	10/17/2007	0	Soil	SYS	I08-001-SL0-1007	Klau West Undisturbed Random
I08	10/17/2007	1	Soil	SYS	I08-001-SL1-1007	Klau West Undisturbed Random
I09	10/17/2007	0	Soil	SYS	I09-001-SL0-1007	Klau West Undisturbed

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
KLAU						
I11	10/17/2007	0	Soil	SYS	I11-001-SL0-1007	Klau West Undisturbed
I17	10/10/2007	0	Soil	SYS	I17-001-SL0-1007	Klau North Undisturbed Random
I17	10/16/2007	1	Soil	SYS	I17-001-SL1-1007	Klau North Undisturbed Random
I3.5	11/12/2007	0	Soil	SYS	I3.5-001-SL0-1107	Klau West Undisturbed Random
I3.5	11/12/2007	1	Soil	SYS	I3.5-001-SL1-1107	Klau West Undisturbed Random
J01	10/17/2007	0	Soil	SYS	J01-001-SL0-1007	Klau West Undisturbed
J01	10/17/2007	1	Soil	SYS	J01-001-SL1-1007	Klau West Undisturbed
J03	10/16/2007	0	Soil	SYS	J03-001-SL0-1007	Klau West Undisturbed
J07	10/17/2007	0	Soil	SYS	J07-001-SL0-1007	Klau West Undisturbed
J10	10/10/2007	0	Soil	SYS	J10-001-SL0-1007	Klau Disturbed Boundary
J11	10/10/2007	0	Soil	SYS	J11-001-SL0-1007	Klau Disturbed
J12	10/10/2007	0	Soil	SYS	J12-001-SL0-1007	Klau Disturbed
J13	10/10/2007	0	Soil	SYS	J13-001-SL0-1007	Klau Disturbed
J14	10/10/2007	0	Soil	SYS	J14-001-SL0-1007	Klau Disturbed
J15	10/10/2007	0	Soil	SYS	J15-001-SL0-1007	Klau Disturbed Random
J19	10/13/2007	0	Soil	SYS	J19-001-SL8-1007	Klau Disturbed Random
J19	10/13/2007	0	Soil	SYS	J19-001-SL0-1007	Klau Disturbed Random
JK5	11/12/2007	0	Soil	SYS	JK5-001-SL0-1107	Klau West Undisturbed Random
JK5	11/12/2007	1	Soil	SYS	JK5-001-SL1-1107	Klau West Undisturbed Random
JK78	10/26/2007	0	Soil	SYS	JK78-001-SL0-1007	Klau West Undisturbed
K04	10/16/2007	0	Soil	SYS	K04-001-SL0-1007	Klau West Undisturbed Random
K04	10/16/2007	1	Soil	SYS	K04-001-SL1-1007	Klau West Undisturbed Random
K06	10/16/2007	0	Soil	SYS	K06-001-SL0-1007	Klau West Undisturbed
K08	10/23/2007	0	Soil	SYS	K08-001-SL0-1007	Klau Disturbed
K09	10/23/2007	0	Soil	SYS	K9-001-SL0-1007	Klau Disturbed
K10	10/10/2007	0	Soil	SYS	K10-001-SL0-1007	Klau Disturbed Random
K11	10/10/2007	0	Soil	SYS	K11-001-SL0-1007	Klau Disturbed
K12	10/10/2007	0	Soil	SYS	K12-001-SL0-1007	Klau Disturbed Random
K13	10/10/2007	0	Soil	SYS	K13-001-SL0-1007	Klau Disturbed Random
K14	10/10/2007	0	Soil	SYS	K14-001-SL0-1007	Klau Disturbed
K15	10/10/2007	0	Soil	SYS	K15-001-SL0-1007	Klau Disturbed
K16	10/10/2007	0	Soil	SYS	K16-001-SL0-1007	Klau Disturbed
K18	10/23/2007	0	Soil	SYS	K18-001-SL0-1007	Klau North Undisturbed
K19	10/25/2007	0	Soil	SYS	K19-001-SL0-1007	Klau Disturbed
KLU	10/31/2007	0	VEG	BIO	KLU-001-ACN-1007	Klau Undisturbed: on hill from J03, about 200ft from I05. - Terrestrial Acorns In Klau Undis
KLU	10/31/2007	0	VEG	BIO	KLU-001-GRS-1007	Klau Undisturbed: on hill from J03, about 200ft from I05. - Terrestrial Grasses
KLU	11/2/2007	0	TIS	BIO	KLU-001-SIN-1107	Klau Undisturbed: on hill from J03, about 200ft from I05. - Terrestrial Soil Inverts
KLU	11/2/2007	0	TIS	BIO	KLU-001-JCR-1107	Klau Undisturbed: on hill from J03, about 200ft from I05. - Terrestrial Jersulem Crickets
KMP	10/19/2007	0	Soil	JUD	KMP-001-SL0-1007	Klau Mine Pit
KMP	10/20/2007	1	Soil	JUD	KMP-001-SL1-1007	Klau Mine Pit
KOP-1	10/10/2007	0	Soil	JUD	KOP-001-SL0-1007	Klau Pond Overburden Pile

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
KLAU						
KOP-2	10/10/2007	0	Soil	JUD	KOP-002-SL0-1007	Klau Pond Overburden Pile
KOP-3	10/20/2007	0	Soil	JUD	KOP-003-SL0-1007	Klau Pond Overburden Pile
KOP-3	10/20/2007	1	Soil	JUD	KOP-003-SL1-1007	Klau Pond Overburden Pile
KPC	10/20/2007	0	Soil	JUD	KPC-001-SL0-1007	Klau Pond Condensor
KPC	10/20/2007	1	Soil	JUD	KPC-001-SL1-1007	Klau Pond Condensor
L03	10/17/2007	0	Soil	SYS	L03-001-SL0-1007	Klau West Undisturbed
L05	10/16/2007	0	Soil	SYS	L05-001-SL0-1007	Klau West Undisturbed Random
L07	10/23/2007	0	Soil	SYS	L07-001-SL0-1007	Klau Disturbed
L08	10/23/2007	0	Soil	SYS	L08-001-SL0-1007	Klau Disturbed
L09	10/23/2007	0	Soil	SYS	L09-001-SL0-1007	Klau Disturbed Random
L10	10/23/2007	0	Soil	SYS	L10-001-SL0-1007	Klau Disturbed
L11	10/10/2007	0	Soil	SYS	L11-001-SL0-1007	Klau Disturbed
L12	10/10/2007	0	Soil	SYS	L12-001-SL0-1007	Klau Disturbed Random
L13	10/10/2007	0	Soil	SYS	L13-001-SL0-1007	Klau Disturbed
L14	10/10/2007	0	Soil	SYS	L14-001-SL0-1007	Klau Disturbed
L15	10/23/2007	0	Soil	SYS	L15-001-SL0-1007	Klau Disturbed
L16	10/23/2007	0	Soil	SYS	L16-001-SL0-1007	Klau Disturbed
L17	10/23/2007	0	Soil	SYS	L17-001-SL0-1007	Klau Disturbed
L18	10/23/2007	0	Soil	SYS	L18-001-SL0-1007	Klau Disturbed
L19	10/25/2007	0	Soil	SYS	L19-001-SL0-1007	Klau Disturbed
M06	10/16/2007	0	Soil	JUD	M06-001-SL0-1007	Klau Western Retort
M07	10/16/2007	0	Soil	SYS	M07-001-SL0-1007	Klau Disturbed
M08	10/23/2007	0	Soil	SYS	M08-001-SL0-1007	Klau Disturbed
M09	10/23/2007	0	Soil	SYS	M09-001-SL0-1007	Klau Disturbed
M10	10/23/2007	0	Soil	SYS	M10-001-SL0-1007	Klau Disturbed
M11	10/23/2007	0	Soil	SYS	M11-001-SL0-1007	Klau Disturbed
M12	10/23/2007	0	Soil	SYS	M12-001-SL0-1007	Klau Disturbed
M13	10/23/2007	0	Soil	SYS	M13-001-SL0-1007	Klau Disturbed
M14	10/23/2007	0	Soil	SYS	M14-001-SL0-1007	Klau Disturbed
M15	10/23/2007	0	Soil	SYS	M15-001-SL0-1007	Klau Disturbed
M16	10/23/2007	0	Soil	SYS	M16-001-SL0-1007	Klau Disturbed
M17	10/23/2007	0	Soil	SYS	M17-001-SL0-1007	Klau Disturbed
M18	10/23/2007	0	Soil	SYS	M18-001-SL0-1007	Klau Disturbed
M19	10/25/2007	0	Soil	SYS	M19-001-SL0-1007	Klau Disturbed
N06	10/13/2007	0	Soil	SYS	N06-001-SL0-1007	Klau Disturbed
N07-1	10/23/2007	0	Soil	SYS	N07-001-SL0-1007	Klau Disturbed
N08	10/16/2007	0	Soil	SYS	N08-001-SL0-1007	Klau Disturbed
N09	10/24/2007	0	Soil	SYS	N09-001-SL0-1007	Klau Disturbed Random
N10	10/24/2007	0	Soil	SYS	N10-001-SL0-1007	Klau Disturbed
N11	10/24/2007	0	Soil	SYS	N11-001-SL0-1007	Klau Disturbed
N12	10/24/2007	0	Soil	SYS	N12-001-SL0-1007	Klau Disturbed Random

TABLE A-1
Summary of Sample Information and Descriptions
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
KLAU						
N13	10/24/2007	0	Soil	SYS	N13-001-SL0-1007	Klau Disturbed Random
N13	10/24/2007	1	Soil	SYS	N13-001-SL1-1007	Klau Disturbed Random
N13E	10/24/2007	0	Soil	SYS	N13-002-SL0-1007	Judgmental Klau Disturbed 3 feet east N13
N13S	10/24/2007	0	Soil	SYS	N13-003-SL0-1007	Judgmental Klau Disturbed 3 feet south N13
N13W	10/24/2007	0	Soil	SYS	N13-004-SL0-1007	Judgmental Klau Disturbed 3 feet west N13
N14	10/23/2007	0	Soil	SYS	N14-001-SL0-1007	Klau Disturbed
N15	10/23/2007	0	Soil	SYS	N15-001-SL0-1007	Klau Disturbed
N16	10/20/2007	0	Soil	SYS	N16-001-SL0-1007	Klau Disturbed
N17	10/25/2007	0	Soil	SYS	N17-001-SL0-1007	Klau Disturbed
N18	10/25/2007	0	Soil	SYS	N18-001-SL0-1007	Klau Disturbed Random
N19	10/13/2007	0	Soil	SYS	N19-001-SL0-1007	Klau Disturbed
O03	10/17/2007	0	Soil	SYS	O03-001-SL0-1007	Klau West Undisturbed Random
O03	10/17/2007	1	Soil	SYS	O03-001-SL1-1007	Klau West Undisturbed Random
O05	10/17/2007	0	Soil	SYS	O05-001-SL0-1007	Klau West Undisturbed
O08	10/23/2007	0	Soil	SYS	O08-001-SL0-1007	Klau Disturbed
O09	10/16/2007	0	Soil	SYS	O09-001-SL0-1007	Klau Disturbed
O10	10/24/2007	0	Soil	SYS	O10-001-SL0-1007	Klau Disturbed
O11	10/24/2007	0	Soil	SYS	O11-001-SL0-1007	Klau Disturbed
O12	10/24/2007	0	Soil	SYS	O12-001-SL0-1007	Klau Disturbed
O13	10/20/2007	0	Soil	SYS	O13-001-SL0-1007	Klau Disturbed
O14	10/20/2007	0	Soil	SYS	O14-001-SL0-1007	Klau Disturbed
O15	10/23/2007	0	Soil	SYS	O15-001-SL0-1007	Klau Disturbed
O16	10/20/2007	0	Soil	SYS	O16-001-SL0-1007	Klau Disturbed
O17	10/25/2007	0	Soil	SYS	O17-001-SL0-1007	Klau Disturbed
O18	10/25/2007	0	Soil	SYS	O18-001-SL0-1007	Klau Disturbed
O19	10/13/2007	0	Soil	SYS	O19-001-SL0-1007	Buena Vista Disturbed
O20	10/22/2007	0	Soil	SYS	O20-001-SL0-1007	Buena Vista Disturbed
O21-1	10/22/2007	0	Soil	SYS	O21-001-SL0-1007	Buena Vista Disturbed
O22	10/18/2007	0	Soil	SYS	O22-001-SL0-1007	Buena Vista Disturbed
O23	10/18/2007	0	Soil	SYS	O23-001-SL0-1007	Buena Vista Disturbed
OP15-16	10/26/2007	0	Soil	SYS	OP1516-001-SL0-1007	Klau Disturbed
P10	10/13/2007	0	Soil	SYS	P10-001-SL0-1007	Klau Disturbed Random
P11	10/19/2007	0	Soil	SYS	P11-001-SL0-1007	Klau Disturbed Random
P11	10/19/2007	0	Soil	SYS	P11-001-SL8-1007	Klau Disturbed Random
P12	10/25/2007	0	Soil	SYS	P12-001-SL0-1007	Klau Disturbed Random
P13	10/25/2007	0	Soil	SYS	P13-001-SL0-1007	Klau Disturbed
P14	10/25/2007	0	Soil	SYS	P14-001-SL0-1007	Klau Disturbed
P15	10/25/2007	0	Soil	SYS	P15-001-SL0-1007	Klau Disturbed Random
P16	10/25/2007	0	Soil	SYS	P16-001-SL0-1007	Klau Disturbed Random
P17	10/25/2007	0	Soil	SYS	P17-001-SL0-1007	Klau Disturbed
Q11-1	10/26/2007	0	Soil	SYS	Q11-001-SL0-1007	Klau Disturbed Random

TABLE A-1
Summary of Sample Information and Descriptions
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
KLAU						
Q11-1	10/26/2007	1	Soil	SYS	Q11-001-SL1-1007	Klau Disturbed Random
Q12	10/19/2007	0	Soil	SYS	Q12-001-SL0-1007	Klau Disturbed
Q13	10/16/2007	0	Soil	SYS	Q13-001-SL0-1007	Klau Disturbed Random
Q13	10/19/2007	1	Soil	SYS	Q13-001-SL1-1007	Klau Disturbed Random
Q14	10/19/2007	0	Soil	SYS	Q14-001-SL0-1007	Klau Disturbed
Q15	10/19/2007	0	Soil	SYS	Q15-001-SL0-1007	Klau Disturbed
Q16	10/19/2007	0	Soil	SYS	Q16-001-SL0-1007	Klau Disturbed Random
ROC	10/24/2007	0	Soil	JUD	ROC-001-SL0-1007	Klau Disturbed Rock outcrop on backside of dense forest
SB4	10/19/2007	0	Soil	JUD	SB4-001-SL0-1007	Klau Sedimentation Basin 4
SB4	10/20/2007	1	Soil	JUD	SB4-001-SL1-1007	Klau Sedimentation Basin 4
WKJ	10/26/2007	0	Soil	SYS	WKJ-001-SL0-1007	Klau West Undisturbed Random
WKJ	10/26/2007	1	Soil	SYS	WKJ-001-SL1-1007	Klau West Undisturbed Random
WMA	10/20/2007	0	Soil	JUD	WMA-001-SL0-1007	Klau Disturbed Western Mill Area
WMA	10/20/2007	1	Soil	JUD	WMA-002-SL1-1007	Klau Disturbed Western Mill Area
WMD-1	10/26/2007	0	Soil	JUD	WMD-001-SL0-1007	Klau Disturbed West Mill Driveway
WMD-2	10/26/2007	0	Soil	JUD	WMD-002-SL0-1007	Klau Disturbed West Mill Driveway
WMD-3	10/26/2007	0	Soil	JUD	WMD-003-SL0-1007	Klau Disturbed West Mill Driveway
WMD-4	10/26/2007	0	Soil	JUD	WMD-004-SL0-1007	Klau Disturbed West Mill Driveway
WMD-5	10/26/2007	0	Soil	JUD	WMD-005-SL0-1007	Klau Disturbed West Mill Driveway
WP1	10/20/2007	0	Soil	JUD	WP1-001-SL0-1007	Klau Disturbed waste pile 1 west of western retort
WP1	10/20/2007	1	Soil	JUD	WP1-001-SL1-1007	Klau Disturbed waste pile 1 west of western retort
WP2	10/20/2007	0	Soil	JUD	WP2-001-SL0-1007	Klau Disturbed waste pile 2 west of western retort
WP2	10/20/2007	0	Soil	JUD	WP2-001-SL8-1007	Klau Disturbed waste pile 2 west of western retort
WP3	10/20/2007	0	Soil	JUD	WP3-001-SL0-1007	Klau Disturbed waste pile 3 west of western retort
WPC	10/20/2007	0	Soil	JUD	WPC-001-SL0-1007	Klau Disturbed Waste Pile Creek
WRC	10/20/2007	0	Soil	JUD	WRC-001-SL0-1007	Klau Disturbed West Retort Creek Cut
WRC	10/20/2007	1	Soil	JUD	WRC-001-SL1-1007	Klau Disturbed West Retort Creek Cut
WRC	10/20/2007	2	Soil	JUD	WRC-001-SL2-1007	Klau Disturbed West Retort Creek Cut
WRC	10/20/2007	3	Soil	JUD	WRC-001-SL3-1007	Klau Disturbed West Retort Creek Cut
WRC	10/20/2007	4	Soil	JUD	WRC-001-SL4-1007	Klau Disturbed West Retort Creek Cut
WRC	10/20/2007	5	Soil	JUD	WRC-001-SL5-1007	Klau Disturbed West Retort Creek Cut
WRP	10/19/2007	0	Soil	JUD	WRP-001-SL0-1007	Klau Disturbed Waste Rock Pile
WRP	10/20/2007	1	Soil	JUD	WRP-001-SL1-1007	Klau Disturbed Waste Rock Pile
WRS	10/23/2007	0	Soil	JUD	WRS-001-SL0-1007	Klau Disturbed Hillside Seep North of Western Retort
WRT	10/20/2007	0	Soil	JUD	WRT-001-SL0-1007	Klau Disturbed Western Retort
WRT	10/20/2007	1	Soil	JUD	WRT-001-SL1-1007	Klau Disturbed Western Retort
WRT	10/20/2007	1	Soil	JUD	WRT-001-SL9-1007	Klau Disturbed Western Retort
WRT	10/30/2007	0	VEG	JUD	WRT-001-ACN-1007	Klau Disturbed Western Retort - Terrestrial Acorns
WRT	10/30/2007	0	VEG	JUD	WRT-001-GRS-1007	Klau Disturbed Western Retort - Terrestrial Grasses
WRT	11/3/2007	0	TIS	JUD	WRT-001-JCR-1107	Klau Disturbed Western Retort - Terrestrial Jersulem Crickets
WRW	10/23/2007	0	Soil	JUD	WRW-001-SL0-1007	Klau Disturbed Western Reort Waste

TABLE A-1
Summary of Sample Information and Descriptions
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

Loc ID	Date	Depth	Matrix	Type	Sample ID	Description
KLAU - Ponds						
KPD-1	11/1/2007	0	Sed	JUD	KPD-001-SD0-1107	Klau Pond
KPD-1	11/1/2007	1	Sed	JUD	KPD-001-SD1-1107	Klau Pond
KPD-1	11/1/2007	1	Sed	JUD	KPD-001-SD9-1107	Klau Pond
KPD-1	11/5/2007	0	SW	JUD	KPD-001-SW8-1107	Klau Pond
KPD-1	11/5/2007	0	SW	JUD	KPD-001-SW0-1107	Klau Pond
KPD-2	10/30/2007	0	VEG	JUD	KPD-002-ACN-1007	Klau Pond - Terrestrial Acorns Location upgradient from beach by condenser
KPD-2	10/30/2007	0	VEG	JUD	KPD-002-GRS-1007	Klau Pond - Terrestrial Grasses Location upgradient from beach by condenser
KPD-2	11/1/2007	0	TIS	JUD	KPD-002-BGL-1107	Klau Pond - Aquatic Bluegill Comp 1 Beach
KPD-2	11/1/2007	0	TIS	JUD	KPD-002-DRG-1107	Klau Pond - Aquatic Dragonflies Beach
KPD-2	11/1/2007	0	Sed	JUD	KPD-002-SD0-1107	Klau Pond
KPD-2	11/1/2007	1	Sed	JUD	KPD-002-SD1-1107	Klau Pond
KPD-2	11/3/2007	0	TIS	JUD	KPD-002-SOW-1107	Klau Pond - Terrestrial Sowbugs Location upgradient from beach by condenser
KPD-2	11/5/2007	0	SW	JUD	KPD-002-SW0-1107	Klau Pond
KPD-3	11/1/2007	0	Sed	JUD	KPD-003-SD0-1107	Klau Pond
KPD-3	11/1/2007	1	Sed	JUD	KPD-003-SD1-1107	Klau Pond
KPD-3	11/5/2007	0	SW	JUD	KPD-003-SW0-1107	Klau Pond
WKP-1	10/30/2007	0	Sed	JUD	WKP-001-SD0-1007	Klau Disturbed Western Klau Pond
WKP-1	10/30/2007	1	Sed	JUD	WKP-001-SD1-1007	Klau Disturbed Western Klau Pond
WKP-2	10/23/2007	0	Sed	JUD	WKP-002-SD0-1007	Klau Disturbed Western Klau Pond
WKP-2	10/30/2007	0	VEG	JUD	WKP-002-ALG-1007	Klau Disturbed Western Klau Pond - Aquatic Algae
WKP-3	10/30/2007	0	Sed	JUD	WKP-003-SD0-1007	Klau Disturbed Western Klau Pond
WKP-3	10/30/2007	1	Sed	JUD	WKP-003-SD1-1007	Klau Disturbed Western Klau Pond
WKP-3	10/30/2007	1	Sed	JUD	WKP-003-SD9-1007	Klau Disturbed Western Klau Pond
KLAU - Seeps						
N07-2	11/13/2007	0	Sed	SYS	N07-002-SD0-1107	Klau Disturbed Dry Seep
Q11-2	11/13/2007	0	Sed	SYS	Q11-002-SD0-1107	Klau Disturbed Seep
Q11-2	11/13/2007	0	SW	SYS	Q11-002-SP0-1107	Klau Disturbed Seep

Notes:

BIAS	Biased
BIO	Biological
Disc	Discharge
GW	Groundwater
IDW	Investigation Derived Waste
JUD	Judgmental
Sed	Sediment
SW	Surface water
SYS	Systematic
TIS	Tissue
VEG	Vegetation

TABLE A-2
Soil Sample Results - XRF
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

					Sample Results and Project Goals are reported in mg/Kg										
					Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
				PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs:	23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
West Klau Undisturbed															
H03	0	MY3NM1	10/16/2007		13.75 U	13.36 U	**261.37**	360.91 U	**51.46**	**15.18**	**713.17**	**186.72**	6.89 U	**50.8**	**32381.34**
H03	1	MY3NM6	10/16/2007		13.04 U	14.34 U	**244.92**	**382.94**	**63.15**	**17.58**	**972.27**	**212.35**	7.49 U	**55.75**	**35164.84**
H07	0		10/17/2007		**18.27**	**21.93**	**2071.64**	610.27 U	**67.95**	12.63 U	**2302.48**	**1660.95**	8.51 U	41.26 U	**98012**
H10	0	MY3NN1	10/17/2007		8.35 U	**9.13**	**154.18**	290.4 U	**63.92**	11.33 U	**808.29**	**231.97**	5.43 U	**55.1**	**32694.93**
H10	1	MY3NN0	10/17/2007		12.24 U	**14**	139.29 U	**366.95**	**79.12**	**17.25**	**1261.64**	**120.99**	6.84 U	**83.56**	**39961.34**
H15	0		10/10/2007		11.63 U	**14.76**	**162.68**	370.21 U	**44.68**	14.25 U	**739.74**	**94.6**	7.84 U	**72.83**	**35042.55**
I02	0		10/16/2007		**12.81**	12.48 U	**142.01**	239.66 U	33.25 U	**20.17**	**362.91**	**61.96**	5.67 U	**44.71**	**20293.23**
I05	0	MY3PF8	11/14/2007		**61.1**	**20.82**	**10296.75**	1241.94 U	120.54 U	14.61 U	**6266.62**	**7277.52**	11.92 U	63.96 U	**282088.7**
I08	0	MY3NM5	10/17/2007		**41.22**	10.7 U	**1331.27**	543.48 U	66.81 U	12.84 U	**1548.6**	**2242.22**	7.41 U	38.48 U	**74215.27**
I08	1	MY3NM4	10/17/2007		**23.42**	11.13 U	**1225.82**	**540.15**	66.32 U	14.01 U	**1149.97**	**2442.12**	8.2 U	36.07 U	**67323.48**
I09	0		10/17/2007		10.75 U	**12.3**	**698.42**	350.1 U	**51.09**	**15.9**	**755.61**	**585.83**	6.51 U	**54.65**	**38101.68**
J01	0		10/17/2007		11.26 U	12.38 U	**165.68**	267.37 U	36.71 U	**24.09**	**747.69**	**95.23**	6.73 U	**57.28**	**22643.97**
J01	1		10/17/2007		10.58 U	11.33 U	122.8 U	261.76 U	39.54 U	**14.16**	**442.22**	**82.72**	6.91 U	**36.32**	**20354.76**
J03	0		10/16/2007		11.8 U	12.4 U	**499.45**	370.86 U	**74.33**	**17.22**	**802.47**	**349.21**	6.82 U	**63.29**	**38702.93**
J07	0		10/17/2007		**25.14**	**14.93**	**1879.7**	564.48 U	**59.08**	14.32 U	**2010.35**	**1494.37**	6.86 U	39.27 U	**80546**
JK78	0		10/26/2007		**31.87**	**21.55**	**7852.88**	1119.32 U	**65.45**	**26.25**	**6303.99**	**5475.42**	9.61 U	**73.62**	**265926.3**
K04	0	MY3NL0	10/16/2007		14.52 U	13.9 U	**565.95**	401.88 U	**66.39**	**16.56**	**950.24**	**516.82**	7.54 U	**65.35**	**40330.82**
K04	1	MY3NM9	10/16/2007		14.08 U	12.91 U	**1036.56**	546.19 U	**79.96**	16.27 U	**2498.1**	**625.46**	9.36 U	**83.61**	**67571.63**
K06	0		10/16/2007		**21.73**	9.35 U	**3459.8**	732.24 U	**87.75**	12.16 U	**2926.95**	**4382.56**	7.7 U	38.09 U	**151438.3**
L03	0		10/17/2007		10.9 U	**12.94**	107.46 U	239.78 U	31.31 U	12.76 U	**482.66**	**64.55**	5.75 U	**42.24**	**19357.52**
L05	0	MY3PC4	10/16/2007		**33.98**	20.15 U	**2897.88**	670.64 U	67.66 U	**72.69**	**2735.13**	**2693.45**	7.45 U	**67.04**	**122128.3**

TABLE A-2
Soil Sample Results - XRF
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

					Sample Results and Project Goals are reported in mg/Kg										
					Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
				PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs:	23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
West Klau Undisturbed															
O03	0	MY3NN3	10/17/2007		12.26 U	**10.61**	163.02 U	**424.2**	**87.27**	14.83 U	**1213.03**	**118.31**	7 U	**46.19**	**48182.8**
O03	1	MY3NN4	10/17/2007		12.15 U	10.39 U	**194.6**	505.48 U	**112.7**	14.44 U	**1244.72**	**186.73**	8.53 U	**48.03**	**59970.65**
O05	0		10/17/2007		11.47 U	10.24 U	**347.92**	**372.05**	**53.91**	12.67 U	**837.18**	**392.32**	6.07 U	**47.31**	**32629.58**
WKJ	0	MY3P10	10/26/2007		**60.73**	**19.94**	**8469.56**	993.85 U	90.93 U	14.61 U	**3259.52**	**3556.23**	10.71 U	55.35 U	**177104.4**
WKJ	1	MY3P11	10/26/2007		**34.96**	**39.45**	**7412.61**	1182.94 U	96.45 U	14.93 U	**3955.36**	**4258.5**	9.76 U	61.2 U	**239849**
				Mean	33.2	17.7	2335	417	69.3	23.4	1818	1515		58.2	82385
				Standard Deviation	15.9	8.12	3150	72.3	17.3	16.8	1622	1979		13.9	77643
				Number of detects / Total measurements	11/26	12/26	22/26	5/26	16/26	11/26	26/26	26/26	0/26	18/26	26/26

TABLE A-2
Soil Sample Results - XRF
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
North Klau Undisturbed														
B15	0	MY3NL4	10/16/2007	11.5 U	10.39 U	**194.39**	319.26 U	**51.77**	12.8 U	**992.32**	**149.62**	6.46 U	**63.59**	**33400.9**
B15	1	MY3NM2	10/16/2007	11.23 U	11.47 U	**282.2**	337.38 U	**73.37**	**16.45**	**790.15**	**188.77**	7.31 U	**67.96**	**35547.59**
C14	0		10/16/2007	12.2 U	12.05 U	144.98 U	365.47 U	**58.18**	14.3 U	**1047.24**	**93.88**	6.56 U	**76.48**	**37717.49**
D17	0		10/16/2007	11.22 U	11.8 U	**223.83**	316.53 U	46.23 U	**14.69**	**683.78**	**146.39**	6.55 U	**52.25**	**29743.12**
E15	0	MY3NL3	10/16/2007	9.94 U	**9.74**	**168.13**	311.68 U	**59.2**	11.44 U	**930.58**	**130.74**	5.91 U	**55.02**	**30803.98**
F17	0	MY3NL1	10/16/2007	10.77 U	12.05 U	**291.54**	349.88 U	**59.14**	**16.63**	**770.52**	**280.88**	5.88 U	**63.87**	**36498.48**
F17	1	MY3NL6	10/16/2007	13.57 U	13.35 U	**253.57**	397.79 U	**85.93**	14.39 U	**755.11**	**264.3**	6.91 U	**69.78**	**37924.71**
H19	0	MY3NH6	10/13/2007	12.74 U	**9.65**	**168.49**	315.78 U	**49.6**	13.86 U	**576.18**	**187.45**	6.41 U	**32.94**	**26230.88**
H19	1	MY3NK8	10/16/2007	11.35 U	**13.06**	**388.94**	376.89 U	**65.39**	**15.71**	**698.33**	**270.55**	5.97 U	**46.56**	**41599.02**
I11	0		10/17/2007	7.31 U	8.7 U	**85.09**	209.11 U	**51.71**	**14.34**	**1707.43**	**68.54**	5.05 U	**55.53**	**21570.16**
I17	0	MY3NK6	10/10/2007	10.78 U	**12.47**	**264.3**	333.71 U	46.04 U	11.8 U	**648.09**	**220.25**	7.01 U	**49.61**	**28519.41**
I17	1	MY3NL2	10/16/2007	11.41 U	**14.95**	**380.95**	373.83 U	**73.6**	13.22 U	**732.29**	**300.29**	6.87 U	**53.69**	**39648.95**
K18	0		10/23/2007	**13.36**	**16.37**	**160.2**	**378.05**	**109.18**	**27.68**	**1118.49**	**90.48**	7.32 U	**87.46**	**42892.23**
			Mean	13.4	12.7	238	378	67	17.6	880	184		59.6	34007
			Standard Deviation		2.71	90.6		17.9	5.03	297	78.4		14.1	6325
			Number of detects / Total measurements	1/13	6/13	12/13	1/13	11/13	6/13	13/13	13/13	0/13	13/13	13/13

TABLE A-2
Soil Sample Results - XRF
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Klau Disturbed														
CWA	0		10/26/2007	**14.63**	13.27 U	**349.47**	**426.31**	**47.32**	14.88 U	**1691.59**	**339.15**	7.78 U	**82.32**	**49974.43**
FMS-1	0	MY3NS8	10/19/2007	**67.15**	13.32 U	**1905.8**	424.97 U	**54.32**	15.29 U	**818.51**	**644.33**	7.12 U	33.55 U	**42682.78**
FMS-1	1	MY3NT9	10/20/2007	**42.42**	**24.24**	**426.38**	509.06 U	**54.3**	13.68 U	**454.05**	**187.29**	8.07 U	29.48 U	**71119.86**
FMS-2	0	MY3NT1	10/19/2007	**171.88**	**17.59**	**875.24**	304.67 U	38.45 U	14.01 U	**240.64**	**224.45**	7.43 U	29.33 U	**24436.41**
FMS-2	1	MY3NW1	10/20/2007	**67.63**	**29.22**	**1502.55**	**515.62**	**67.92**	**16.37**	**1349.95**	**766.21**	6.97 U	**54.04**	**57505**
J10	0		10/10/2007	11.65 U	14.86 U	161.01 U	364.41 U	48.84 U	16.92 U	**619.43**	**118.06**	7.03 U	**71.8**	**32667.33**
J11	0		10/10/2007	10.73 U	10.95 U	**169.23**	312.36 U	**57.72**	**12.29**	**615.77**	**130**	5.79 U	**61.31**	**30578.02**
J12	0		10/10/2007	12.15 U	**12.22**	**262.91**	359.51 U	**62.49**	**13.43**	**897.32**	**112.82**	7.24 U	**62.76**	**37134.07**
J13	0		10/10/2007	22.97 U	22.53 U	267.14 U	498.23 U	78.69 U	**36.21**	**693.05**	**102.13**	13.83 U	**86.97**	**29520.64**
J14	0		10/10/2007	11.96 U	13.77 U	**236.24**	380.29 U	**64.8**	**13.4**	**862.4**	**113.45**	6.7 U	**62.06**	**34874.27**
J15	0	MY3NH5	10/10/2007	13.26 U	**11.16**	**327.49**	454.6 U	**48.85**	**23.88**	**806.5**	**252.86**	6.38 U	**77.91**	**35813.48**
J19	0	MY3NH7	10/13/2007	**17.77**	12.67 U	134.39 U	362.99 U	**73.05**	**18.34**	**1245.67**	**58.23**	6.62 U	**67.55**	**34056.38**
K08	0		10/23/2007	**29.52**	**19.95**	**1229.48**	496.93 U	53.95 U	**16.8**	**1937.77**	**924.93**	8.45 U	**46.24**	**66662.34**
K09	0		10/23/2007	10.64 U	**14.55**	97.25 U	261.87 U	37.94 U	13.53 U	**445.91**	47.94 U	6.13 U	**58.18**	**23355.75**
K10	0	MY3NH4	10/10/2007	13.24 U	**15.42**	123.21 U	340.34 U	**65.62**	12.74 U	**608.1**	58.56 U	6.94 U	**69.11**	**24979.52**
K11	0		10/10/2007	10.01 U	11.07 U	**187.5**	347.63 U	**77.63**	12.74 U	**674.24**	**182.8**	5.9 U	**55.32**	**35838.4**
K12	0	MY3NH0	10/10/2007	10.22 U	**11.01**	113.36 U	293.82 U	**47.62**	**11.95**	**568.07**	**60.49**	5.56 U	**57.1**	**31720.01**
K13	0	MY3NG9	10/10/2007	10.62 U	10.1 U	**226.73**	328.7 U	**48.94**	12.68 U	**625.65**	**166.25**	6.1 U	**43.49**	**32971.71**
K14	0		10/10/2007	10.55 U	11.41 U	**140.07**	361.31 U	**54.66**	**20.44**	**775.73**	**105.66**	5.51 U	**75.53**	**43308.9**
K15	0		10/10/2007	11.87 U	12.25 U	**206.88**	**379.15**	**43.88**	14.77 U	**597.84**	**211.02**	6.58 U	**62.6**	**33376.2**
K16	0		10/10/2007	9.98 U	9.47 U	**209.56**	**298.18**	**42.37**	10.8 U	**516.74**	**241.95**	5.2 U	**79.95**	**34208.48**

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Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Klau Disturbed														
K19	0		10/25/2007	10.94 U	11.46 U	**288.99**	**385.44**	**64.24**	**15.4**	**713.76**	**146.03**	6.55 U	**54.23**	**35596.13**
KMP	0	MY3NS6	10/19/2007	**41.06**	**11.72**	**703.06**	325.11 U	**72.76**	**12.05**	**607.49**	**639.99**	6.97 U	**65.94**	**31076.96**
KMP	1	MY3NT7	10/20/2007	**72.15**	12.19 U	**1138.91**	442.98 U	**71.31**	16.86 U	**2752.36**	**1178.39**	7.92 U	**79.43**	**51499.99**
KOP-1	0	MY3NH2	10/10/2007	12.54 U	**16.26**	**163.55**	332.96 U	**68.51**	15.21 U	**460.43**	**89.09**	6.76 U	**67.17**	**30013.19**
KOP-2	0	MY3NH3	10/10/2007	**1147.95**	**14.91**	**355.96**	327.45 U	43.08 U	18.1 U	160.53 U	**88.09**	10.36 U	43.71 U	**29760.93**
KOP-3	1	MY3NX6	10/20/2007	**14.23**	**18.66**	119.05 U	292.3 U	41.34 U	14.37 U	**484.79**	**56.35**	6.57 U	**33.41**	**24040.18**
KPC	0	MY3NX3	10/20/2007	10 U	---	---	---	---	---	---	---	---	---	---
KPC	1	MY3NX4	10/20/2007	12.46 U	14.87 U	**444.19**	440.94 U	**58.22**	17.44 U	**827.96**	**292.7**	7.25 U	**75.68**	**40852.71**
L07	0		10/23/2007	**43.98**	**126.91**	**584.49**	**399.88**	**59.47**	**26.26**	**1118.76**	**1117.34**	6.51 U	**161.78**	**38393.66**
L08	0		10/23/2007	**12.07**	**115.33**	**314.86**	429.8 U	**50.4**	**21.93**	**1062.45**	**471.57**	7.51 U	**94.71**	**48896.96**
L09	0	MY3NZ1	10/23/2007	**11.5**	**13.86**	121.7 U	314.32 U	**41.15**	**16.86**	**695.61**	**58.73**	6.28 U	**67.77**	**34118.71**
L10	0		10/23/2007	9.41 U	**13.06**	104.99 U	278.67 U	**34.5**	**15.74**	**589.69**	**62.98**	5.32 U	**60.07**	**28589.08**
L11	0		10/10/2007	12.31 U	14.86 U	**259.49**	**499.58**	**49**	16.43 U	**760.36**	**108.02**	8.41 U	**52.37**	**44357.1**
L12	0	MY3NH1	10/10/2007	11.1 U	8.87 U	**144.34**	**438.13**	**37.24**	10.68 U	**784.23**	**188.06**	5.86 U	**60.64**	**31000.17**
L13	0		10/10/2007	**350.63**	12.74 U	**593.97**	**305.64**	41.51 U	**15.98**	**531.18**	**151.73**	7.1 U	**60.1**	**23947.29**
L14	0		10/10/2007	14.59 U	12.37 U	**288.61**	433.85 U	62.48 U	14.9 U	**633.51**	**233.94**	8.06 U	**45.88**	**34723.92**
L15	0		10/23/2007	13.38 U	**9.34**	**256.07**	445.18 U	**47.86**	**14.18**	**1280.15**	**233.07**	6.76 U	**60.75**	**50409.7**
L16	0		10/23/2007	12.08 U	**12.07**	**263.81**	407.94 U	**50.29**	**16.56**	**907.97**	**215.71**	6.84 U	**57.66**	**40837.43**
L17	0		10/23/2007	11.72 U	12.06 U	**279.65**	359.89 U	**65.72**	**14.98**	**896.51**	**305.87**	6.72 U	**72.51**	**42112.18**
L18	0		10/23/2007	12.53 U	12.76 U	**169.69**	343.45 U	**55.52**	15.46 U	**768.32**	**189.38**	8.65 U	**83.33**	**31653.88**
L19	0		10/25/2007	**31.64**	13.13 U	**455.91**	416.86 U	**60.26**	**15.83**	**1204.39**	**393.09**	7.08 U	**46.04**	**48517.39**

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Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Klau Disturbed														
M06	0	MY3NL7	10/16/2007	**169.62**	**18.48**	**671.69**	**319.79**	**49.82**	14.18 U	**568.36**	**427.4**	7.2 U	**52.61**	**37823.11**
M07	0		10/16/2007	16.66 U	13.44 U	**1138.94**	571.35 U	67.58 U	16.4 U	**1319.79**	**819.35**	9 U	**72.22**	**60293.07**
M08	0		10/23/2007	13.42 U	14.23 U	**182.82**	463.49 U	53.11 U	**18.4**	**1472.37**	**135.45**	7.79 U	**63.14**	**53535.82**
M09	0		10/23/2007	13.53 U	14.65 U	183.13 U	486.62 U	**63.69**	17.16 U	**876.85**	74.61 U	7.53 U	**82.71**	**61689.48**
M10	0		10/23/2007	11.73 U	**11.87**	**293.5**	402.77 U	**57.83**	**16.49**	**1419.04**	**170.94**	6.96 U	**71.9**	**53244.93**
M11	0		10/23/2007	15.18 U	13.28 U	**293.89**	531.05 U	49.06 U	15.6 U	**1071.74**	**318.51**	8.17 U	**69.74**	**63623.06**
M12	0		10/23/2007	**12.36**	10.61 U	**325.88**	**361.27**	**61.56**	13.41 U	**981.09**	**200.49**	6.52 U	**57.13**	**46293.07**
M13	0		10/23/2007	12.56 U	12.74 U	**168.68**	**684.32**	**69.27**	**16.9**	**1835.33**	**229.73**	7.32 U	**93.12**	**116818.8**
M14	0		10/23/2007	11.78 U	**11.36**	**195.71**	351.11 U	**39.85**	12.32 U	**413.38**	**114.3**	6.83 U	**69.67**	**36039.45**
M15	0		10/23/2007	**16.63**	10.49 U	**112.18**	242.99 U	36.38 U	**12.82**	**161.39**	46.3 U	6.43 U	25.52 U	**21799.17**
M16	0		10/23/2007	11.73 U	**11.49**	**399.57**	389.73 U	**44.49**	**14.61**	**950.51**	**237.23**	6.59 U	**62.63**	**47941.92**
M17	0		10/23/2007	**12.27**	9.77 U	**189.11**	**307.58**	**46.33**	9.79 U	**854.87**	**158.57**	6.52 U	**59.32**	**36965.66**
M18	0		10/23/2007	**10.05**	10.89 U	**324.62**	**463.42**	**86.82**	12.04 U	**1282.15**	**249.84**	7.02 U	**63.65**	**56428.89**
M19	0		10/25/2007	**30.03**	15.27 U	**234.86**	500.27 U	**59.44**	18.15 U	**1220.92**	**157.54**	8.01 U	**81.71**	**50631.54**
N06	0		10/13/2007	**21.66**	14.36 U	169.52 U	429.59 U	46.06 U	**18.18**	**344.62**	**100.28**	8.02 U	**42.04**	**48480.43**
N07-1	0		10/23/2007	**18.7**	11.48 U	**631.17**	407.35 U	**57.62**	**15.52**	**1220.18**	**463.27**	6.13 U	**47.51**	**57287.47**
N08	0		10/16/2007	**32.01**	12.67 U	**461.16**	372.44 U	**67.52**	**17.4**	**877.1**	**368.67**	7.17 U	**69.05**	**41450.15**
N09	0	MY3NZ6	10/24/2007	**16.05**	**9.97**	**166.48**	**273.48**	**48.62**	11.55 U	**387.61**	**102.18**	5.88 U	**35.7**	**22009.51**
N10	0		10/24/2007	**34.41**	10.03 U	**665.58**	318.52 U	**42.08**	12.31 U	**926.3**	**98.44**	6.06 U	29.96 U	**34716.48**
N11	0		10/24/2007	**16.04**	11.41 U	**251.38**	180.59 U	32.77 U	**25.84**	**1340.68**	**148.55**	5.75 U	**27.88**	**15081.66**
N12	0	MY3P00	10/24/2007	**16.86**	**11.92**	**267.53**	380.42 U	**73.82**	**17.37**	**2869.83**	**249.11**	7.1 U	**58.02**	**41082.55**

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Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

					Sample Results and Project Goals are reported in mg/Kg										
					Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
				PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs:	23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Klau Disturbed															
N13	0	MY3NZ7	10/24/2007		**350.76**	11.15 U	**401.46**	292.52 U	**40.03**	13.38 U	**432.32**	**57.54**	6.13 U	30.73 U	**30161.45**
N13E	0		10/24/2007		**75.78**	12.13 U	**212.76**	283.09 U	**51.11**	**17.76**	139.1 U	**76.37**	6.21 U	26.53 U	**26694.36**
N13S	0		10/24/2007		**25.54**	10.63 U	**139.5**	280.13 U	**38.13**	12.58 U	133.02 U	47.5 U	5.54 U	27.52 U	**27083.63**
N13W	0		10/24/2007		**60.16**	12.35 U	**336.43**	412.7 U	**54.99**	13.92 U	**266.24**	**77.3**	7.38 U	**49.34**	**42726.75**
N14	0		10/23/2007		13.16 U	12.11 U	142.38 U	324 U	44.61 U	14.64 U	**539**	**120.76**	7.46 U	33.11 U	**28084.62**
N15	0		10/23/2007		**17.07**	12.8 U	**194.82**	426.76 U	**59.94**	**19.12**	**483.72**	**157.12**	6.48 U	**34.93**	**52130.64**
N16	0		10/20/2007		**45.77**	**13.72**	**457.18**	365.47 U	46.25 U	13.78 U	**522.67**	**230.85**	7.98 U	**37.47**	**38489.91**
N17	0		10/25/2007		12.64 U	12.47 U	**468.25**	430.93 U	**80.77**	15.23 U	**845.98**	**237.87**	7.88 U	**59.61**	**43822.8**
N18	0	MY3P06	10/25/2007		15.22 U	**14.84**	**295.51**	460.14 U	**63.92**	17.69 U	**896.78**	**221**	8.39 U	**48.86**	**43983.71**
N19	0		10/13/2007		11.82 U	10.67 U	**423.12**	374.78 U	**42.14**	13.76 U	**565.33**	**208.8**	6.39 U	**44.74**	**37829**
O08	0		10/23/2007		**45.99**	**13.49**	**553.58**	375.85 U	**62.28**	14.6 U	**1037.42**	**442.5**	7.77 U	**71.56**	**43683.54**
O09	0		10/16/2007		**32.62**	**14.04**	**990.37**	425.23 U	**62.07**	**25.02**	**1225.22**	**778.65**	7.01 U	**67.46**	**50829.05**
O10	0		10/24/2007		**30.93**	**20.56**	**1396.81**	414.58 U	**55.15**	**18.38**	**3110.07**	**1221.78**	6.46 U	**38.91**	**49380.82**
O11	0		10/24/2007		**17.34**	11.24 U	**528.73**	306.36 U	**62.25**	**13.76**	**734.25**	**151.86**	7.19 U	**48.93**	**32085.19**
O12	0		10/24/2007		**37.27**	8.94 U	**264.51**	137.23 U	35.07 U	12.28 U	97.66 U	41.92 U	5.92 U	20.17 U	**8017.72**
O13	0		10/20/2007		**35.56**	9.86 U	**728.32**	303.97 U	**49.33**	**13.07**	**10498.73**	**131.92**	6.57 U	**35.12**	**28842.1**
O14	0		10/20/2007		**23.13**	11.95 U	**306.99**	318.37 U	41.03 U	**20.83**	**467.46**	**119.4**	6.58 U	29.66 U	**31919.82**
O15	0		10/23/2007		**121.19**	**13.26**	**396.4**	316.3 U	**58.73**	13.78 U	**179.08**	**58.12**	6.77 U	29.3 U	**30145.91**
O16	0		10/20/2007		**10.77**	9.25 U	**99.58**	214.47 U	**40.4**	**14.61**	**590.42**	**132.19**	4.9 U	**76.81**	**21350.92**
O17	0		10/25/2007		12.88 U	13.03 U	**362.11**	368.2 U	**90.24**	15.56 U	**833.19**	**181.7**	7.9 U	**48.72**	**37421.77**
O18	0		10/25/2007		**10.18**	**10.26**	**137.79**	353.3 U	**99.86**	**10.8**	**944.65**	**190.55**	5.95 U	**69.66**	**45759**

TABLE A-2
Soil Sample Results - XRF
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Klau Disturbed														
O19	0		10/13/2007	14.5 U	12 U	**219.62**	525.11 U	**68.85**	13.86 U	**1401.99**	**163.36**	8.35 U	**50.22**	**60737.66**
O20	0		10/22/2007	**26.36**	12.51 U	**153.41**	336.04 U	**78.68**	14.35 U	**558.06**	**139.92**	**15.57**	**75.39**	**32654.39**
O21-1	0		10/22/2007	**12.56**	**10.69**	**132.52**	318.56 U	**52.58**	12.61 U	**585.45**	**118.42**	5.59 U	**63.46**	**29600.13**
O22	0		10/18/2007	13.93 U	12.09 U	**146.79**	317.77 U	44.85 U	13.22 U	**657.67**	**66.51**	6.62 U	**67.87**	**25633.09**
O23	0		10/18/2007	**10.3**	9.13 U	**111.69**	231.19 U	**53.21**	11.46 U	**380.76**	**68.55**	5.85 U	**62.62**	**19200.23**
OP15-16	0		10/26/2007	**15.61**	**25.11**	**197.2**	392.93 U	**63.21**	15.46 U	**393.61**	**125.55**	7.33 U	**45.77**	**45134.61**
P10	0	MY3PC5	10/13/2007	12.8 U	13.94 U	**594.53**	**1049.53**	51.97 U	15.11 U	**986.58**	**330.22**	6.97 U	**80.73**	**84527.76**
P11	0	MY3NT4	10/19/2007	**48.46**	**17.92**	**1446.77**	478.35 U	**86.54**	**18.61**	**1379.34**	**947.54**	8.45 U	41.08 U	**54761.51**
P12	0	MY3P05	10/25/2007	**34.79**	**14.28**	**959.24**	218.92 U	35.99 U	**11.94**	**1399.13**	**45.45**	5.63 U	**27.01**	**15654.5**
P13	0		10/25/2007	15.01 U	13.32 U	**286.15**	486.42 U	54.78 U	16.36 U	**624.46**	**102.65**	9.7 U	**67.47**	**48918.25**
P14	0		10/25/2007	**52.56**	14.22 U	**273.62**	299.95 U	**53.81**	**22.79**	**899.53**	**205.78**	6.72 U	**36.66**	**24900.04**
P15	0	MY3P07	10/25/2007	**164.65**	12.99 U	**348.3**	312.98 U	**53.56**	14.08 U	**363.14**	55.99 U	6.96 U	28.24 U	**29550.95**
P16	0	MY3P04	10/25/2007	**28.75**	14.37 U	**292.31**	536.21 U	**58.67**	**14.82**	**1600.91**	**245.12**	7.52 U	**69.88**	**68273.91**
P17	0		10/25/2007	**22.33**	12.18 U	**303.32**	**390.94**	**51.18**	**21.45**	**1372.13**	**271.01**	8.89 U	**72.73**	**41347.57**
Q11-1	0	MY3P12	10/26/2007	**93.11**	**24.35**	**698.57**	545.98 U	**79.37**	15.25 U	**1537.01**	**630.66**	8.31 U	**72.5**	**70531.96**
Q12	0		10/19/2007	**67.01**	**21.69**	**1641.96**	448.96 U	**68.8**	16.6 U	**1421.68**	**987.78**	8.46 U	**42.26**	**51569.83**
Q13	0	MY3NM7	10/16/2007	**57.95**	11.7 U	**1075.35**	349.16 U	46.08 U	13.11 U	**695.39**	**441.2**	7.48 U	**46.86**	**36066.98**
Q14	0		10/19/2007	**28.19**	13.03 U	**431.95**	405.62 U	**61.49**	**21.04**	**1003.76**	**272.82**	6.78 U	**42.33**	**39854.32**
Q15	0		10/19/2007	**15.85**	**15.22**	**411.31**	418.65 U	**57.86**	15.44 U	**912.81**	**294.76**	6.96 U	37.16 U	**43229.09**
Q16	0	MY3NP4	10/19/2007	**15.69**	**23.75**	**363.46**	461.11 U	**57.27**	15.06 U	**1463.37**	**334.88**	8.02 U	**47.25**	**50090.36**
ROC	0	MY3NZ5	10/24/2007	**41.29**	9.53 U	**116.28**	137.81 U	34.52 U	11.95 U	88.47 U	**58.14**	5.59 U	19.92 U	**6292.75**

TABLE A-2
Soil Sample Results - XRF
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Klau Disturbed														
SB4	0	MY3NT6	10/19/2007	**34.2**	**16.23**	**1042.89**	370.74 U	52.66 U	14.56 U	**873.4**	**786.79**	7.57 U	**64.25**	**34681.63**
SB4	1	MY3NW2	10/20/2007	**36.16**	**19.41**	**932.89**	426.62 U	**68.11**	15.84 U	**1282**	**848.28**	7.66 U	**59.13**	**50847.25**
WMA	0	MY3NW0	10/20/2007	**352.12**	14.24 U	**465.75**	246.46 U	40.88 U	16.45 U	139.65 U	47.55 U	8.37 U	30.18 U	**18340.05**
WMA	1	MY3NW3	10/20/2007	**58.85**	9.85 U	**357.91**	293.05 U	**78.16**	14.4 U	**515.42**	**690.12**	6.18 U	**37.98**	**25755.62**
WMD-1	0	MY3P13	10/26/2007	**65.69**	11.58 U	**274.8**	317.4 U	42.44 U	13.81 U	**710.2**	**280.36**	7.54 U	**98.9**	**28917.88**
WMD-2	0	MY3P14	10/26/2007	**484.5**	**24.89**	**797.92**	305.1 U	**45.18**	**20.4**	**553.68**	**171.21**	8.76 U	**86.94**	**26740.54**
WMD-3	0	MY3P15	10/26/2007	12.67 U	13.67 U	**1013.93**	517.61 U	**84.71**	**17.52**	**1283.71**	**578.92**	7.89 U	**62.64**	**58546.45**
WMD-4	0	MY3P16	10/26/2007	12.9 U	12.78 U	**195.08**	391.86 U	**72**	**16.75**	**743.75**	**144.29**	7.06 U	**78.02**	**40547.73**
WMD-5	0		10/26/2007	12 U	13.65 U	132.09 U	303.17 U	**88.29**	**32.7**	**651.23**	**240.26**	6.17 U	**133.91**	**26962.94**
WP1	0	MY3NW7	10/20/2007	**327.36**	13.95 U	**1495.19**	210.41 U	37.51 U	16.21 U	168.8 U	**61.23**	7.86 U	30.18 U	**16494.29**
WP1	1	MY3NW8	10/20/2007	**223.5**	11.35 U	**853.37**	**168.65**	33.88 U	14.27 U	129.33 U	**73.65**	6.9 U	26.68 U	**11698.89**
WP2	0	MY3NX0	10/20/2007	**174.31**	13.76 U	**751.78**	234.28 U	37.76 U	**14.06**	146.18 U	52.38 U	6.17 U	25 U	**15012.57**
WP3	0	MY3NW9	10/20/2007	**56.21**	**76.91**	**1765.7**	418.61 U	**77.78**	**26.31**	**1121.72**	**659.57**	7.8 U	**84.26**	**46376.41**
WPC	0	MY3NZ4	10/20/2007	14.11 U	14.84 U	**279.31**	564.75 U	**64.48**	15.99 U	**3127.29**	**469.26**	6.14 U	**82.65**	**76450.92**
WRC	0	MY3NY7	10/20/2007	**37.61**	**15.72**	**1164.99**	410.03 U	**75.71**	**18.61**	**955.44**	**565.9**	6.75 U	**65.39**	**43355.87**
WRC	1		10/20/2007	16.25 U	16.08 U	**362.61**	478.42 U	**61.27**	**19.52**	**960.87**	**273.21**	8.45 U	**72.65**	**44891.64**
WRC	2	MY3NY8	10/20/2007	13.06 U	12.63 U	**227.34**	402.48 U	50.18 U	16.91 U	**1090.13**	**195.71**	7.26 U	**63.66**	**37517.46**
WRC	3		10/20/2007	17.62 U	16.12 U	182.57 U	429.3 U	63.48 U	**22.9**	**1426.51**	**207.53**	8.59 U	**62.3**	**32747.91**
WRC	4	MY3NY9	10/20/2007	**149.5**	**14.03**	**439.82**	414.79 U	**63.81**	**22.94**	**1033.34**	**344.05**	7.06 U	**74.36**	**44621.86**
WRC	5		10/20/2007	**131.11**	**18.75**	**473.48**	460.38 U	**61.88**	17.94 U	**1709.5**	**545.23**	8.2 U	**84.73**	**47340.69**
WRP	0	MY3NT3	10/19/2007	**112.8**	**26.17**	**5630.28**	642.61 U	60.29 U	16.91 U	**411.43**	**869.94**	8.94 U	**49.13**	**83774.45**
WRP	1	MY3NT8	10/20/2007	**86.51**	**26.21**	**3574.3**	484.44 U	**53.69**	14.8 U	**355.13**	**472.07**	7.59 U	34.68 U	**66173.02**

TABLE A-2
Soil Sample Results - XRF
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Klau Disturbed														
WRS	0	MY3NZ3	10/23/2007	**22.14**	12.31 U	**229.41**	410.39 U	**59.93**	**25.2**	**840.9**	**349.97**	6.85 U	**60.26**	**59021.25**
WRT	0	MY3NW4	10/20/2007	**12850.28**	**173.58**	**6257.26**	983.8 U	104.82 U	**121.87**	**2984.11**	**922.93**	40.1 U	**372.49**	**138525.7**
WRT	1	MY3NW5	10/20/2007	**269.57**	**17.64**	**265.29**	423.74 U	**77.68**	16.11 U	**844.45**	**149.98**	8.75 U	**69.06**	**44776.25**
WRW	0	MY3NZ9	10/23/2007	**384.56**	15.94 U	**1206.3**	275.14 U	41 U	**25.59**	165.58 U	**61.29**	8.23 U	33.22 U	**19960.67**
			Mean	46.4	21.4	402	445	58.3	17.7	1023	256	15.6	61.3	40464
			Standard Deviation	68.5	26.6	322	202	13.4	4.77	1134	245		18.8	15552
			Number of detects / Total measurements	51/91	32/91	80/91	14/91	70/91	44/91	88/91	84/91	1/91	79/91	91/91

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Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Buena Vista Disturbed														
BRF-1	0	MY3NS1	10/19/2007	**359.7**	**30.98**	**454.09**	614.32 U	**121.26**	**31.81**	**1598.02**	**397.85**	10.36 U	**239.49**	**77914.95**
BRF-1	1	MY3NT2	10/19/2007	**3637.41**	42.16 U	**648.14**	940.46 U	**210.47**	**91.48**	**875.28**	**422.13**	20.42 U	**361.48**	**157493**
BRF-2	0	MY3NS2	10/19/2007	**42.74**	**22.06**	**289.08**	476.03 U	**79.86**	16.3 U	**651.98**	**182.68**	8.71 U	**71.54**	**50135.47**
BRF-2	1	MY3NT0	10/19/2007	**92.89**	**33.92**	**263.58**	479.24 U	**67.34**	**15.27**	**693.22**	**229.36**	9.75 U	**46.35**	**46660.27**
BVR-1	0	MY3NQ6	10/18/2007	12.83 U	11.8 U	112.99 U	**357.8**	43.82 U	13.77 U	**348.28**	60.01 U	6 U	**35**	**23008.23**
BVR-2	0	MY3NZ0	10/20/2007	**10.14**	**10.92**	110.04 U	**240.96**	**42.15**	11.56 U	**336.52**	**67.94**	5.96 U	**49.95**	**19794.82**
H20	0		10/13/2007	10 U	**8.8**	**134.42**	272.45 U	**42.57**	**16.66**	**575.64**	**107.41**	6.09 U	**40.81**	**25646.91**
H21	0	MY3NG8	10/10/2007	**34.77**	14.83 U	**262.13**	580.87 U	**69.98**	17.92 U	**1417.69**	**167.43**	7.52 U	**92.12**	**70346.55**
I20	0	MY3NG6	10/09/2007	**19.14**	**24.69**	**329.54**	435.39 U	52.04 U	**18.11**	**780.11**	**169.65**	7.36 U	**90.47**	**46394.91**
I21	0		10/09/2007	**24.7**	**17.93**	**198.45**	431.01 U	**55.97**	**16.29**	**651.94**	**133.98**	7.1 U	**58.7**	**44684**
I22	0		10/09/2007	16.45 U	17.07 U	**206.23**	457.45 U	61.54 U	**20.56**	**869.96**	**150.77**	8.56 U	**65.14**	**42740.07**
I23	0		10/09/2007	**19.52**	17.93 U	**238.11**	530.59 U	**75.84**	**20.61**	**975.82**	**115.25**	10.3 U	**61**	**37669.72**
I24	0	MY3NY1	10/22/2007	**129.46**	16.35 U	**332.58**	307.27 U	**62.02**	**41.48**	**525.39**	**180.18**	6.65 U	**115.59**	**29604.02**
I25	0		10/22/2007	**11.99**	**13.05**	**244.04**	326.96 U	**61.56**	12.89 U	**789.93**	**188.57**	6.39 U	**89.98**	**37001.82**
J20	0		10/13/2007	**51.67**	**12.91**	**208.97**	374.5 U	46.49 U	**18.27**	**482.75**	**138.31**	6.91 U	**44.83**	**35538.23**
J21	0		10/09/2007	**44.62**	**16.64**	**281.92**	524.84 U	50.07 U	**26.08**	**768.74**	**203.14**	8.51 U	**58.16**	**68556.09**
J22	0		10/18/2007	11.29 U	**17.29**	**220.93**	392.96 U	**55.13**	12.92 U	**716.71**	**196.57**	6.87 U	**54.86**	**43625.3**
J23	0		10/09/2007	13.38 U	**16.18**	**502.04**	441.85 U	**54.93**	16.1 U	**739.23**	**291.31**	8.89 U	**47.22**	**41421.5**
J24	0		10/09/2007	**20.31**	19.52 U	**288.76**	812.96 U	**87.59**	**31.56**	**3274.49**	**203.29**	9.51 U	**429.38**	**138613.7**
J25	0	MY3NG7	10/09/2007	**14.31**	29.65 U	**278.74**	419.9 U	**72.1**	**96.82**	**1002.2**	**149.04**	9.56 U	**88.44**	**39820.57**
K20	0		10/10/2007	**14.76**	**11.97**	**305.65**	**328.95**	**52.3**	**14.19**	**681.25**	**158.11**	6.05 U	**54.04**	**39009.1**

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Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

					Sample Results and Project Goals are reported in mg/Kg										
					Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
				PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs:	23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Buena Vista Disturbed															
K21	0	MY3NN5	10/18/2007		**20.67**	**16.58**	**320.21**	425.57 U	**56.45**	16.12 U	**857.57**	**178.12**	7.68 U	**52.38**	**47300.2**
K22	0		10/18/2007		21.95 U	16.61 U	303.92 U	1244.5 U	66.54 U	20.14 U	**1490.82**	**191.91**	10.74 U	54.56 U	**341105**
K23	0		10/18/2007		**12.53**	**19.82**	**291.58**	369.72 U	**45.29**	14.3 U	**736.45**	**157.37**	6.34 U	**64.89**	**36766.26**
K24	0		10/18/2007		**17.08**	**11.77**	**103.69**	315.95 U	**54.32**	**11.85**	**660.35**	**142.48**	5.75 U	**51.5**	**33726.76**
K25	0		10/09/2007		**24.83**	13.96 U	**306.54**	496.21 U	**54.14**	**24.68**	**829.57**	**191.05**	7.34 U	**64.36**	**52638.09**
L20	0	MY3NM8	10/18/2007		**52.45**	12.48 U	**287.13**	415.13 U	46.89 U	16.08 U	**831.69**	**315.5**	7.65 U	**59.27**	**50632.49**
L21-1	0	MY3NN6	10/18/2007		**24.6**	**21**	**349.81**	856.89 U	**60.6**	13.89 U	307.03 U	**139.81**	9.35 U	43.52 U	**206535.8**
L22	0		10/18/2007		**35.15**	11.75 U	**155.52**	**307.31**	**63.68**	**20**	**455.46**	**146.83**	6.79 U	**288.81**	**30154.21**
L23	0		10/18/2007		**48.39**	**22.89**	**442.94**	**654.24**	56.83 U	18.08 U	**709.91**	**172.49**	8.61 U	41.81 U	**71023.02**
L24	0		10/18/2007		**22.69**	**16.93**	119.54 U	286.64 U	**51.75**	12.67 U	**634.69**	**151.03**	5.54 U	**62.39**	**26938.12**
L25	0	MY3P01	10/25/2007		10.34 U	10.87 U	**221.7**	344.26 U	**46.05**	13.48 U	**795.28**	**184.41**	6.77 U	**52.38**	**33323.39**
M20-1	0	MY3P03	10/25/2007		**18.63**	16.45 U	184.66 U	497.38 U	**69.88**	19.22 U	**1443.59**	**119.69**	8.7 U	**53.32**	**46403.31**
M21	0	MY3NP0	10/19/2007		**367.36**	20.7 U	**347.48**	941.1 U	**57.06**	**22.18**	**593.08**	**204.71**	12.43 U	46.63 U	**180711**
M22	0		10/19/2007		**55.57**	**18.28**	**415.53**	384.52 U	**57.81**	14.02 U	**1049.99**	**151.46**	7.49 U	**41.97**	**41754.11**
M23	0	MY3NP5	10/19/2007		**25.84**	**11.38**	128.84 U	308.34 U	**40.32**	14.38 U	**459.84**	**110.81**	8.23 U	**86.03**	**26078.14**
M24-1	0	MY3NP2	10/19/2007		**84.23**	**12.14**	185.09 U	**517.16**	**89.21**	16.88 U	**920.14**	**283.63**	7.57 U	**48.58**	**72570.42**
M25	0	MY3NJ1	10/15/2007		**19.03**	**15.63**	**157.84**	343.76 U	**45.96**	**15.94**	**951.69**	**158.81**	**10.36**	**65.47**	**33059.22**
M26	0	MY3NK5	10/09/2007		11.48 U	**14.51**	**394.53**	379.93 U	**62.69**	11.45 U	**1065.73**	**339.28**	6.06 U	**63.62**	**51567.47**
M26	1	MY3NJ0	10/15/2007		13.78 U	**14.07**	**290.85**	**526.83**	**80.47**	14.85 U	**867.77**	**314.27**	7.49 U	**53.6**	**46265.99**
MAD	0	MY3NR8	10/19/2007		**97.76**	**18.87**	**280.85**	**465.31**	44.06 U	**21.21**	**1046.76**	**211.69**	7.69 U	36.1 U	**60280.71**
MAD	1	MY3NS7	10/19/2007		**117.1**	13.82 U	**868.65**	**550.38**	**65.5**	16.22 U	**280.55**	63.6 U	8.23 U	31.19 U	**40505.99**

TABLE A-2
Soil Sample Results - XRF
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Buena Vista Disturbed														
MOA-1	0	MY3NQ8	10/18/2007	**1795.21**	**54.68**	237.92 U	**1006.23**	68.45 U	**134.17**	273.54 U	114.49 U	**47.26**	65.62 U	**82701.64**
MOA-1	1	MY3NR0	10/18/2007	**1316.63**	**428.82**	**220.3**	793.06 U	66.06 U	**1211.43**	**330.31**	99.35 U	**39.14**	53.21 U	**106488.6**
MOA-2	0	MY3NQ9	10/18/2007	**190.79**	**23.58**	**226.07**	402.16 U	**52.78**	**37.3**	163.11 U	**80.48**	7.97 U	33.57 U	**46134.21**
MOA-3	0	MY3NR2	10/18/2007	**1300.48**	34.58 U	170.85 U	637.62 U	59.6 U	**62.91**	235.43 U	88.35 U	**33.37**	50.45 U	**69937.95**
MSA	0	MY3NR3	10/19/2007	15.41 U	13.48 U	330.55 U	1232.1 U	**117.8**	13.71 U	**590.25**	**154.61**	8.22 U	**38.91**	**336872.4**
N20	0		10/22/2007	12.41 U	12.99 U	**194.78**	398.38 U	49 U	15.79 U	**949.24**	**108.18**	8.81 U	**83.75**	**37715.83**
N21	0		10/22/2007	**100.43**	**30.32**	**300.89**	**275.95**	**56.07**	14.34 U	**276.15**	**94.57**	7.49 U	35.87 U	**25481.82**
N22	0	MY3NX9	10/22/2007	**18.41**	9.84 U	**124.35**	266.61 U	**50.01**	12.33 U	**358.65**	**104.57**	6.86 U	**51.5**	**25571.67**
N23-1	0		10/18/2007	**10.79**	11.98 U	120.84 U	299.15 U	**45.3**	13.35 U	**403.85**	57.41 U	5.85 U	**55.71**	**24351.08**
N24	0		10/25/2007	**19.5**	13.68 U	**220.09**	618.46 U	**84.67**	17.03 U	**709.73**	**133.67**	8.24 U	**52.21**	**80719.8**
N25	0		10/25/2007	**34.02**	**14.46**	141.86 U	397.29 U	**52.33**	16.02 U	**314.76**	**83.35**	**11.67**	**73.08**	**36731.73**
O24-1	0	MY3NN8	10/18/2007	11.81 U	**15.44**	**143.13**	290.89 U	**45.18**	11.51 U	**408.41**	**90.72**	6.42 U	**52.56**	**26251.04**
O25	0		10/25/2007	10.78 U	**11.08**	140.97 U	**244.54**	**72.93**	13.57 U	**344.56**	**131.92**	6.48 U	**75.76**	**37883.89**
OCT-1	0	MY3NR5	10/19/2007	**298.29**	**12.58**	100.9 U	213.67 U	**43.22**	12 U	**137.4**	**70.82**	6.43 U	29.21 U	**15879.58**
OCT-1	1	MY3NS4	10/19/2007	**52.01**	**23.43**	**459.71**	489.79 U	**79.87**	15.87 U	192.33 U	**197.76**	8.72 U	38.1 U	**62210.88**
OCT-2	0	MY3NR6	10/19/2007	17.71 U	12.9 U	304.1 U	1073.04 U	65.18 U	14.64 U	**2467.69**	**172.82**	9.92 U	49.63 U	**246771.1**
OCT-3	0	MY3NR7	10/19/2007	**29.41**	11.81 U	154.94 U	394.65 U	52.1 U	14.66 U	**523.6**	**87.65**	**19.88**	**73.85**	**34282.01**
OPT	0	MY3NX7	10/20/2007	10.95 U	**22.49**	137.64 U	430.94 U	42.84 U	14.84 U	**1168.11**	**242.21**	**13.78**	**135.99**	**54294.76**
OPT	1	MY3NX2	10/20/2007	11.13 U	**14.55**	**163.67**	301.82 U	43.91 U	14.39 U	**595.93**	**166.22**	**11.79**	**166.33**	**25841.75**
P18	0		10/13/2007	**15.05**	13.93 U	**316.44**	453.8 U	**64.81**	15.89 U	**767.88**	**307.83**	7.35 U	**48.38**	**44415.68**
P19	0		10/22/2007	**28.25**	14.69 U	**269.68**	425.07 U	**65.44**	**33.05**	**916.97**	**210.19**	7.48 U	**73.78**	**42767.66**

TABLE A-2
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Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

					Sample Results and Project Goals are reported in mg/Kg										
					Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
				PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs:	23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Buena Vista Disturbed															
P20	0		10/22/2007		**30.48**	12.88 U	**210.64**	381.71 U	46.51 U	**15.29**	**710.66**	**171.77**	7.08 U	**78.1**	**39312.46**
P21	0		10/18/2007		10.4 U	**12.26**	**128.74**	234.07 U	**70.32**	**14.63**	**707.32**	**75.49**	5.89 U	**49.32**	**21673.24**
P22	0		10/18/2007		**20.15**	**11.65**	**140.77**	331.29 U	**41.88**	**13.35**	**586.77**	**135.07**	6.66 U	**65.62**	**34652.17**
P23	0	MY3NN9	10/18/2007		8.68 U	**11.27**	**168.5**	258.1 U	**29.55**	11 U	**726.15**	**109.22**	5.61 U	**62.16**	**25999.05**
P24	0		10/18/2007		10.04 U	**8.25**	**141.33**	214.78 U	41.06 U	12.65 U	**231.5**	**79.44**	6.47 U	**50.87**	**12547.23**
P25	0		10/25/2007		11.4 U	**12.51**	**112.13**	206.95 U	**44.99**	13.92 U	**188.75**	**111.96**	**8.28**	**181.79**	**12193.44**
P26	0		10/25/2007		10.99 U	**13.19**	**159.2**	255.51 U	**78.41**	**18.4**	**307.03**	**118.69**	6.8 U	**255.04**	**16816.99**
PAR	0	MY3NS0	10/19/2007		**200.93**	**24.28**	**565.98**	682.97 U	**69.13**	**22.58**	**988.34**	**259.43**	10.09 U	51.01 U	**87903.78**
PAR	1	MY3NS3	10/19/2007		**556.71**	20.53 U	**225.31**	501.42 U	**55.85**	**37.95**	**362.77**	**95.97**	11.09 U	47.28 U	**53426.95**
PAS	0	MY3NR9	10/19/2007		**61.39**	11.53 U	**217.71**	305.56 U	42.01 U	13.46 U	**805.27**	**84.25**	7.7 U	32.71 U	**28070.29**
PAS	1	MY3NS5	10/19/2007		**35.05**	13.81 U	**382.74**	534.15 U	**57.42**	15.65 U	**1387.54**	**387.1**	8.25 U	**68.64**	**69853.55**
Q17	0		10/13/2007		10.39 U	**17**	113.24 U	180.45 U	41.98 U	11.68 U	**119.38**	**76.52**	7.95 U	**144.75**	**9206.53**
Q18	0		10/22/2007		12.66 U	10.96 U	135.37 U	320.94 U	**45.33**	13.31 U	**647.17**	**75.85**	6.15 U	**45.24**	**30013.92**
Q19	0		10/22/2007		**8.44**	10.52 U	**217.44**	319.82 U	**41.54**	**11.17**	**2539.33**	**135.79**	5.38 U	**50.02**	**35161.07**
Q20	0		10/20/2007		11.43 U	**23.46**	**160.05**	372.37 U	38.85 U	13.8 U	**1009.6**	**236.44**	**9.13**	**121.8**	**49532.87**
Q21	0	MY3NY0	10/22/2007		**21.23**	11.92 U	**308.7**	331.02 U	**105.27**	13.68 U	**1579.87**	**1171.84**	6.96 U	**435.06**	**33229.95**
Q22	0		10/22/2007		12.83 U	11.76 U	124.09 U	317.64 U	43.73 U	**15.16**	**464.92**	**64.99**	6.4 U	**67.98**	**29299.33**
Q23	0		10/11/2007		11.69 U	12.04 U	**229.06**	351.55 U	**51.17**	13.49 U	**760.47**	**102.43**	7.78 U	**72.68**	**31004.15**
Q24	0		10/25/2007		14.56 U	**10.9**	**163.89**	428.23 U	**72.1**	16.47 U	**463.76**	**101.15**	8.99 U	**46.11**	**36451.34**
Q25	0	MY3P02	10/25/2007		16.61 U	15.23 U	144.09 U	259.74 U	60.24 U	20.85 U	**245.56**	**133.36**	8.93 U	**103.8**	**12933.91**
Q26	0		10/25/2007		11.57 U	**21.27**	**258.11**	236.78 U	**51.88**	15.09 U	**221.46**	**163.16**	7.75 U	**190.35**	**15789.28**

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Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

					Sample Results and Project Goals are reported in mg/Kg										
					Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
				PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs:	23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Buena Vista Disturbed															
R14	0		10/26/2007		**14.79**	11.4 U	**386.67**	508.37 U	**112.41**	15.45 U	**1620.2**	**303.27**	7.73 U	**48.17**	**73085.57**
R15	0		10/13/2007		8.93 U	**15.57**	**159.24**	191.99 U	**48.88**	**12.74**	**179.19**	**121.95**	5.63 U	**164.56**	**15853.05**
R16	0	MY3NY4	10/22/2007		**11.68**	**11.71**	**180.31**	286.25 U	**46.26**	12.83 U	**1065.38**	**195.41**	5.93 U	**65.39**	**32552.42**
R17	0	MY3NY5	10/22/2007		**45.84**	**16.99**	**993.93**	443.48 U	**83.16**	**16.64**	**1041.11**	**745.34**	8.16 U	**65.66**	**62458.58**
R18	0		10/22/2007		11.85 U	10.82 U	**136.67**	291.01 U	**37.92**	12.44 U	**572.06**	**169.05**	6.14 U	**56.88**	**25488.65**
R19	0		10/22/2007		**35.51**	**14.88**	**142.65**	244.48 U	37.4 U	**12.58**	**408.43**	**112.06**	6.09 U	**48.34**	**22439.7**
R20	0	MY3NY6	10/22/2007		**35.79**	**14.55**	**143.98**	327.44 U	**62.56**	**17.11**	**473**	**149.94**	9.57 U	**108.59**	**29674.41**
R21	0		10/22/2007		**16.63**	**15.7**	101.12 U	204.21 U	**55.5**	**17.38**	**422.35**	**105.7**	6.57 U	**109.17**	**12652.78**
R22	0		10/22/2007		12.46 U	**14.56**	**137.21**	334.11 U	**53.75**	**16**	**631.55**	**139.76**	6.64 U	**70.75**	**32371.1**
R23	0		10/22/2007		10.1 U	9.72 U	**93.05**	222.24 U	**59.47**	11.41 U	**459.13**	**65.33**	5.23 U	**69.68**	**20535.24**
R24	0		10/25/2007		8.69 U	8.55 U	72.55 U	151.52 U	**46.38**	**11.25**	88.49 U	39.52 U	4.81 U	**97.7**	**9842.37**
R25	0		10/25/2007		12.66 U	**12.6**	**179.95**	**480.75**	**73.1**	13.14 U	**239.29**	**117.93**	7.67 U	**149.12**	**25772.23**
R26	0		10/25/2007		12.63 U	14 U	**153.46**	378.06 U	**52.33**	16.19 U	**421.52**	**108.68**	8.43 U	**140.23**	**29787.46**
RCC-1	0	MY3NP6	10/18/2007		**21.35**	**16.16**	**472.53**	402.98 U	**36.33**	16.22 U	**912.55**	**259**	6.92 U	**58.01**	**40793.16**
RCC-1	1	MY3NP7	10/18/2007		13.06 U	**17.39**	**187.1**	295.08 U	45.87 U	13.81 U	**493.57**	**122.54**	6.74 U	**44.62**	**24007.99**
RCC-2	0	MY3NP9	10/18/2007		**21.53**	**13.54**	**282.67**	392.06 U	**50.03**	13.11 U	**792.37**	**199.07**	6.46 U	**36.8**	**56634.5**
RCC-2	1	MY3NQ0	10/18/2007		13.35 U	12.95 U	**344.61**	417.48 U	**58.9**	**16.63**	**967.27**	**187.79**	7.01 U	**59.57**	**42932.98**
RPB	0	MY3NQ2	10/18/2007		21.9 U	**17.28**	383.43 U	1512.73 U	69.39 U	17.1 U	**1716.91**	**233.05**	12.15 U	66.1 U	**324567.8**
RPB	1	MY3NQ3	10/18/2007		**14.23**	**15.5**	178.03 U	497.92 U	**56.78**	16.27 U	**684**	**180.51**	8.27 U	**43.19**	**60291.49**
S18	0		10/22/2007		**14.8**	12.55 U	138.69 U	378.75 U	**52.78**	14.6 U	**735**	**96.12**	6.39 U	**35.25**	**39413.58**
S19	0		10/22/2007		**14.51**	**13.87**	**288.62**	348.17 U	**73.47**	13.43 U	**763.22**	**166.04**	6.42 U	**48.58**	**42246.81**

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Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

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				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Buena Vista Disturbed														
S20	0	MY3NY3	10/22/2007	9.94 U	**9.7**	**113.5**	**220.87**	**41.4**	**10.79**	**791.16**	**82.21**	5.67 U	**58.54**	**21779.1**
S22	0		10/22/2007	10.27 U	**15.03**	**85.86**	185.67 U	30.9 U	**11.66**	**147.87**	40.25 U	4.61 U	22.2 U	**12535.52**
S23	0		10/22/2007	10.82 U	11.37 U	**234.47**	296.68 U	40.37 U	**15.66**	**575.42**	**140.14**	6.02 U	**67.25**	**28495.33**
S24	0		10/11/2007	27.75 U	18.38 U	219.88 U	406.45 U	94.1 U	**20.12**	**382.34**	**68.71**	13.41 U	**110.24**	**21041.91**
SB1-1	0	MY3NH9	10/08/2007	13.97 U	12.76 U	**198.31**	392.36 U	53.15 U	15.05 U	**544.86**	**124.47**	8.64 U	**63.81**	**29510.69**
SB1-1	1	MY3NQ1	10/18/2007	**35.38**	14.64 U	**251.51**	578.09 U	62.79 U	16.83 U	**1050.96**	**111.6**	9.63 U	**56.81**	**61407.97**
SB1-2	0	MY3NG5	10/09/2007	**24.51**	18.09 U	**257.66**	506.32 U	70.66 U	21.65 U	**698.42**	**111.73**	10.29 U	53 U	**42328.49**
SB3	0	MY3NQ4	10/18/2007	10.66 U	**11.11**	**235.81**	**432.7**	**61.16**	13.28 U	**681.7**	**205.08**	6.36 U	**39.69**	**36245.52**
SB3	1	MY3NQ5	10/18/2007	**13.01**	11 U	**224.51**	**264.26**	**48.11**	13.56 U	**338.32**	**156.91**	7.22 U	29.9 U	**18744.98**
T23	0		10/22/2007	10.8 U	**12.06**	**193.65**	376.1 U	**60.05**	**12.94**	**787.74**	**206.37**	7.01 U	**78.29**	**37260**
			Mean	38	15.2	241	395	59.6	20.3	737	174	9.9	89.1	44348
			Standard Deviation	55.6	4.34	131	152	15.9	14.9	482	146	1.48	73.2	45621
			Number of detects / Total measurements	45/81	47/81	65/81	9/81	63/81	35/81	79/81	78/81	4/81	75/81	81/81

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PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Buena Vista Undisturbed														
KUP-1	0		10/15/2007	13.55 U	**21.09**	**492.07**	417.19 U	50.03 U	16.17 U	**798.16**	**207.34**	6.91 U	**45.79**	**41701.83**
KUP-2	0		10/15/2007	14.66 U	15.2 U	**815.83**	616.82 U	**85.66**	15.93 U	**1492.92**	**343.02**	8.22 U	**216.25**	**80185.59**
L27	0		10/09/2007	14.33 U	13.83 U	**292.38**	624.92 U	**86.28**	15.52 U	**1166.32**	**162.16**	7.59 U	**62.39**	**76940.79**
O27	0	MY3NK9	10/15/2007	10.83 U	12.1 U	**202.58**	327.6 U	44.83 U	15.02 U	**1072.56**	**170.21**	8.29 U	**53.71**	**29087.39**
O27	1	MY3NJ4	10/15/2007	12.64 U	**19.79**	141.54 U	322.12 U	**48.04**	13.13 U	**853.05**	**142.17**	7.91 U	**36.9**	**27571.12**
O29	0		10/15/2007	12.67 U	12.02 U	**317.62**	523.8 U	**66.46**	13.29 U	**807.82**	**105**	8.31 U	**49.38**	**72277.66**
P27	0		10/15/2007	8.74 U	10.41 U	**148.86**	203.18 U	**58.52**	**13.25**	**284.88**	**114.25**	5.22 U	**197.6**	**14771.31**
R27	0	MY3PB9	10/15/2007	9.41 U	**13.64**	103.97 U	206.72 U	**49.9**	13.17 U	**188.06**	**128.24**	6.03 U	**168.55**	**13247.31**
R27	1	MY3NJ6	10/15/2007	10.78 U	**13.56**	112.28 U	193.25 U	**85.34**	14.49 U	**139.79**	**103.75**	6.55 U	**145.81**	**11617.73**
S25	0		10/11/2007	16.07 U	15.52 U	**265.86**	506.46 U	**54.38**	**17.22**	**722.52**	**160.4**	10.65 U	**68.17**	**43836.6**
S29	0	MY3NK7	10/11/2007	10.6 U	**18.65**	**193.39**	242.55 U	**71.87**	14.64 U	**237.2**	**130.64**	7.14 U	**190.54**	**17087.78**
S29	1	MY3NL9	10/16/2007	10.04 U	**11.77**	**129.36**	194.58 U	**50.17**	13.08 U	**169.28**	**108.42**	6.4 U	**148.84**	**11655.87**
S31	0		10/11/2007	10.46 U	10.14 U	116.93 U	194.11 U	**66.23**	13.59 U	**220.51**	**93.35**	6.97 U	**150.51**	**10372.92**
T22	0	MY3NL8	10/16/2007	10.86 U	11.26 U	**162.35**	321.7 U	**42.6**	13.7 U	**630.78**	**182.29**	6.97 U	**59.22**	**30275.98**
T22	1	MY3NM0	10/16/2007	10.83 U	**11.96**	**290.76**	**331.26**	**64.42**	12.7 U	**402.64**	**132.26**	7.25 U	**43.24**	**24717.36**
T27	0		10/11/2007	15.02 U	15.45 U	154.74 U	365.27 U	**74.97**	18.77 U	**563.05**	**157.34**	8.6 U	**137.5**	**30872.25**
U24	0		10/12/2007	9.86 U	9.87 U	**128.23**	273.41 U	**48.1**	11.83 U	**862.29**	**193.55**	5.48 U	**54.27**	**27735.49**
U26	0	MY3NK3	10/11/2007	12.42 U	11.53 U	**260.85**	354.6 U	**60.25**	14.89 U	**655.18**	**223.24**	6.83 U	**98.3**	**34245.82**
U26	1	MY3NJ7	10/15/2007	11.4 U	**12.29**	**297.47**	383.35 U	**67.67**	14.47 U	**790.85**	**267.54**	6.26 U	**69.77**	**40021.31**
U29	0		10/11/2007	11.91 U	**17.37**	**201.32**	324.86 U	**50.2**	13.43 U	**788.75**	**233.88**	7.16 U	**91.93**	**26880.34**
U31	0	MY3NK2	10/11/2007	9.94 U	11.1 U	**167.73**	301.9 U	**56.62**	13.05 U	**928.92**	**170.45**	5.8 U	**100.42**	**30989.43**
U31	1	MY3NK0	10/15/2007	11.64 U	**14.38**	**238.63**	356.86 U	**48.79**	13.27 U	**765.88**	**182.91**	6.67 U	**62.62**	**33090.65**

TABLE A-2
Soil Sample Results - XRF
Phase 2 Addendum to the Sampling and Analysis Plan
Klau and Buena Vista Mines

PRELIMINARY DRAFT DATE: 3/7/2008

				Sample Results and Project Goals are reported in mg/Kg										
				Mercury	Arsenic	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron
			PGs:	0.174	0.062	0.4	13	28	11	220	38	1	50	23000
Location	Depth	CLP ID	Sample Date	PRGs: 23	0.39	210	NA	3100	150	1800	1600	390	23000	23000
Buena Vista Undisturbed														
V28	0		10/26/2007	11.72 U	**14.33**	119.94 U	246.97 U	39.94 U	12.17 U	**405.7**	**102.44**	6.42 U	**116.4**	**18930.55**
W23	0		10/12/2007	11.22 U	13.15 U	**443.27**	407.89 U	**64.99**	16.59 U	**970.73**	**326.77**	7.89 U	**64.59**	**43506.25**
W27	0		10/12/2007	12.7 U	13.75 U	134.23 U	299.23 U	44.55 U	**24.08**	**831.54**	**88.04**	6.77 U	**67.22**	**20842.46**
W29	0		10/11/2007	14.55 U	14.68 U	**281.77**	**445.86**	59.95 U	18.35 U	**940.13**	**220.68**	9.09 U	**113.6**	**35529.3**
X22	0	MY3NJ8	10/15/2007	11.19 U	12.57 U	**234.62**	390 U	**50.47**	14.68 U	**965.31**	**225.68**	6.82 U	**63.82**	**38674.08**
X22	1	MY3NJ9	10/15/2007	12.94 U	14.75 U	**226.18**	**551.32**	**81.48**	16.71 U	**2391.49**	**204.61**	7.98 U	**76.3**	**55270**
X30	0	MY3P08	10/26/2007	11.59 U	12.76 U	**336.13**	420.02 U	51.79 U	**18.27**	**808.38**	**420.72**	6.63 U	**55.81**	**42724.62**
X30	1	MY3P09	10/26/2007	11.49 U	10.7 U	**413.23**	470.05 U	**49.07**	11.66 U	**1116.7**	**539.87**	6.8 U	**36.34**	**57724.75**
Y29	0		10/12/2007	13.74 U	13.84 U	**214.43**	427.09 U	**128.24**	**17.05**	**3669.94**	**88.93**	7.57 U	**77.82**	**43385.43**
Z30	0		10/12/2007	11.44 U	13.11 U	111.78 U	**252.31**	39.85 U	**29.23**	**1341.36**	**58.41**	7.1 U	**69.57**	**15158.33**
			Mean		14.8	247	395	63.5	19.8	856	181		91	32634
			Standard Deviation		2.85	83.7	130	18.6	5.77	693	102		45.9	16974
			Number of detects / Total measurements	0/30	10/30	22/30	4/30	24/30	6/30	30/30	30/30	0/30	30/30	30/30
			Overall Mean	17.2	419	535	60.9	44969	41.3	986	356	19.3	11	74.8
			Overall Standard Deviation	15.2	159	1222	15.8	40426	59.3	999	793	10.9	2.86	50.1
			Overall Number of Detects / Total measurements	107/241	33/241	201/241	184/241	241/241	108/241	236/241	231/241	102/241	5/241	215/241

Notes:

Detected results are shown in bold.

PGs	Project Goals
PRGs	Residential Soil PRGs
mg/Kg	milligrams per kilogram
NA	Not applicable
J	Estimated value
U	not detected at or above the listed reporting limit.

Regional Proposed Sample Locations
(See Base map for legend)
0 2,000 4,000
Feet

South Fork Las Tablas Creek
Cypress Mountain Dr.
North Klau Undisturbed Area
West Klau Undisturbed Area
Klau Mine
Buena Vista Mine
Buena Vista Undisturbed Area
Sediment Basin No. 1
Lower Containment Pond
Regraded Clay Cap
Upper Containment Pond
Sediment Basin No. 3
Old Retort
Klau Mine Rd
North Fork of Las Tablas Creek
Rotary Furnace Area
Sediment Basin No. 2
Mill Buildings
Mahoney Tunnel Adit
No. 2 Tunnel Adit
No. 4 Tunnel Adit
No. 3 Tunnel Adit
Western Retort
Western Mill Area
West Klau Pond (Dry)
Klau Pond
Furnace and Retort
Klau Repository
Sediment Basin No. 4
Richard's Development
No. 2 Tunnel Adit
Waste Rock Pile
No. 1 Tunnel Adit
Blanchini Tunnel Adit
Leonard Tunnel Adit
Wright Tunnel Adit
Carson Tunnel Adit
Morales Tunnel Adit
Buena Vista Repository
Main Overburden Area
Open Pit
Klau Branch
Klau Branch (Dry)
BLM Reservoir
Santa Cruz Millsite Fork
Camp Natoma
RD4 ND(14.5)
RD5 ND(14.22)
B15 ND(12.99)
C14 ND(12.2)

DRAFT

LEGEND

N11
16.04
Field XRF Measurement Location, identifaction and Mercury reading in milligrams per kilogram or parts per million. ND is not detected at limit in parentheses.

Sample Collected for Laboratory Analysis

Adit

Water Flow Direction

Approximate Boundary of Disturbed Area

Study Area

Klau and Buena Vista Mine Parcel Boundaries

N
0 150 300
Feet

Notes:
1. Field XRF Measurments recorded for multiple metals only mercury results are posted
2. XRF Measurements taken September 26 through October 30 ,2007.
3. Refer to Sampling and Analysis Plan for Phase 1 Field Investigation of Klau Buena Vista Mine, San Luis Obispo, County, California dated October 2007.
4. Samples collected include soil, sediment, and water.
5. Biological sample locations are identified as midpoint of area from which biological samples were collected.

Data sources:
1. Tetra Tech, "Environmental Assessment of the Buena Vista and Klau Mines, San Luis Obispo County, California," June, 1998.
2. Aerial Source: National Agricultural Imagery Program August, 2005

FIGURE A-1
XRF FIELD MEASUREMENTS OF MERCURY IN SURFACE SOIL

KLAU AND BUENA VISTA MINES
SAN LUIS OBISPO COUNTY, CALIFORNIA

CH2MHILL

Appendix B
Regional Sample Control Center Request for Analyses - Addendum

REGION 9 SAMPLE COORDINATION CENTER (RSCC)
SUPERFUND ANALYTICAL REQUEST FORM

Section 1

Project Name: Klau Buena Vista Mines Superfund Site Remedial Investigation (Phase 1)		
Site Name: Klau Buena Vista Mines	**SS ID:** CA1141190578	**OU:**
[X**] RI/FS/RA [ ] Enforcement [ ] PA/SI [ ] Emergency Response [ ] Fed. Facilities**		
Proposed Sampling Dates: April 2008		
EPA Project Manager: Jim Sickles	**Mail Code:** SFD-8-1	

Section 2

Sampling Organization (if other than above): CH2M HILL	
Mailing Address: 155 Grand Avenue, Oakland California94612	
Project Manager: Diane Sarmiento	**E-mail:** dsarmie1@ch2m.com
Office Phone: (510) 587-7559	**Office Fax:**
Sampler: Bill Frolich **(if different from above):**	**E-mail:** bfrolich@ch2m.com
Office Phone: (510) 251-2888 x7718	**Mobile Phone:** (925)209-0881

Section 3

Title of QA plan or addendum to existing plan under which this sampling event will occur:
1) Phase 2 Addendum to the Sampling and Analysis Plan
EPA Quality Assurance Office DCN (if available):

In compliance with EPA Order 5360.1, the EPA Region 9 Quality Management Plan, Section 1.1.2, states that, "An appropriate QA planning document … will be developed and approved for each environmental data collection activity prior to the initiation of data collection."

Section 4

Type of Data Deliverable	Data Distribution (include e-mail address if appropriate)
Hard copy report	Vikki Taylor – 2 copies (CH2M HILL, 155 Grand Avenue, Suite 1000, Oakland, CA 94612, 510-587-7782)
Electronic report copy	1. Jim Sickles (Sickles.Jim@epa.gov) 2. Bill Frohlich (bill.frohlich@ch2m.com) 3. Vikki Taylor (victoria.taylor@ch2m.com)
Electronic Data Deliverable (EDD) for R9 Lab Results*	4. Jim Sickles (Sickles.Jim@epa.gov) 2. Bill Frohlich(bill.frohlich@ch2m.com) 2. Vikki Taylor (victoria.taylor@ch2m.com)

Section 5
(Fill in table or attach copy of analytical description from Sampling and Analysis Plan)

Analysis (method, CLP SOW No., or R9 Lab SOP No.)	Matrix (Sample Type)	No. of Samples	TAT	Review/ Validation
Total Metals plus Boron, CLP SOW	Sediment	62	24 hours	Tier 1A/1B 90% Tier 3 10%
Methyl Mercury, EPA Method 1630-modified	Sediment	60	21 days	Tier 1A/1B 90% Tier 3 10%
Total Organic Carbon, EPA Method 9060	Sediment	21	21 days	Tier 1A/1B 100%
Grain Size, ASTM D422/C136	Sediment	21	21 days	None
pH, EPA Method 9045D	Sediment	60	21 days	None
Moisture Content, E160.3	Tissue	41	21 days	None
Total Metals plus Boron, EPA SOW	Wildfowl eggs	3	21 days	Tier 1A/1B 90% Tier 3 10%
Methyl Mercury, EPA Method 1630 Modified	Wildfowl eggs	3	21 days	Tier 1A/1B 90% Tier 3 10%
Total Metals plus Boron, EPA SOW	Aquatic Invertebrates	15	21 days	Tier 1A/1B 90% Tier 3 10%
Methyl Mercury, EPA Method 1630 Modified	Aquatic Invertebrates	15	21 days	Tier 1A/1B 90% Tier 3 10%

Analysis (method, CLP SOW No., or R9 Lab SOP No.)	Matrix (Sample Type)	No. of Samples	TAT	Review/ Validation
Laboratory Composite	Aquatic Invertebrates	15	21 days	
Preparation and dissection of muscle aliquot	Biota Fish, Large, Muscle Only	1	21 days	Tier 1A/1B 90% Tier 3 10%
Total Metals plus Boron, EPA Method 6010B/6020	Biota Fish, Large, Muscle Only	1	21 days	Tier 1A/1B 90% Tier 3 10%
Methyl Mercury, EPA Method 1630 Modified	Biota Fish, Large, Muscle Only	1	21 days	Tier 1A/1B 100%
Total Metals plus Boron, EPA Method 6010B/6020	Biota Fish, Small	2	21 days	Tier 1A/1B 90% Tier 3 10%
Methyl Mercury, EPA Method 1630 Modified	Biota Fish, Small	2	21 days	Tier 1A/1B 100%
Laboratory Composite	Biota Fish, Small	2	21 days	Tier 1A/1B 100%
Laboratory Composite	Grass	20	21 days	
Total Metals plus Boron, EPA Method 6010B/6020	Grass	20	21 days	Tier 1A/1B 90% Tier 3 10%
Methyl Mercury, EPA Method 1630 Modified	Grass	20	21 days	Tier 1A/1B 90% Tier 3 10%
Total metals plus Boron, CLP SOW	Water	115	21 days	Tier 1A/1B 90% Tier 3 10%
Filtered Metals plus Boron, CLP SOW	Water	50	21 days	Tier 1A/1B 90% Tier 3 10%
Trace Mercury, EPA Method 1631	Water	102	21 days	Tier 1A/1B 90% Tier 3 10%
Methyl Mercury, Filtered, EPA Method 1630	Water	62	21 days	Tier 1A/1B 90% Tier 3 10%
Total Suspended Solids, EPA Method 160.2	Water	40	21 days	Tier 1A/1B 100%
Sulfide, EPA Method 376.1	Water	13	21 days	Tier 1A/1B 100%
Anions, EPA Method 300	Water	13	21 days	Tier 1A/1B 100%

Analysis (method, CLP SOW No., or R9 Lab SOP No.)	Matrix (Sample Type)	No. of Samples	TAT	Review/ Validation
Hardness, EPA Method 130.2	Water	13	21 days	Tier 1A/1B 100%

Notes:
1) Above sample numbers include estimated numbers of trip blanks, field duplicates, source blanks, and ambient blanks.

TABLE 1
Required Reporting Limits for Aqueous and Solid Samples and Project Concentration Goals
Klau Buena Vista Mine Superfund Site Sampling and Analysis Plan

Analyte	Method	Units	Water	Project Goals[1]	Units	Soil/Sediment/Biota*	Project Goals[2]
Aluminum	ILM05.3/ILM05.4	µg/L	80	87	mg/kg	20	50
Antimony	ILM05.3/ILM05.4	µg/L	2	5.6	mg/kg	0.015	0.027
Arsenic	ILM05.3/ILM05.4	µg/L	1	0.018	mg/kg	0.03	0.062
Barium	ILM05.3/ILM05.4	µg/L	4	4	mg/kg	20	330
Beryllium	ILM05.3/ILM05.4	µg/L	0.5	0.66	mg/kg	0.5	10
Boron	ILM05.3/ILM05.4 (additional compound)	µg/L	1	1.6	mg/kg	0.25	0.5
Cadmium	ILM05.3/ILM05.4	µg/L	0.2	0.25	mg/kg	0.15	0.36
Calcium**	ILM05.3/ILM05.4	µg/L	5000	NA	mg/kg	500	NA
Chromium, total	ILM05.3/ILM05.4	µg/L	10	11	mg/kg	0.25	0.4
Cobalt	ILM05.3/ILM05.4	µg/L	20	23	mg/kg	5	13
Copper	ILM05.3/ILM05.4	µg/L	2	9	mg/kg	2.5	28
Iron**	ILM05.3/ILM05.4	µg/L	100	158	mg/kg	10	23,000
Lead	ILM05.3/ILM05.4	µg/L	1	2.5	mg/kg	1	11
Magnesium**	ILM05.3/ILM05.4	µg/L	5000	NA	mg/kg	500	NA
Manganese	ILM05.3/ILM05.4	µg/L	15	50	mg/kg	1.5	220
Nickel	ILM05.3/ILM05.4	µg/L	40	52	mg/kg	4	38
Potassium**	ILM05.3/ILM05.4	µg/L	5000	NA	mg/kg	500	NA
Selenium	ILM05.3/ILM05.4	µg/L	1	5	mg/kg	0.5	1
Silver	ILM05.3/ILM05.4	µg/L	0.25	0.36	mg/kg	1	4.2
Sodium**	ILM05.3/ILM05.4	µg/L	5000	NA	mg/kg	500	NA
Thallium	ILM05.3/ILM05.4	µg/L	0.2	0.24	mg/kg	0.5	1
Vanadium	ILM05.3/ILM05.4	µg/L	15	20	mg/kg	1	2

TABLE 1
Required Reporting Limits for Aqueous and Solid Samples and Project Concentration Goals
Klau Buena Vista Mine Superfund Site Sampling and Analysis Plan

Analyte	Method	Units	Water	Project Goals[1]	Units	Soil/Sediment/Biota*	Project Goals[2]
Zinc	ILM05.3/ILM05.4	µg/L	60	120	mg/kg	6	50
Mercury	ILM05.3/ILM05.4	µg/L	0.05	0.05	mg/kg	0.1	0.174/0.486/0.37[3]
Methyl mercury	EPA Method 1630 [4]	ng/L	0.03	0.03	ug/kg	0.02	6,100
Trace mercury	EPA Method 1631	ng/L	0.5	50	--	NA	NA
Total Hardness	EPA Method 130.2	mg/L	10	NA	--	NA	NA
Total dissolved solids	EPA Method 160.1	mg/L	5	250	--	NA	NA
Bromide	EPA Method 300/9056	mg/L	1	NA	--	NA	NA
Chloride	EPA Method 300/9056	mg/L	1	NA	--	NA	NA
Fluoride	EPA Method 300/9065	mg/L	0.5	NA	--	NA	NA
Nitrate	EPA Method 300/9056	mg/L	0.05	10	--	NA	NA
Sulfate	EPA Method 300/9056	mg/L	5	250	--	NA	NA
Sulfide	EPA Method 376.1/9030	mg/L	0.25	NA	--	NA	NA
Total organic carbon	EPA Method 415.1(2)/9060A	mg/L	1	NA	--	200	NA

Notes:

[1] Project Goals based on ambient water quality criteria for protection of human health or freshwater aquatic life, which ever value is lower from California Toxics Rule and EPA National Recommended Ambient Water Quality Criteria.

[2] EPA 2004 Preliminary Remediation Goals (PRGs) for Residential Soil (Cal-modified PRG for total chromium and arsenic)

[3] From Las Tablas Creek and Lake Nacimiento Total Maximum Daily Load for Mercury, Central Coast Water Quality Control Board, Draft December 25, 2002.

[4] Modified for soil, sediment, and biota

NA = not applicable

*Biota refers to all biota including fish, invertebrates, and vegetation.

** Analytes not required for biotae analyses.

Appendix C
Standard Operating Procedures—Addendum

Standard Operating Procedure 22: Bird Egg Sampling Procedure

Introduction

Avian eggs are a common sample matrix for contaminants analysis. An accurate analysis depends upon getting the egg contents from the shell to a clean sample jar without introducing other sources of contamination.

Materials and Equipment

1) GPS unit
2) permits
3) field data sheets, writing instruments (pencils/pens/permanent markers)
4) padded egg collection boxes (hard-sided container, e.g. egg cartons, Tupperware or tackle box, with foam padding)

Procedures

1) Collected eggs should be whole and not cracked. Depending upon your sampling scheme, you may collect fresh eggs or eggs with well-developed embryos. Eggs with late-stage embryos can be recognized at time of collection using egg floatation methods (Custer et al. 1992), collecting from unfinished clutches, etc.), or you may target addled eggs (eggs that failed to hatch), or all of these types of eggs. The best eggs for contaminants analysis are not cracked, since cracking increases variation in percent moisture, and may lead to leakage or contamination of the contents. Eggs with well-developed embryos can be examined for gross abnormalities and malpositions of the embryo.
2) A preformatted field data sheet will be filled out that will include a unique nest/egg identification code, location (using GPS coordinates for the nest), date, number of eggs in the clutch, and initial estimation of incubation stage.
3) In the field, mark eggs with unique identification code, date, and number of eggs in the clutch and place in egg container.
4) Transport to lab in hard container with sufficient padding.
5) Refrigerate eggs until opened, ideally no longer than seven days.

References

Custer, T.W., G.W. Pendleton, and R.W. Roach. 1992. Determination of hatching date for eggs of black-crowned night-heron, snowy egrets, and great egrets. J. Field. Ornithol. 63:145-154.

Appendix D
Laboratory Data Quality Indicator Tables for TSS Analysis

TOTAL SUSPENDED SOLIDS (TSS)
EPA Method 160.2 (Gravimetric, Dried at 103-105EC)

Table 1. Summary of Contract Required Detection Limits, Holding Times, and Preservation for Total Suspended Solids (TSS)

Analytical Parameter	**Contract Required Detection Limit (CRDL)**	**Technical and Contract Holding Times**	**Preservation**
Total Suspended Solids (TSS)	10 mg/L	Technical: 7 days from collection; Contract: 5 days from receipt at laboratory	Cool to 4EC ±2EC

Follow the procedure outlined in EPA method 160.2 for the analysis of samples for TSS.

Weigh solid residue to a constant weight, defined as two consecutive weight measurements differing by less than 0.5 mg, or less than 4%, whichever is smaller.

Data Calculations and Reporting Units:

Calculate the sample results according to Section 8 of EPA Method 160.2.

Report sample results in concentration units of milligram per liter (mg/L) as total suspended solids. Report TSS concentrations that are less than 100 mg/L to 2 significant figures, and TSS concentrations that are greater than or equal to 100 mg/L to 3 significant figures.

For rounding results, adhere to the following rules:

a) If the number following those to be retained is less than 5, round down;
b) If the number following those to be retained is greater than 5, round up; or
c) If the number following the last digit to be retained is equal to 5, round down if the digit is even, or round up if the digit is odd.

All records of analysis and calculations must be legible and sufficient to recalculate all sample concentrations and QC results. Include an example calculation in the data package.

Table 2. Summary of Internal Quality Control Procedures for Total Suspended Solids (TSS) by EPA 160.2

QC Element	Frequency	Acceptance Criteria	Corrective Action
Analytical Balance Check: Weights of 100 mg, 1 g, and 100 g	Daily	Difference < 0.5 mg	1. Identify and document problem 2. Verify before sample analysis
Method Blank (MB)	One per Batch or SDG[a] (1 per 20 samples minimum)	< CRDL	1. If lowest sample concentration is more than 10X the blank conc., no action 2. If samples are non-detected, no action 3. If detected sample concentrations are less than 10X blank conc., all associated samples must be prepared again with another method blank and reanalyzed
Duplicate Sample (DUP)	One per batch or SDG (1 per 20 samples minimum)	RPD <20% for samples >5X CRDL; ± CRDL for samples <5X CRDL	1. Flag associated data with an "*"
One set (two concentration levels) mineral reference samples	One set per batch or SDG (1 set per 20 samples minimum)	± 15% from expected concentration	1. Terminate analysis 2. Identify, document, and correct the problem 3. Reanalyze all associated samples

[a] SDG - Sample Delivery Group - each case of field samples received; or each 20 field samples within a case; or each 14 calendar day period during which field samples in a case are received.

Use sample aliquots of 100 mL. If the weight of captured residue is less than 1.0 mg, increase the sample

volume (up to 200 mL) to provide at least 1.0 mg of residue and repeat the analysis.