REPORT

ENGINEERING EVALUATION / COST ANALYSIS
ANDERSON CALHOUN WORK GROUP
ANDERSON CALHOUN MINE
COLVILLE, WASHINGTON

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EXECUTIVE SUMMARY

This Engineering Evaluation/Cost Analysis (EE/CA) addresses soil and sediment contamination identified at the Anderson-Calhoun Mine/Mill Site (Site), Stevens County. Washington. The purpose of the EE/CA is to summarize the nature and extent of contamination associated with the site, and to evaluate alternatives for the purpose of selecting an appropriate response action to address such contamination.

The removal action described in this EE/CA will be conducted pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (CERCLA). This EE/CA has been prepared in accordance with and in a manner consistent with the National Contingency Plan (NCP) and the U.S. Environmental Protection Agency's (EPA) the *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA* (EPA, 1993).

This EE/CA was prepared pursuant to an Administrative Order of Consent (AOC) No. 10-2004-0076 (5 August 2004) between the Anderson-Calhoun Site Work Group (Work Group) and the United States Environmental Protection Agency (EPA). The Work Group consists of Combustion Engineering, Blue Tee Corp., and the Goldfield Corporation (hereinafter collectively referred to as the Respondents).

The Site is located in northeast Washington State approximately 30 miles northeast of Colville. The entire Site is approximately 200 acres; the area affected by former operations is approximately 92 acres. The Site is the location of former mineral exploration, mining, and milling activities that were conducted between 1910 and the early 1980s. Historic mining-related features at the Site include two small open pits used to mine zinc ores, the remains of a flotation mill used to process zinc and barite ores, a tailings impoundment used to contain the residues from the processing of zinc and barite ores, and associated mining and milling infrastructure. The mill has generally been abandoned since the barite processing ended in the early 1980s.

The goal of this EE/CA is to effectively address the mine waste related contamination associated with former mining and milling activities in soil and sediment at the Site, and to reduce the potential for this affected media to act as a source to surface water and ground water, in a manner that is protective of human health and the environment and to attain applicable or relevant and appropriate requirements (ARARs) to the extent practicable considering the exigencies of the situation and the scope of the removal.

The Site characterization information, and identification and analyses of removal action alternatives presented in this EE/CA are based both on the findings or previous investigations and reports conducted at the Site performed by others and the site-specific investigations performed by the Respondents.

The potential adverse human health effects attributable to the Site soils and sediments could occur to the following human receptors from specific source materials and affected media:

Future On-Site Resident:

- Tailings impoundment;
- Tailings and ore piles south of the mill; and
- Mill area surface soils.

Future Industrial/Construction Worker:

- Tailings and ore piles south of mill; and
- Mill area surface soils.

Recreational Visitor/Trespasser:

- Tailings and ore piles south of the mill; and
- Mill area surface soils.

Based on the results of the streamlined ecological risk evaluation, screening criteria for avian receptors (waterfowl) are exceeded in the wetlands located on and adjacent to the tailings impoundment. Therefore, risk reduction for potential avian receptors (waterfowl) is considered in the evaluation of removal alternatives.

Based on the potential human health and ecological risks identified for the Site, the following removal action objectives (RAOs) have been identified for the Site:

- Reduce exposure of potential future residents to Site tailings impoundment, tailings and ore piles south of the mill (including oil-stained soils), and mill area soils via direct contact and ingestion exposure pathways;
- Reduce exposure of recreational visitors/trespassers and potential industrial/construction workers to the tailings and ore piles south of the mill (including oil-stained soils); and
- Reduce exposure of avian receptors (waterfowl) to sediments and associated benthic macroinvertebrates in the pond on the tailings impoundment and wetlands adjacent to the impoundment.

In accordance with the EE/CA Guidance, several removal action alternatives were identified for consideration within the EE/CA. The categories considered were:

- No action;
- Institutional Controls;
- Containment;
- Consolidation; and
- Excavation.

The potential alternatives were subsequently evaluated and screened with respect to implementability, effectiveness, and cost. The following removal action categories survived the initial screening and were retained for further evaluation:

- Alternative 1 - No action;
- Alternative 2 - Institutional Controls;
- Alternative 3 - Institutional Controls and Excavation, Limited Consolidation, and Containment; and
- Alternative 4 - Institutional Controls and Excavation, Greater Consolidation, and Containment.

Based on the findings of the individual and comparative analyses, Alternative 3 is the recommended removal action. Alternative 3 consists of:

Institutional controls would help to minimize the potential for human exposure to contamination through constructing fences or other barriers around certain areas such as the tailings and ore piles south of the mill building and oil-stained soils to prevent or limit access. Signs to provide location-specific warnings will be placed on fencing. This alternative also would include deed and land use restrictions to prevent residential use at the tailings impoundment, tailings and ore piles south of the mill building and certain soils in the mill area.

This alternative would help to minimize the potential for human health exposure to contamination through excavating the tailings, ore piles south of the mill building, oil-stained soils, and underground storage tank (UST) staged soils near the mill building and consolidating the materials on-site beneath a protective barrier consisting of six inches of clean soil material and six inches of surface armor rock. All areas affected by the action will be graded to control for surface water run-on and run-off. Ecological exposures will be minimized by placing 12 inches of clean soil material over the tailings impoundment pond and filling the wetlands along the west and south sides of the tailings impoundment and immediately south of the mill area with clean, local rock, where warranted by contaminant concentrations. The pond would be vegetated with native plant species to accelerate re-establishment of the wetland, and the wetlands filled with rock would be mitigated by creating new wetlands (at a 1:1 ratio) south of the tailings impoundment. Large woody debris (LWD) would be placed along the perimeter of the impoundment to protect the surface of the impoundment. Best Management Practices (BMPs) would be implemented during construction to protect workers, the community, and the environment from short-term construction impacts such as erosion, fugitive dust, and other similar potential impacts.

A long-term monitoring and maintenance program would be implemented to ensure the continuing effectiveness of the removal action, particularly with respect to surface water and groundwater, and to monitor site conditions. As part of the monitoring program, annual or episodic inspections of capped and rock filled areas, as well as existing drainage systems would be evaluated for functionality, and the soil cover placed on the tailings pond would be cored at several locations, inspected for clean soil cover thickness and analyzed to verify that the Constituents of Concern (COCs) remain adequately contained.

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LIST OF ACRONYMNS

AOC	Administrative Order of Consent
ARARs	Applicable or Relevant and Appropriate Requirements
amsl	above mean sea level
BMPs	Best Management Practices
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CGS	Coordinate Grid System
COCs	Constituents of Concern / Chemicals of Concern
COPCs	Constituents of Potential Concern
CY	Cubic Yard
^{o}F	degrees fahrenheit
E&E	Ecology and Environment, Inc.
EE/CA	Engineering Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
FACW	Facultative Wetland
fbg	feet below grade
LWD	Large Woody Debris
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MTCA	Model Toxics Control Act
NCP	National Contingency Plan
OBL	Obligate Wetland
PA/SI	Preliminary Assessment/Site Inspection
PCBs	Polychlorinated biphenyls
PID	Photo Ionization Detector
ppmv	parts per million by volume
PQLs	Practical Quantification Limits
PRSC	Post Removal Site Control
QAPP	Quality Assurance Project Plan
RA	Removal Action
RAOs	Removal Action Objectives
Respondents	Work Group: Combustion Engineering, Blue Tee Corp., and the Goldfield Corporation
RMC	Resource & Environmental Management Consultants
SAP	Sampling and Analysis Plan
SECOR	SECOR International Incorporated
sf	square feet
Site	Anderson-Calhoun Mine/Mill Site
SOPs	Standard Operating Procedures
T&E	Threatened and Endangered
TBCs	To Be Considered
TP	Test pits
TPH	Total Petroleum Hydrocarbon
UCL	Upper Confidence Limit
USDA	United States Department of Agriculture
USFWS	U.S. Fish and Wildlife
UST	Underground Storage Tank
WDFW	Washington Department of Fish and Wildlife

WDOE	State of Washington Department of Ecology
Work Group	Anderson-Calhoun Site Work Group
XRF	X-ray Fluorescence

1.0 INTRODUCTION

This Engineering Evaluation/Cost Analysis (EE/CA) addresses contamination identified at the Anderson-Calhoun Mine/Mill Site (Site), Stevens County. Washington. The Site consists of a former mine and mill site located near Leadpoint, Washington. The purpose of the EE/CA is to summarize the nature and extent of contamination associated with the site, and to evaluate alternatives for the purpose of selecting an appropriate response action to address such contamination.

This EE/CA was prepared pursuant to an Administrative Order of Consent (AOC) No. 10-2004-0076 (5 August 2004) between the Anderson-Calhoun Site Work Group (Work Group) and the United States Environmental Protection Agency (EPA). The Work Group consists of Combustion Engineering, Blue Tee Corp., and the Goldfield Corporation (hereinafter collectively referred to as the Respondents). The requirements for the EE/CA are specified in the Scope of Work attached to the AOC.

The Site is located in northeast Washington State approximately 30 miles northeast of Colville. The entire Site is approximately 200 acres; the area affected by former operations is approximately 92 acres. The Site (see Figure 1) is the location of former mineral exploration, mining, and milling activities that were conducted between 1910 and the early 1980s. Historic mining-related features at the Site include two small open pits used to mine zinc ores, the remains of a flotation mill used to process zinc and barite ores, a tailings impoundment used to contain the residues from the processing of zinc and barite ores, and associated mining and milling infrastructure (Figure 2). The mill has generally been abandoned since the barite processing ended in the early 1980s.

The response action described in this EE/CA will be conducted pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). This EE/CA has been prepared in accordance with and in a manner consistent with the National Contingency Plan (NCP) and the U.S. Environmental Protection Agency's (EPA) the *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA* (EPA, August 1993).

The Site characterization information, and identification and analyses of removal action alternatives presented in this EE/CA are based both on the findings or previous investigations and reports conducted at the Site performed by others and the site-specific investigations performed by the Respondents.

2.0 SITE CHARACTERIZATION

This section of the EE/CA provides general information regarding the Site including the location, type of former operations conducted at the Site, and a synopsis of the Site history. The geography and topography of the area are described along with descriptions of the regional geology and soils, adjacent land use, population near the Site, meteorology, and sensitive ecosystems. Previous response actions that have occurred at the Site are also described. Information related to the source, nature, and extent of contamination associated with the Site is presented, including analytical data from sampling efforts to characterize conditions associated with the Site. Finally, the results of streamlined risk evaluation are summarized to provide an overall characterization of the potential impacts to human health and the environment associated with mine waste found at the Site, and to provide a basis for evaluating whether response actions recommended in this EE/CA protect human health and the environment.

2.1 Site Description and Background

Site description, topography, geology and hydrogeology, land use and climate are discussed below.

2.1.1 Site Location

The Site is located in northeast Washington State approximately 30 miles northeast of Colville (see Figure 1). The Site is accessed by State Route 22 and State Route 22A and is situated on a valley bottom along an east-facing hillside west of the Selkirk Mountains in and adjacent to the Deep Creek Valley at elevations ranging from approximately 2,140 to 2,500 feet above mean sea level (amsl). It is in the center of Section 2, Township 39 north, Range 41 EWM.

2.1.2 Type of Facility and Operational Status

The Site is the location of former mineral exploration, mining, and milling activities that were conducted between 1910 and the early 1980s. The entire Site is approximately 200 acres; the area affected by former operations is approximately 92 acres.

In the early 1980s, barite that was mined in the Flagstaff Mountain area (west of Lake Roosevelt, approximately 3 miles southwest of Northport, Washington) was processed at the mill on the Site. The mill has generally been abandoned since the barite processing ended. Stevens County involuntarily acquired the Site due to tax delinquency in the mid-1990s. The Site was subsequently acquired by an individual through a tax sale. Historic mining-related features at the Site include two small open pits used to mine zinc ores, the remains of a flotation mill used to process zinc and barite ores, a tailings impoundment used to contain the residues from the processing of zinc and barite ores, and associated mining and milling infrastructure (Figure 2).

2.1.3 Geology/Soil Information

2.1.3.1 Regional Geologic Setting

The Site is located in the Okanogan Highlands province, situated east of the Cascade Range and north of the Columbia Basin. To the east and north, the highlands extend into

northern Idaho and southern British Columbia, respectively. They are characterized by rounded mountains with elevations up to 8,000 feet amsl and deep, narrow valleys. The eastern portion of the Okanogan Highlands contains the oldest sedimentary and metamorphic rocks in the State. Precambrian Belt Supergroup, Windermere Group, and Deer Trail Group metasedimentary rocks extend from British Columbia south to the Columbia River. Since the Precambrian Era, huge amounts of crust have been accreted to the North American Continent. Everything west of the Precambrian rocks in northeastern Washington has been created through complex processes along an active continental margin or transported from elsewhere and stuck onto the continent of this region.

In the eastern highlands, Precambrian metasedimentary rocks are overlain by marine rocks representing each of the Paleozoic geologic time periods. The Cambrian record starts with sandstone (now quartzite) followed by shales and then limestones that grade into rocks of the Ordovician Period. Cambrian trilobites indicate relatively shallow seas. During the Ordovician Period, dark shales full of graptolites indicate deeper water conditions. All these rocks were subjected to metamorphism during Jurassic through Eocene time.

Cambrian rocks, in particular, are important sources of mineral wealth. All Paleozoic and some younger rocks have been folded repeatedly into a northeast-trending regional structure called the Kootenay Arc, which extends northeastward for 150 miles into British Columbia and contains numerous lead-zinc mines. In Stevens County near Northport, Devonian argillite includes interbedded barite.

2.1.3.2 Soils

The 1982 United States Department of Agriculture (USDA) Soil Survey of Stevens County, Washington identifies three soil types at the Site—Saltese Muck, Waits loam and Waits-Rock outcrop complex. General descriptions of these soil types are provided below.

Saltese Muck, drained (mapping unit 202) is the soil that is present near North Fork Deep Creek and surrounding the wetlands at the Site. The soil is a hydric, very deep, artificially drained, organic soil in basins and potholes, on bottom lands, and along the perimeters of lakes. It is formed of decomposed remains of reeds, sedges, and other plant material, with an admixture of alluvium, diatomite, and volcanic ash. This soil type occurs on slopes of zero to two percent. The native vegetation is water-tolerant grasses, cattails, sedges, and rushes. Typically the surface tier is dark reddish brown muck about five inches thick. The next tier is dark reddish brown sapric material to a depth of 60 inches or more.

Waits loam (mapping unit 240) is the soil that is present over most of the mill area. The soil is a very deep, well drained soil on toe slopes of foothills at elevations of 2100 to 4000 feet amsl. The unit is formed in glacial till and is mantled with volcanic ash and loess. The native vegetation is conifers, shrubs, forbs, and grasses. Typically, the surface of this soil is covered with a mat of partially decomposed organic litter about one and one half inches thick. The subsurface layer is light gray very fine sandy loam about one half inch thick. The upper part of the subsoil is a light brown loam about seven inches thick, and the lower part is pale brown and light brown loam about 16 inches thick. The substratum is light gray gravelly loam to a depth of 60 inches or more. The soil is calcareous throughout the substratum.

Waits-Rock outcrop complex (mapping unit 245) is the soil on the slopes leading to the upper mine pit. The soil is formed on side slopes of foothills at elevations of 2100 to 4000

feet amsl. The native vegetation is conifers, shrubs, forbs, and grasses. The rock outcrop portion of the complex consists of areas of exposed bedrock.

2.1.3.3 Surface Water Hydrology

The Site lies at the headwaters of North Fork Deep Creek. The surrounding watershed area provides moderate to high spring runoff flows. Channel morphology in the Site area is indicative of a low energy hydrologic system.

North Fork Deep Creek flows from north to south through the Site and flows through wetland sediments that are underlain by alluvium derived from glacial outwash and debris material. North Fork Deep Creek flows south to Deep Lake, which drains via Deep Creek to the Columbia River.

In the Site area, the creek has been channelized to accommodate the tailings impoundment and other Site features. Other surface water resources located on the Site include the two flooded mine pits, an evaporation pond and a pond that has formed on the tailings impoundment.

2.1.4 Surrounding Land Use and Populations

The area near the Site is rural. Forestry, livestock grazing, mining, and localized agriculture are principal uses. The area around the Site is used for recreational activities and for hunting in the fall. During the winter months when snow covers the Site, recreational activities change to cross-county skiing and related outdoor activities.

The Site is currently inactive. The area surrounding the Site is mainly undisturbed and is composed of native soil cover, rock outcrops, and vegetation. There are no residences or schools on or immediately adjacent to the Site; however, there are several single-family homes within one-half mile of the Site. Stevens County has a population of approximately 42,000, and the population density in non-urban areas is approximately 12.9 persons per square mile.

2.1.5 Sensitive Ecosystems

The characterization of sensitive ecosystems at the Site included a review of published information on the biological resources of the area and the completion of a field inspection and evaluation of the Site by a qualified wildlife biologist. According to the Upper Columbia USFWS Office (USFWS, 2006), the threatened and endangered (T&E) species that could be present in the Site area include the grey wolf (*Canis lupus* - Endangered), bald eagle (*Haliaeetus leucoephalus* - Threatened), grizzly bear (*Ursus arctos* - Threatened), Canada lynx (*Lynx Canadensis* - Threatened).

Maps were obtained from the Washington Department of Fish and Wildlife (WDFW) of endangered, threatened, candidate, sensitive and priority species and habitats that were identified in the Site area (WDFW, 2006). WDFW lists the same Federally T&E species, but does not identify any candidate or sensitive species in the Site area. The WDFW identifies wetlands as a priority habitat present in the Site area. Within the south portion of the Site and below the confluence with Silver Creek, North Fork Deep Creek is identified as a Washington State priority resident fish stream. A more detailed discussion of the Site ecological resources is found in Section 2.4.2.

2.1.6 Meteorology

The climate of the Site is maritime-influenced and receives 30 to 80 inches of precipitation per year, with most of the precipitation occurring as snow. Humidity is low year-round. Adequate soil moisture is generally present during the growing season on all but the most severe areas. Annual average temperatures range from a minimum of 30 to 58 degrees Fahrenheit (^{o}F), with a mean temperature of 44 ^{o}F. Warmest months are late July through August. The growing season generally lasts 45 to 120 days, but may extend as long as 140 days in some lower valleys. Snow covers the ground during the winter and a portion of the fall and spring months.

2.2 Previous Removal Actions

A preliminary site assessment conducted in September 2001 and a removal site evaluation conducted in 2002 by the USEPA identified numerous drums and containers across the site, as well as a large number of transformers and other electrical equipment. The site was not secured, and there was widespread evidence of trespassing, vandalism, and domestic and wild animal movement. The USEPA conducted a time-critical removal action at the site from 27 October 2002 through 3 November 2002. The objectives for this action included: mitigate exposure to mine-waste contaminated soils; mitigate exposure to polychlorinated biphenyls (PCBs) through removal and off-site disposal of the transformers and other oil-filled electrical equipment; and mitigate exposure to potentially hazardous substances through appropriate characterization and disposal. Site activities included: removal and off-site disposal of drums and containers containing hazardous and non-hazardous substances; removal and off-site disposal of water contaminated with diesel fuel and other flammable liquids; removal and off-site disposal of oil contained in transformers and other electrical equipment, as well as transformer carcasses; and removal and off-site disposal of chemicals contained in bottles and jars associated with the assay lab dump. (Herrera, 2003)

2.3 Previous Investigations

Ecology and Environment, Inc. (E&E) collected surface soil, sediment, and water samples from the Site for USEPA in September 2001 as part of a Preliminary Assessment and Site Inspection (PA/SI) of Upper Columbia River Mines and Mills in Stevens County, Washington (E&E, 2002). This inspection reported elevated concentrations of metals in the tailings located in the tailings impoundment and in soil and sediment near the former mill. The inspection also identified numerous 55-gallon drums in the mill area, oil-filled transformers and other electrical equipment, a fuel storage tank and stained soil associated with these structures.

A limited screening of surface soil metal concentrations in the vicinity of the mill was also conducted as part of the removal evaluation. The screening found elevated concentrations of metals in soils. The Removal Action (RA) and screening conducted at the Site are documented in a Removal Action Report (RA Report) (Herrera, 2003).

Since little or no data were available on the additional areas to be investigated as part of the EE/CA, Resource & Environmental Management Consultants (RMC) was retained to conduct a Site Reconnaissance to collect additional data to assist in the scoping of future investigations. The Site Reconnaissance and sampling was conducted in November 2003 and included an inspection of the historic mining-related facilities at the Site, excavation of three test pits in the tailings impoundment and the collection of nine (9) surface water, four

(4) sediment, nine (9) soil and eight (8) tailings/waste rock samples. The locations were these samples were collected are shown on Figure 3. Samples were collected, preserved and handled in accordance with USEPA approved methods and appropriate field documentation procedures, including the use of chain-of-custody forms. Samples were analyzed by American Environmental Consultants Laboratory in Salt Lake City, Utah.

The laboratory data sheets from the analysis of the samples from the Site Reconnaissance are provided in Appendix A of the EE/CA Work Plan and the results are summarized and discussed by media in the EE/CA Work Plan which is Attachment 1 to the AOC.

2.4 Source, Nature, and Extent of Contamination

In October 2004, SECOR International Incorporated (SECOR) completed an EE/CA investigation at the Site. The scope and objectives of the EE/CA investigation were defined in the EE/CA Work Plan and detailed in the Final EE/CA Sampling and Analysis Plan (SAP) (SECOR, 2004). Procedures used during the EE/CA investigation were in accordance with Standard Operating Procedures (SOPs) developed for the project. The SOPs for the EE/CA investigation activities were discussed in the Quality Assurance Project Plan (QAPP), which was a part of the SAP. The analytical data and quality assurance/quality control evaluation results for the 2004 SECOR investigation are provided in Appendix F.

This section describes the investigations that were conducted at the Site by SECOR and members of the Work Group to collect information and data to define the nature and extent of any contamination at the Site, to conduct the streamlined risk evaluations, and to develop and evaluate alternatives to address any identified unacceptable risks to human health and the environment.

A Site walkover was conducted by SECOR prior to the start of the field investigation in areas at the Site described in the SAP for which visual inspections were proposed. This walkover was completed so the sampling locations could be chosen to represent depositional areas, prevailing wind direction, and actual Site conditions at the time of the investigation. The selected sampling locations for the EE/CA investigation are shown on Figures 4 and 5.

2.4.1 Constituents of Potential Concern

The constituents of potential concern (COPCs) for the various source materials and potentially affected media at the Site were defined by source material and media in the EPA approved Work Plan attached to the AOC. The selection of COPCs was based on the type and characteristics of the source material or media, the potential mobility of COPCs and the extent of information and data on the source materials and potentially affected media present at the Site.

The inorganic COPCs used for the investigation of all mining and milling related source materials and media potentially affected by these source materials, including soils, sediment, surface water and groundwater, were defined based on the results from sampling conducted as part of the Site Reconnaissance for the Workgroup by RMC in 2003. As part of the Site Reconnaissance, samples of tailings, soils, sediment and surface water were collected and analyzed for a comprehensive list of metals including aluminum, arsenic, barium, cadmium, chromium, cobalt, copper, lead, magnesium, manganese, mercury, nickel, selenium, vanadium and zinc. Water samples also were analyzed for major inorganic cations and anions. Any of these above parameters that were detected in one or more of

the source material or media sampled as part of the Site Reconnaissance at concentrations exceeding the State of Washington Department of Ecology (WDOE) Model Toxic Control Act (MTCA) soil cleanup levels or the WDOE water quality standards were defined as inorganic COPCs for the EE/CA investigation. Based on this procedure, the inorganic COPCs were defined in the Work Plan as barium, cadmium, copper, lead, selenium and zinc. Since available data for groundwater and surface water are inconclusive, this EE/CA evaluates the COPCs relevant to soil and sediment only, and addresses the potential threat from these media to human health and the environment.

The organic COPCs were based primarily on the findings and recommendations included in the Removal Action Report (Herrera 2003). The RA Report identified certain specified areas where it was believed that soils could be potentially contaminated with PCBs from leaking transformers and PCBs were defined in the Work Plan as a COPC for any stained soils in the specified transformer areas and to investigate the potential for transport to the sediment. For the identified underground storage tank (UST) and soil staining in the area where drums of waste oil were removed as part of the removal action, total petroleum hydrocarbon (TPH) was defined in the Work Plan attached to the AOC as a COPC for these potentially contaminated soils and to investigate for the potential transport to the sediment. For the assay lab dump discovered during the removal action, volatile and semi-volatile organic compounds were defined in the Work Plan as the COPCs to investigate if a release had occurred to soils at this dump.

All analyses of COPCs in samples collected as part of the EE/CA investigation were analyzed using applicable and USEPA approved analytical methods. The specific analytical method used for each COPC and the practical quantification limits (PQLs) for the methods are provided in Table 4 of the approved Sampling and Analysis Plan (SECOR, 2004). The analytical laboratory achieved standard PQLs for all analyses.

The data collected as part of the EE/CA investigation were compared to screening values to determine which COPCs needed to be considered in the streamlined risk evaluation. The screening values used for this investigation were taken from the following sources:

- Natural Background Soil Metals Concentrations in Washington State (Ecology, 1994);
- Washington State Drinking Water Standards (WAC 246-290);
- Model Toxics Control Act (MTCA) cleanup values for human health (WAC 173-340-700);
- USEPA Ecological Soil Screening Level (EC0-SSLs) and MTCA Table 749-3 soil concentrations for plants and animals (WAC 173-340-7493);
- Ecology, Washington Department of 2003. Development of Freshwater Quality Values for Use in Washington State. Toxics Cleanup Program. Publication Number: 03-09-088. Olympia, Washington; and
- Washington State Ambient Water Quality Criteria (WAC173-201A), Federal National Recommended Water Quality Criteria (USEPA, 2002) and NOAA Squirt Table (USEPA, 2003) Threshold Effects Level (NOAA, 1999) for aquatic life.

The specific criteria that were used to screen the investigative data are presented in Section 2.6.

2.4.2 Ecological Resources

The characterization of ecological resources of the Site included the review of published information on the biological resources of the area and the completion of a field inspection and evaluation of the Site by a qualified wildlife biologist. The field evaluation included identifying the major vegetation communities and wildlife habitats present at the Site, the dominant flora associated with each vegetation community, and wildlife presence and habitat utilization. Amphibians were observed using the pond perched on the tailings impoundment and the wetlands adjacent to the Site. Existing cover types at the Site were also evaluated with regard to their suitability for threatened, endangered, or sensitive wildlife species. Four primary cover types were found on the Site:

1. Upland Forest. This cover type occurs west of the main operating facilities in areas that contain non-hydric soil (soil types 243 and 245). This cover type consists of a classic mesic regime non-hydrophytic climax vegetation of trees, shrubs, and herbaceous plants.

2. Upland Pasture. This cover type occurs in non-hydric soils in areas that are fenced off from the mine facilities located in the eastern and southern portions of the Site. This cover type contains residual and invasive pasture grasses that have been grazed and farmed for hay production.

3. Palustrine Emergent Wetland (Cowardin). This cover type occurs in hydric soils (soil type 202) in the flat bottom-lands immediately adjacent to North Fork Deep Creek. This cover type is dominated by hydrophytic vegetation.

4. Riverine System (Cowardin). This cover type includes the North Fork Deep Creek channel that flows through the property. North Fork Deep Creek is Washington State Department of Natural Resources Classified Type 3 Water, which is perennial fish-bearing water.

2.4.2.1 Plants

The geomorphological and topographical features of the Site (e.g., aspect, slope, elevation, soil characteristics) influence the distribution of species. Appendix A provides a list of the plant species identified at the Site. The upland areas provide a diversity of food and cover for a variety of wildlife. The forest type in the upland areas of the Site is the Douglas fir/Snowberry community. This community is dominated by Douglas fir (*Pseudotsuga menziessi*) with shared crown densities of Ponderosa pine (*Pinus ponderosa*), Lodgepole pine (*Pinus contorta*), Western larch (*Larix occidentalis)*, Quaking aspen (*Populus tremiloids*), and Black cottonwood (*Populus trichocarpos*).

The understory is a shrub layer of Snowberry (*Symphoricarpos albus*) and Serviceberry (*Amellanchier alnifolia*). The herbaceous layer consists of Oregon grape (*Berberis nervosa*), Indian strawberry (*Duchesnea indica*), and Pinegrass (*Calamagrostis rubescens*).

The Riverine System Habitat is the riparian zone which is the transitional area between North Fork Deep Creek and the terrestrial upland environment. The riparian and associated wetland areas constitute approximately 22 acres of the project area, excluding the tailings. The riparian wetlands begin north of the property line above the confluence of Hartbauer Creek and the North Fork Deep Creek. Riverine System Habitat also is present between

North Fork Deep Creek and the drainage ditch between the creek and the tailings impoundment.

The plants associated with the riparian and wetland areas are dominated by Obligate Wetland (OBL) and Facultative Wetland (FACW) indicator status species. There are large blocks of sedges, juncus, and cattail. The instream and pond flora at the Site consists of submerged aquatic bed milfoil (*Myriophyllum spicatum*) and coontail (*Ceratophyllum demersum*). Surface vegetation is dominated by common duckweed (*Lemna major*). At the ordinary high water mark, Cattail (*Typha latifolia*) and species of rush including Ovoid spikerush (*Eleocharis ovata*) and Hardstem bulrush (*Scirpus acutus*) dominate.

2.4.2.2 Wildlife

Field surveys were conducted to identify wildlife species present at the Site. (See Appendix A for a list of wildlife species observed at the Site.) The most commonly encountered birds in the field surveys of the riparian habitat were red wing blackbird (*Agelaius phoeniceus*), American goldfinch (*Carduelis tristis)*, winter wren (*Troglodytes troglodytes)*, white crown sparrow (*Zonotrichia leucophrye*), and raven (*Corvus corax)*. Two observations of trout were made in North Fork Deep Creek, with two to four fish present during each observation. While positive species identification was not made, the U.S. Fish and Wildlife (USFWS) personnel investigating the Site suggested the trout were probably brook trout (*Salvelinus fontinalis*) due to the temperature regime.

Several dozen northern spotted frogs (*Rana petiosa*) were netted and inspected. Most of the frogs were observed in or on the banks of Deep Creek. No obvious abnormalities were noted in the frogs inspected. No other amphibians were observed. No reptiles were observed during the brief surveys.

2.4.2.3 Threatened and Endangered Species and Habitat

According to the Upper Columbia USFWS Office, the threatened and endangered (T&E) species that could be present in the Site area include (USFWS, 2006):

Endangered Species:
- grey wolf (*Canis lupus*).

Threatened Species:
- bald eagle (Haliaeetus leucoephalus),
- grizzly bear (Ursus arctos),
- Canada lynx (*Lynx Canadensis*).

Proposed Species:
- none.

Candidate Species:
- none.

Critical habitat:
- none.

Maps were obtained from the Washington Department of Fish and Wildlife (WDFW) of endangered, threatened, candidate, sensitive and priority species and habitats that were identified in the Site area (WDFW, 2006). WDFW lists the same Federally T&E species, but does not identify any candidate or sensitive species in the Site area. The WDFW identifies wetlands as a priority habitat present in the Site area. Within the south portion of the Site and below the confluence with Silver Creek, North Fork Deep Creek is identified as a Washington State priority resident fish stream.

2.4.3 Source Material Investigations

The primary source materials at the Site are from the mining and processing of zinc ores, and the processing of barite ores. Small accumulations of crushed ore are present in the primary crusher, beneath the conveyor belts between the primary and secondary crusher, and within the secondary crusher. Tailings resulting from the processing of ores are contained within the tailings impoundment (See Figure 5.) Incidental spills of tailings resulting from pipe and equipment failures or cleanouts are also present around the mill building. Some tailings and crushed ore are mixed with the crushed rock of the roadbed in the central portion of the mill area. Tailings or crushed ore piles are also present south and southwest of the mill building. Debris piles, apparently formed by scraping the roadways, are present south of the mill area and east of other tailings and ore piles. The small accumulations of crushed ore in the crusher areas were not sampled during the EE/CA investigation, but based upon results of soil sampling during the Site Reconnaissance they are presumed to contain up to a few percent zinc and/or barium. This section discusses the investigation at these areas including three white crystalline waste piles identified as part of the removal action.

2.4.3.1 Tailings Impoundment

The tailings impoundment covers approximately 43 acres and is situated to the east of the processing facilities and the North Fork Deep Creek (Figure 5). Approximately one-third of the surface of the impoundment is vegetated with emergent grass and forbs. Most of the vegetated area surrounds an approximately 3-acre pond located on the tailings impoundment. Vegetation also is established along the northern portion and northeastern quadrant of the tailings impoundment. The sidewalls of the tailings impoundment are bermed; wood rails structurally support the sidewalls on the western sidewall and gravel berms support the southern, eastern, and northern sidewalls.

The vertical extent of tailings in the impoundment was delineated by excavating three test pits (TP-4 through TP-6) by backhoe. The three test pits were aligned similar to, but off-set from, test pit locations TP-1 through TP-3 excavated as part of the Site Reconnaissance (Figure 5). Samples were collected from each of the three test pits using the methods described in SOP 1 (in Appendix A of the SAP) and analyzed for the inorganic COPCs. Results are presented along with comparable results from the Site Reconnaissance in Table 1. One sample was collected at the surface (0 to 2 inches) for use in the streamlined risk evaluation, one sample was collected in native soil immediately below the tailings, and the other two samples were spaced between the above sample points in visually evident different textural or colored layers or vertical segments. In addition, one additional sample was collected approximately eighteen inches below the interface of the tailings and native soil. That sample was not analyzed based upon the results of the soil-interface sample.

The composition of tailings in the tailings impoundment is fairly consistent and includes:

- Approximately 2.5 feet of barium tailings at the surface of the tailings impoundment. Total volume of barium tailings in the impoundment is estimated to be 173,000 cubic yards (CY). A thin layer of evaporative salts is present on the undisturbed surface of the tailings. Composition of this tailings material is silt with some fine sand; color is brown. The average concentration of barium (63,000 milligrams/kilograms {mg/kg}) is greater than the respective human soils screening levels for unrestricted land use. Individual samples containing lead exceed the unrestricted land use criteria. The average concentrations of barium, lead, zinc, and selenium exceed their respective terrestrial ecological soil screening levels.
- An average of 11.5 feet of zinc tailings beneath the barium tailings in the tailings impoundment. Total estimated volume of zinc tailings in the impoundment is 795,000 CY. Composition of this tailings material is silt (i.e., zinc tailings are finer than the barium tailings) and color is gray. Individual samples containing lead exceed the unrestricted land use criteria. The average concentrations of barium, lead, zinc, and selenium exceed their respective terrestrial ecological soil screening levels.
- Native soil beneath the tailings is peat (dark brown clayey organic silt). Average depth to native soil is 13.7 feet below grade on the tailings impoundment.

The existing data sufficiently defines the nature and extent of tailings in the tailings impoundment at the Site. However, the tailings may have affected the native soil through years of being deposited on top of the native soil and the data presented indicates contamination in the native soil exceeding screening levels. Test pit data provided in Table 1 indicate barium, lead and selenium exceed the ecological screening level at the deepest samples in the native soil. Parameters to be evaluated in the streamlined human health risk evaluation include barium and lead. The streamlined ecological risk evaluation will address barium, lead, selenium, and zinc.

2.4.3.2 Piles South of Mill Building

A number of small piles of material are present south of the mill building, which occupies a total area of about 2 acres. The extent of the piles was investigated by digging with a spade and hand auger to define the vertical extent and surveying to outline horizontal extent. The horizontal extent of these piles is shown on Figure 6. Four piles of material were selected to be representative of this area and were sampled (See Figure 6.) Samples were collected using the methods described in SOP 2 (Appendix A of the SAP) and analyzed for the inorganic COPCs. The results from this sampling are summarized in Table 2.

Piles A, B, C, F, and K are relatively shallow accumulations of silt with some fine sand that appear to be floatation tailings. Sample location SS MILL-1, taken from Pile B, was a surface sample (0 to 2 inches) that contained parameter concentrations consistent with barium tailings (Table 2).

Piles D, E and G are between four- and six-feet thick accumulations of silt with some fine sand that appear to be floatation tailings. Sample locations SS MILL-2 and SS MILL-4, were located on Piles D and G, respectively. At SS MILL-2, where tailings were less than two feet deep, only a surface sample (0 to 2 inches) was collected. At SS MILL-4, tailings were 20

inches thick and rock was encountered at 20 inches below grade. A tailings sample was collected at the surface (0 to 2 inches) and in the native soil below this accumulation. These piles contained elevated barium concentrations (Table 2) and are believed to represent barium tailings.

A few inches of silt with some fine sand ranging from one to six inches in depth are present at the surface south of the other pile (denoted Pile L in Figure 6). Surface area of this accumulation is approximately 1,200 square feet (sf). Sample location SS MILL-3 was located on Pile L and was collected at the surface (0 to 2 inches). Soil samples were also collected at this sample location at the soil interface (4 to 5 inches) and at 22 inches below grade. Parameter concentrations in this source material are consistent with zinc ore.

The other piles H and I consist of a mixture of soil, gravel and what appears to be tailings; these piles are believed to be the result of scraping the roadway or clearing the area. These piles may have been associated with the RA at the Site.

Surface area of the piles south of the mill area totals 12,900 sf. Total volume of the piles is estimated to be approximately 1,200 CY. The thickness of piles varies from a few inches to over six feet; average thickness is 2.5 feet.

Average barium concentrations exceed human health soil screening levels for unrestricted land use in samples from the tailings piles (all of the Piles except L) south of the mill area. Individual samples containing cadmium and lead exceed the unrestricted land use criteria. These parameters are further evaluated in the streamlined human health risk evaluation. Barium, cadmium, lead, selenium, and zinc from the tailings are further evaluated in the streamlined ecological risk evaluation because the maximum concentrations of these COPCs were greater than terrestrial ecological soil screening levels.

2.4.3.3 White Crystalline Waste Piles

Samples from three white crystalline waste piles were collected and analyzed to determine the presence or absence of barium carbonate and other metals during the 2002 RA (Herrera, 2003). Results indicated carbonate (33,508 to 184,500 mg/kg), bicarbonate (22,200 to 905,600 mg/kg), and barium (39.6 mg/kg to 1,830 mg/kg) were present in all three samples. According to the RA Report, these piles were of the same material observed in several rock powder waste piles located along the road south of the mill building and are believed to be sodium bicarbonate (a non-toxic reagent used in floatation mills for controlling pH).

During the EE/CA investigation, it became apparent that most of the material had been removed from the Site. A family member of the Site Owner confirmed that the material had been removed from the Site and used as lime. Remaining amounts were sampled from each of the three piles (WCWP-1 through WCWP-3; Figure 4) to confirm the identity of the substance. Samples were submitted for analysis of cations (barium, calcium, magnesium, potassium, sodium) and anions (chloride, nitrate/nitrite, and sulfate). Samples were collected using the methods described in SOP 2 (in Appendix A of the SAP). Sample results verify that the material was calcium carbonate lime with up to forty percent calcium (see Table 3). This material is not further considered herein.

2.4.4 Soil Investigations

The RA Report (Herrera, 2003) recommended that the nature and extent of potentially contaminated soil be investigated at: (1) certain areas that contain, or contained, oil filled electrical transformers; (2) around the former assay dump and debris pile; (3) at the location of an underground storage tank (UST); and (4) at an identified oil-stained area southwest of the mill where empty drums were stockpiled during the USEPA RA.

In addition, as part of the EE/CA investigation, soil at the Site that may have been affected by a release from the mining and milling operations was investigated. This includes soil in the mill area where mineral processing operations were conducted and soil downwind of the tailings impoundment that may have been affected by the deposition of fine-grained tailings transported from the tailings impoundment by wind. Two types of soil investigations were conducted as part of this EE/CA: a soil screening survey of the mine/mill area; and a soil transect survey downwind of the tailings impoundment.

2.4.4.1 Soil Near Transformers

In the RA Report (Herrera, 2003) ten pad-mounted transformers were identified (see Appendix B) that contained greater than 1 ppm of PCBs (T1, T2, T3, T7, T8, T9, T13, T14, T15, and T22). The RA Report did not indicate that a release of oil from these transformers had occurred. One additional pad-mounted transformer (T39/40) did not contain PCBs greater than 1 milligram per liter (mg/L); however, stained soil was noted at this area. These 11 transformers were located in five areas:

1. Near the electrical room (T1 to T3 noted as TER on Figure 4);
2. Near the dry room (T7 to T9 noted as TDR on Figure 4);
3. Near the mill building (T13 to T15 noted as TMB on Figure 4);
4. Near the maintenance/ repair shop (T39 and T40 noted as TMR on Figure 4); and
5. Near the lower mine pit (T22 noted as TLMP on Figure 4).

As part of the work conducted for this EE/CA investigation, each of these five areas was visually investigated for evidence that a release had occurred from any of the 11 pad-mounted transformers. A potential release was visually noted at transformer location T39 and T40 (near the maintenance/repair shop noted as TMR on Figure 4); the extent of the oil-stained soil down-gradient of the pad was delineated (Figure 7) in accordance with the SAP (SECOR, 1994). Horizontal extent was estimated at approximately 80 square feet. A surface sample (0 to 2 inches) was collected from the stained area (designated TMR 1-3) for analysis of total PCBs using the methods described in SOP 2 (Appendix A of the SAP). Deeper material was not sampled because of the pervasive crushed rock and the concrete (i.e., it was not possible to collect a soil sample).

PCBs were not detected above practical quantification limits (Table 4) using approved EPA Method 8082. Based upon these results, soil near the former transformers is not contaminated with PCBs and is not further considered herein.

2.4.4.2 Assay Lab Dump

The assay lab dump is located approximately 0.5 miles southwest and uphill from the mill building (Figure 2). As reported in the RA Report, this dump site was found to contain glass and plastic bottles and jars, rubber stoppers and other laboratory supplies, along with other trash. As part of the time-critical RA, all bottles and jars containing unknown liquids and solids were removed from the dump, categorized, and addressed as part of the RA.

As part of the work conducted under this EE/CA, the dump area was investigated for evidence that a release of chemicals occurred in this area. This investigation included performing an intensive visual inspection of the dump for chemical stains or other indications that a release had occurred, hand auguring holes in the area to determine if there were any signs of buried debris, and screening the dump area with a Photo Ionization Detector (PID) to determine if there were any volatile organic constituents in the soils at the dump site.

Surface soil staining was noted in one location and a soil sample was collected (ALD-1). PID readings were below instrument detection level in the area. An organic odor, however, was noted in one location and a soil sample was collected (ALD-2). A third sample (ALD-3) was collected approximately five feet downhill of the debris where surface water would have flowed. Samples were collected using the methods described in SOP 2 (in Appendix A of the SAP) and submitted to the laboratory for analysis of volatile organic and semi-volatile organic compounds in accordance with the Work Plan and the SAP (SECOR,2004). Table 5 presents the detected volatile organic and semi-volatile organic compounds in the assay dump soil samples. Standard and approved EPA Analytical Methods 8260 and 8270 were used for analysis of listed volatile organic and semi-volatile organic priority pollutant compounds for these soil samples. The PQLs of the non-detected organic compounds were typical for these analytical methods.

Hand auguring and digging around the debris revealed no buried debris. In the middle of the debris pile there were some instances of metal penetrating the ground surface, but undisturbed soil was observed beneath the bottom of the pile. The dump appears to contain only surficial disposal of materials. There does not appear to have been subsurface disposal in this area.

As shown in Table 5, analytical results of soil samples were more than two orders of magnitude less than applicable soil human health screening levels for unrestricted land use. Based upon these results, soil at the assay lab dump is not further considered herein.

2.4.4.3 Underground Storage Tank

At the time of the time-critical RA, the contractor located a 10,000-gallon UST at the Site. This tank was located near a wetland area approximately 250 feet north of the mill building (Figure 4). As part of the time-critical RA, approximately 4,500 gallons of water and diesel fuel mixture were removed from the tank. Laboratory analysis of this mixture did not detect diesel or lube oil-range hydrocarbons above the laboratory reporting limits, but the reporting limits were greater than the appropriate MTCA cleanup levels because inadequate volumes were submitted to the laboratory. Because significant liquid was found in the tank the day after it was pumped empty, it was expected that the tank was being recharged by ground water. During the October 24, 2003 Site visit with the USEPA, it was observed that the UST had been removed by the landowner and that the excavation had been backfilled.

As part of the work conducted under this EE/CA, the area where the UST used to be located was excavated with a backhoe to the approximate depth of the bottom of the former tank and the soils in the excavation were visually inspected for evidence of a release from the UST. The excavation proceeded to a depth of 4.2 feet below grade (fbg), which was the depth to ground water. Dimensions of the excavation were 18 feet (west to east) by 60 feet (south to north).

One area of soil with a PID reading of 5.9 parts per million by volume (ppmv) with visual staining and odor, was present in the northwest portion of the excavation from a depth of 2 to 4 fbg. Approximately 4 CY of soil from that area were segregated from the rest of the excavated soil. This area of soil was placed on top of the excavated soil after the excavation was backfilled and is present as a soil mound.

Soil on the sidewalls and bottom of the excavation were screened for the presence of organic constituents with a PID. To assess the potential impact to soils from the UST a total of 6 soil samples were collected from the excavation (four side wall and two bottom samples, as shown on Figure 8). Locations were selected at random because of the lack of PID detections, visible staining, or odor. Samples were collected using the methods described in SOP 1 (in Appendix A of the SAP). The samples were submitted to the laboratory for analysis of TPH using NWTPH-Gx and NWTPH-Dx (extended) MTCA approved analytical methods. The excavated pit was backfilled with the material removed from the excavation to eliminate a safety hazard. The soil removed and placed above the other excavated material in a mound totaled 4 CY.

The results of the TPH analyses are provided in Table 6. The concentrations of TPH were less than applicable human soil screening levels for unrestricted land use in all samples collected from the trench. Based upon these results, soil at the former UST requires no further action, and not further considered herein except for the segregated soil mound which will be addressed in the removal alternatives.

2.4.4.4 Oil Stained Area Southeast of Mill

As part of the time-critical RA oil staining was noted on the ground surface in the vicinity of an empty 500-gallon tank and four drums located southeast of the mill (See Figure 4.) The RA Report reported that three of the four drums appeared to contain waste oil and the fourth drum contained water. The drums were removed as part of the RA. Oil staining was noted on the ground surface in the vicinity of the tank and drums believed to contain waste oil.

As part of the work conducted under this EE/CA, the area where the tank and drums were located was investigated and the extent of oil-stained soil was mapped as shown on Figure 9. This area was screened with a PID with no detectable results. A hand trowel was used to investigate the vertical and horizontal extent of the contamination. Two distinct areas of staining were observed to be present with a total combined stained area of approximately 1,000 square feet. Two surface (0 to 2 inch) soil samples were collected from the visually stained area using the methods described in SOP 2 (in Appendix A of the SAP). Samples collected were submitted to the laboratory and analyzed for TPH.

The results of the TPH analyses for this area are provided in Table 7. Soil Sample SESOIL 1A, taken in the southern portion of the area, contained 15,000 mg/kg diesel-range petroleum and 50,000 mg/kg oil-range petroleum. Vertical extent of staining was two inches in this area. Soil Sample SESOIL 2A, taken in the northern portion of the area, contained

4,500 mg/kg diesel-range petroleum and 23,000 mg/kg oil-range petroleum. Vertical extent of staining was one inch in the northern area. However, horizontal and vertical extent of contamination has not been determined by the limited samples collected.

Petroleum hydrocarbons were present at concentrations that exceed human and terrestrial ecological soil screening levels in the former drum storage area south of the mill building. Total volume of petroleum-contaminated soil in this area is very small and is estimated to be a total of 12.5 CY. The actual volume of soil contaminated with petroleum hydrocarbons above the human and terrestrial ecological screening levels will be determined during the removal action. Petroleum-contaminated soil is included in the streamlined risk evaluation.

2.4.4.5 Soil Screening Survey of the Mill Area

The soil screening survey used an X-ray Fluorescence (XRF) instrument to screen the concentration of metals in the surface soil at the mine/mill area. A coordinate grid system (CGS) with 50 foot square grids was established over this area to provide benchmark locations and reference markers for the field-screening activities (Figure 11). A surface soil sample (0 to 2 inches) was collected at each grid node and the concentration of metals in the sample was measured with the XRF instrument (Table 15). The XRF sample analysis method is described in SOP 7 (in Appendix A of the SAP).

When the XRF result for any metal exceeded the human risk based screening levels at a sampling point, then additional subsurface samples were taken at 6-inch intervals, where possible, until the concentration was below these criteria. In some cases a deeper sample was not possible because of the presence of gravel or rock. Opportunistic measurements also were taken at and along the crushers, conveyors and other ore processing facilities located in the mine/mill area and are reported in the Site Reconnaissance Report.

A split sample was collected at every twentieth sample point and submitted for laboratory analysis for confirmation of the XRF measurements and to obtain data on metal constituents that could not be measured with the XRF. The confirmatory samples submitted to the laboratory were analyzed for the inorganic COPCs. Adjustment of XRF data for optimum correlation with laboratory-measured values is discussed in Appendix D.

The results of the corrected XRF measurements are provided in Table 15 and the results of the laboratory confirmation analyses for the inorganic COPCs are provided in Table 16. Results of soil sampling indicate that crushed ore and tailings materials occur in the primary crusher and secondary crusher areas, beneath the conveyor belts, and around the mill building. Operations at the Site have commingled road gravel, crushed ore, and tailings in these areas and have resulted in areas where the concentrations of barium, cadmium, lead and zinc exceed the human risk screening levels reference values at the surface. Figure 13 shows the extent of these exceedances. The concentration of zinc exceeded the human screening level at 12 grid-sample locations, mostly concentrated in the center of the Site around the equipment warehouse and secondary crusher. An additional exceedance of the zinc human screening level was found along the main road to the former bag house; that sample was representative of the road debris piles along the southern edge of the gravel road going uphill (west) to the top of the primary crusher. A total of 26 surface sampling stations had lead results above the human screening levels; most of the exceedances occurred in the central portion of the Site between the primary crusher and the former mill building.

Of these exceedances, only lead exceeded the upper one sided ninety-five percent confidence limit (UCL) of the true mean concentration for unrestricted land use, but did not exceed the corresponding human soil screening level for industrial land use. The UCL concentrations of all other metal COPCs are less than corresponding human soils screening levels for unrestricted and industrial land uses.

MTCA has a requirement that soil concentrations must not only have an UCL below the cleanup compliance level, but also that no more than ten percent of the samples can be over the level and no single sample can be greater than twice the level (WAC 173-340-740(7)(e)). For the soil samples collected in the mill area, barium, cadmium, lead, and zinc failed this additional requirement for unrestricted land uses. Lead was the only metal that exceeded this additional requirement for industrial land use.

Average concentrations of barium, cadmium, lead and zinc exceeded terrestrial ecological soil screening levels in the mill area soils. In addition, although selenium was not detected in any samples using the XRF, split soil samples analyzed in the laboratory detected selenium above terrestrial ecologic screening levels. A majority of the sample locations that exceeded the ecological screening levels were located in the center of the processing area between the primary crusher and the mill building.

The existing data adequately define the extent of contaminated surface soil at the Site for purposes of the EE/CA. Parameters to be evaluated in the streamlined risk evaluation include barium, selenium (only for ecological), cadmium, lead, and zinc.

2.4.4.6 Downwind Soil Transect Survey

A soil sampling transect was established along the south side of the tailing impoundment to quantify the dispersion of tailings materials from north/northwest and down-valley winds. Thirteen surface soil samples (SS-WND1 through SS-WND15) were collected at the surface (0 to 2 inches) at 100-foot intervals starting at the berm of the tailings impoundment and extending down wind of the impoundment as displayed on Figure 15. The surficial material at the first sampling point, (SS-WND-1) located 50 feet from the berm, consisted of tailings and the sample was not submitted to the laboratory. The remaining 12 surface soil samples were submitted to the laboratory and analyzed for inorganic COPCs.

The results of the laboratory analyses of the soils samples from the downwind transect are summarized in Table 17. The laboratory data indicate that the concentration of barium and zinc in surface soil has been affected by wind blown tailings in the immediate vicinity of the tailings impoundment, but the concentration decreases rapidly with distance from the tailings impoundment. Metal concentrations in all soil samples were below the human risk screening levels for unrestricted land use. Terrestrial ecological screening levels for soils were exceeded for barium, lead, selenium, and zinc in the soil samples 100 feet from the tailings impoundment. At greater distances (i.e., 200 feet and beyond), lead and zinc concentrations were below screening levels, but barium and selenium concentrations remain above the screening levels. The furthest transect soil sample (SS WND-15) located 1,400 feet from the tailings impoundment had concentrations of all metals comparable to Washington State background soil concentrations, for which State background concentrations have been established (Ecology, 1994).

The surface of the tailings impoundment is currently covered by an algal/lichen crust that binds undisturbed surfaces of the tailings. However, since the tailings have been in the

impoundment for more than 40 years with no significant dispersal as indicated by the data, it is believed that wind transport of tailings has never been significant because the near surface tailings remain in a moist condition. Unless the configuration of the tailings impoundment changes and the tailings dry out, wind dispersal of tailings should not be a concern at the Site.

Barium, lead, selenium, and zinc are considered further in the streamlined risk evaluation.

2.4.5 Surface Water and Sediment Investigations

A limited investigation of the surface water and sediment features on Site (North Fork Deep Creek, the upper and lower mine pits, and a pond located on the tailings impoundment) were conducted as part of the EE/CA. Although the EE/CA does not address surface water, the data obtained during the investigation are included for reference purposes. North Fork Deep Creek and Site surface water monitoring will be conducted as part of long-term monitoring at the Site to document the effects of the proposed Removal Action.

2.4.5.1 North Creek Deep Creek

The North Fork Deep Creek flows from north to south through the Site, and the course of the creek has been modified from a meandering course, consistent with the stream meanders to the north of the Site, to a straight course. Width of the stream varies from 10 feet at the northern and southern boundaries of the Site to over 40 feet in the central portion of the Site.

To investigate the potential for constituents to be transported from the Site by North Fork Deep Creek, surface water and sediment samples were collected from three locations on the creek. One location was upstream of any sources from the Site (SW/SD US), one location was at the mid-point of the segment of the creek that crosses the Site (SW/SD MS), and one location was immediately downstream of any potential sources from the Site (SW/SD DS) (See Figures 4 and 5.) The upstream location is approximately 2,000 feet northeast of where North Fork Deep Creek crosses the northern Site boundary at the intersection of North Fork Deep Creek and Deep Lake Boundary Road (County Road 9445).

At each location a surface water sample and a composite sediment sample were collected and submitted to the laboratory for analysis. Sampling methodology was as described in SOPs 3 and 4 (in Appendix A of the SAP). The sediment samples were three-point composite samples with one sub-sample collected near each bank and the third collected near the center of the channel. The sub-samples were of the surface (0 to 2 inch) sediment and were composited in the field. Surface water samples were grab samples collected from near the center of the channel.

The surface water and sediment samples were analyzed for the total and dissolved inorganic COPCs, TPH and total PCBs. In addition, the surface water samples were analyzed for the major anions and cations, total and dissolved solids and hardness.

Flow was measured by determining stream velocity and depth of water at three points along the stream section and completing a standard volume calculation. The results of the flow velocity measurements are provided in Table 11. Upstream results are not comparable to other measurements because of either changes in the morphology of the stream (i.e., braided versus meandering) or instrument error.

The laboratory analytical results of the sediment and surface water samples collected from the North Fork Deep Creek are summarized in Tables 8 and 9, respectively. The results of major cations and anions are provided in Table 10. Specific conductivity, pH and major cations and anions were similar in upstream and downstream samples (Table 10).

Results of sediment analyses of North Fork Deep Creek samples indicate that cadmium, zinc, and selenium concentrations exceed applicable aquatic ecological sediment screening levels at the middle (SDMS in Table 8) and downstream (SDUS in Table 8) sampling locations. Other inorganic and organic COPCs in the sediment samples collected were below screening levels. Cadmium, zinc, and selenium in North Fork Deep Creek sediments are further considered in the streamlined risk evaluation.

The benthic layer was inspected and characterized visually; macroinvertebrates were sampled, identified, and enumerated to investigate if Site activities have affected habitat quality in the creek. At the upstream sample location, the streambed of North Fork Deep Creek is alluvial sand and gravel. The stream then enters an approximately 1,500-foot segment where the stream flows through a wetlands meadow and flow velocity is significantly reduced. Because of the characteristics of the streambed at the upstream sampling location, an alternate location was chosen at the northern Site boundary for the macroinvertebrate sampling. At that location, the bottom of the creek is fully vegetated and sediment beneath the vegetation is thick. Aerobic conditions were apparent in the upper sediment. Diversity and abundance of the benthic macroinvertebrates were typical for a stream with the characteristics of the North Fork Deep Creek (see Appendix B).

The velocity of the water decreases and the width of the stream increases as the creek flows south through the Site and the borders of the stream become indistinguishable from surrounding wetlands. The substrate of the stream and surrounding wetlands in most of the reach crossing the Site consists of thick soft anaerobic muck. At the mid-point sampling location (SW/SD MS), the muck was at least six feet deep, limiting the benthic macroinvertebrates to species that can tolerate such conditions. (See Appendix B)

Approximately 200 feet downstream of the mid-point sampling point the creek narrows again. The western stream bank is bedrock overlain by a benthic substrate of a few inches over firm clayey silt. The eastern stream bank firms slightly farther downstream. MW3 (shown on Figure 5) marks the downstream point where wetlands no longer bound both banks of the creek. Healthy streambed vegetation was present at this location and aerobic conditions were apparent in the upper sediment. South of the Site the flow rate increases as the substrate and sidewalls of the stream change to a solid clayey silt with less obtrusive vegetation.

2.4.5.2 Mine Pits

Ground water and surface water inflow has created ponds in the two former mine pits - the upper and lower mine pit ponds. The lower mine pit pond is approximately 0.7 acres and up to 20 feet deep. The upper mine pit is approximately 300 feet long and ranges from 30 to 50 feet wide with a maximum depth of 10 feet. During the fall season the upper mine pit pond contained much less water and extended over a smaller area than during the spring season.

Water at the upper and lower mine pits was profiled continuously using a temperature and dissolved oxygen probe, and at discrete intervals using a peristaltic pump at very low flow rates to collect a water sample for field measurement of pH and specific conductivity. The

results of the profile measurements for the mine pit ponds are provided in Table 12. In the upper pit, the profile parameters did not change by more than ten percent with depth, indicating that the water was not stratified. In accordance with the approved SAP only one sample was collected from approximately eight feet below the water surface to characterize the water from this pit (UPSW-8 in Table 10). In the lower pit, the profile parameters showed some change with depth suggesting that the water could be stratified as shown graphically on Figure 10. To ensure a representative sample to characterize this pit, samples were collected from the surface and the bottom (LPSW-0 and LPSW-20 in Table 10). Samples were collected using the methods described in SOP 3 (in Appendix A of the SAP). Samples were analyzed for total and dissolved inorganic COPCs, major anions and cations, total dissolved solids, hardness, TPH and PCBs.

A sediment sample was collected from the lower pit from a small boat by lowering the sediment sampler over the side of the boat (methods described in SOP 4 in Appendix A of the SAP). The lower mine pit sediments were analyzed for inorganic COPCs, TPH and total PCBs. A sediment sample was not able to be collected from the upper pit because of unsafe conditions at this mine pit. The side walls of the upper pit are extremely steep along three sides of the pit and access to the remaining side is restricted by large boulders of waste rock. Placing a small boat into the upper pond was not possible because the pond access is surrounded by near vertical rock walls.

The laboratory analytical results of the sediment and surface water samples collected from the mine pit ponds are summarized in Tables 8 and 9, respectively. The results of the cation, anion and other analyses are provided in Table 10. The surface water sample from the upper mine pit pond is designated as UPSW-8 in the tables and the samples from the lower mine pit pond are designated as LPSW-0 and LPSW-20).

The bottom of the mine pits are covered with vegetation. Algae cover the bottom of the lower mine pit, and various aquatic macrophytes cover the bottom of the upper mine pit. Fish were not observed in either pond, and avian and terrestrial wildlife were not observed to drink or feed from the mine pits but wildlife could have limited access and use of these ponds.

Lead concentrations in the sediment of the lower mine pit (LPSD-1 in Table 8) exceed human and ecological soil screening levels, and are consistent with residuals that were being mined from the mine. Barium, cadmium, selenium, and zinc also exceeded ecological screening levels in the mine pit sediment. Diesel- and oil-range TPH were present at concentrations below human and ecological screening levels. PCBs were not detected in sediments. Barium, cadmium, lead, selenium, and zinc in mine pit pond sediment are further considered in the streamlined risk evaluation.

2.4.5.3 Tailings Impoundment Pond

The area of the pond on the tailings impoundment is approximately three acres, and maximum depth is approximately four feet (Figure 5). Elevation of the pond water is several feet higher than surface water in the drainage ditches west and south of the tailings impoundment and the surface water elevation of North Fork Deep Creek. The base of the pond is vegetated; an estimated nine feet of tailings are present between the base of the pond and the underlying native soil. Ducks were observed on the pond during most of the field work. No fish were observed in the pond. Aquatic vegetation is well established around the perimeter of the pond.

Co-located water and sediment samples (TPSW/SD-1) were collected from the tailings impoundment pond at the location shown on Figure 5 to characterize the organically enriched sediment layer that has developed in the tailings impoundment. The pond was profiled from the surface to the total depth of four feet using a temperature and dissolved oxygen probe. Samples for field measurement of pH and specific conductivity were collected at the surface, 2 feet, and 4 feet using a peristaltic pump at very low flow rates. The temperature and dissolved oxygen measurements were consistent from the surface to the total depth of the pond demonstrating that the pond was not stratified. A surface water sample (TPSW-1) was collected near the center of the pond using the methods described in SOP 3 (Appendix A of the SAP). The surface water sample was submitted to the laboratory and analyzed for total and dissolved inorganic and organic COPCs, the major cations and anions, total and dissolved solids, and hardness (Tables 9 and 10). A sediment sample was collected using the methods described in SOP 4 (in Appendix A of the SAP) from the center of the pond (TPSD-1).

The laboratory analytical results of the sediment and surface water samples collected from the tailings impoundment pond are summarized in Tables 8 and 9, respectively. The results of the cation, anion and other analytes are provided in Table 10. Several of the inorganic COPCs detected in the total (i.e., unfiltered) samples were present at greater concentrations than were measured in the dissolved (filtered) samples. However, due to the limited number of samples it cannot be concluded these metals are absorbed to colloidal material within the pond water or that the unfiltered sample was disturbed during sample acquisition. Sulfate, magnesium, and sodium concentrations were elevated relative to the results of other surface water samples collected at the Site. This data, along with the observation that water level in the pond is several feet higher than nearby surface water bodies, suggests that the tailings pond exists in a perched condition above the tailings. Water drains from the surface of the tailings impoundment into the pond and evaporates slowly.

The concentration of lead in the sediment sample was the only COPC that exceeded the human soil screening levels for unrestricted land use (Sample TPSD-1 in Table 8). Barium, cadmium, lead, selenium, and zinc concentrations were above ecological screening levels. Results of the macroinvertebrate identification and enumeration, however, indicate that a rich variety of benthic invertebrates are present. Barium, cadmium, lead, selenium, and zinc in the pond sediment are further considered in the streamlined risk evaluation.

2.4.6 Wetlands

Wetlands are present between and south of the tailings impoundment and the mill area. The total area of the wetlands on the Site is approximately ten acres, though these wetlands are contiguous with much larger marshes associated with North Fork Deep Creek to the north, east, and south of the Site. A biological characterization was not conducted of the wetlands, the wetlands on the Site; however, there were no visually evident signs of phytotoxicity in the Site wetlands and appear similar to the wetlands adjacent to the Site. Although the EE/CA does not address surface water, the data obtained during the wetlands investigation are included for reference purposes. North Fork Deep Creek and Site surface water monitoring will be conducted as part of long-term monitoring at the Site to document the effects of the proposed Removal Action.

To investigate the nature and extent of inorganic and organic COPCs in the wetlands at the Site, five co-located surface water and sediment samples (SW/SD-WET1 through SW/SD-WET5) were collected in wetland areas at the Site at the locations shown on Figures 4 and

5. Sample locations were chosen in consultation with personnel from USEPA, WDOE, and USFWS. The southernmost of these locations (SW/SW-WET1 shown on Figure 4) was located in the wetland area that was found to contain elevated levels of zinc in the sediment collected as part of the Site Reconnaissance (WL-3 shown in Figure 3). Tailings were present beneath the sediment and the banks at this wetlands sampling location. This location also is proximal to Pile L discussed in Section 2.4.3.2. SW/SD-WET2 and SW/SD-WET3 were located in the wetlands west of the tailings impoundment and east of North Fork Deep Creek (Figure 5). SW/SD-WET4 and SW/SD-WET5 were located in wetlands south of the tailings impoundment (Figure 5).

A grab surface water sample was collected using the methods in SOP 3 of the SAP at each location in an area of open water. Three-point composite sediment samples were collected using the methods in SOP 4 of the SAP, with one sub-sample collected near each bank and the third collected near the center of the wetland. The sub-samples were of the surface (0 to 2 inches) sediments and were composited in the field. The surface water and the sediment samples were submitted to the laboratory and analyzed for total and dissolved inorganic COPCs, TPH, and total PCBs. The surface water samples were also analyzed for the major cations and anions, total and dissolved solids and hardness. Temperature, pH and conductivity were measured in the field at each sampling location. In addition, a benthic macroinvertebrate sample was collected at SW/SD-WET5 as discussed in a later section.

The laboratory analytical results of the sediment and surface water samples collected from the wetland sampling locations are summarized in Tables 8 and 9, respectively. The results of the cation, anion and other analyses are provided in Table 10. Several of the inorganic COPCs detected in the total (i.e., unfiltered) water samples from the wetlands were present at greater concentrations than in the dissolved (filtered) samples, consistent with the metals either being absorbed to colloidal/organic material or being disturbed during sample acquisition. Because the differences between the unfiltered and filtered wetland samples are large, the representativeness of the unfiltered surface water samples may be questionable. Calcium, sulfate, and bicarbonate concentrations are elevated in the wetland ponds south of the tailings impoundment (samples SW Wet-3 and SW Wet-4) relative to the results of other surface water sampling locations at the Site. Other results are not significantly different from other surface water sample results.

Wetland sediment COPCs concentrations did not exceed human soils screening levels for unrestricted land use in any of the samples collected. Ecological risk screening levels were exceeded for barium, cadmium, selenium, and zinc in most wetland sediment samples. Barium, cadmium, selenium, and zinc in sediment are further considered in the streamlined risk evaluation.

Wetlands at the Site are inhabited by a variety of amphibian, avian, and mammalian organisms. During the field work over 30 frogs were netted and inspected. There were no obvious abnormalities observed in any of the frogs. Small mammals were found to be plentiful in the wetlands along the creek as described in a later section. Larger mammals also use the wetlands as indicated by a muskrat den in the wetlands between the tailings impoundment and the drainage ditch and the observation of muskrats during the investigation. Deer tracks were common in the area as were cattle tracks and possibly elk tracks.

The wetlands at the Site exhibit no overt symptoms of toxicity. The sediments in most areas do not appear affected by past operations and the benthic macroinvertebrates present are

those typical of wetland environments. Ducks and other aquatic birds use the wetlands located at the Site.

The wetlands south of the mill building contain a thin organic substrate underlain by at least eighteen inches of gray silt with a trace of fine sand. Color and texture of the material beneath the organic substrate is consistent with the crushed zinc ore present in Pile L (see Section 2.4.3.2). Only dipterans and mollusca were identified in the sediment at this location.

2.4.7 Ground Water Investigations

No information on the ground water beneath the Site was collected as part of the preliminary assessment or RA. Seven existing piezometers located on or near the tailings impoundment were inspected as part of the Site Reconnaissance, but these piezometers were not deemed suitable for sampling. Three of the piezometers were dry and less than a foot of water was present at the other four locations. No water was encountered in any of the test pits excavated in the tailings impoundment. Although the EE/CA does not address ground water, the data obtained during the investigation are included for reference purposes. Ground water monitoring will be conducted as part of long-term monitoring at the Site to document the effects of the proposed Removal Action.

Four ground water monitoring wells were installed as part of the EE/CA investigation. One well was located north and up-gradient of the Site (MW-1), one well was located south and down-gradient of the Site (MW-2), and one well was located adjacent to the mine/mill area and the tailings impoundment (MW-3) as shown on Figures 4 and 5. In addition, to assess the potential for a release to ground water from the UST, a well was installed between the location of the former UST and the wetland located immediately to the southeast of the former UST (MW-4) as shown on Figure 4. The monitoring wells were installed in accordance with State of Washington regulations and protocols by a driller licensed in the State, and by the methods specified in SOP 5 (in Appendix A of the SAP) using auger drilling equipment. Depth to water in each monitoring well was measured, and ground water elevations were calculated and are presented in Table 13.

After development of the wells, a water sample was collected from each monitoring well following SOPS 6 and 7 of the SAP. The ground water samples were submitted to the laboratory and analyzed for total and dissolved inorganic COPCs, the major anions and cations, TPH, total and dissolved solids, and hardness. Temperature, pH, and conductivity were measured in the field at each sample location. The laboratory analytical results and field measurements for groundwater samples are provided in Table 14.

2.4.8 Biological Sampling

No biological sampling or characterization was performed as part of the Preliminary PA/SI, RA, or the Site Reconnaissance. As part of the work conducted under this EE/CA, the aquatic and terrestrial habitats were characterized and samples were collected of benthic macroinvertebrates and small mammals to provide information for the streamlined ecological risk evaluation.

2.4.8.1 Benthic Macroinvertebrate Sampling

Benthic macroinvertebrates were sampled from the aquatic habitats at the Site to characterize this component of the aquatic ecosystem and to obtain samples for tissue analysis. For characterization sampling, samples were taken from known areas of substrate with an Ekman dredge according to SOP 8 of the SAP. Characterization samples were collected at upstream and downstream surface water sampling locations in North Fork Deep Creek, in one of the wetland surface water sampling stations, and from the pond in the tailings impoundment. The characterization samples were preserved and submitted to the laboratory for identification and enumeration.

Results of the benthic macroinvertebrate sampling are shown in Appendix C. In general, the samples showed good diversity and abundance of macroinvertebrates except for the sample collected in the wetlands south of the mill area. Upstream and downstream benthic macroinvertebrate communities were the same, and diversity and frequency were similar. According to SECOR's biologist, the sample collected from the wetland had a benthic macroinvertebrate community typical of the anaerobic conditions that were present at the sample site; diversity and abundance of benthic macroinvertebrates in this sample were low.

Four benthic macroinvertebrate samples were collected for tissue analysis. Samples were collected at upstream and downstream surface water locations on North Fork Deep Creek, at one wetland surface water sampling station, and from the pond in the tailings impoundment. The samples were collected with an Ekman dredge in soft sediments and with a kick net in gravelly sediments according to SOP 8 of the SAP. Samples were screened in the field to remove the sediment. The organisms retained on the screens were placed into sample containers, and the containers were submitted to the laboratory in iced coolers. At the laboratory the samples were digested and analyzed for the metal COPCs.

The results of the tissue analyses of the benthic macroinvertebrate samples are provided in Table 18. Tissue analyses results do not appear to correlate to corresponding sediment concentrations or position relative to the Site. For example, in North Fork Deep Creek tissue metal concentrations were greatest at the upstream sample location. Also, zinc concentrations in benthic macroinvertebrate tissue samples from the tailings impoundment pond and SW/SD WET5 locations, which contained relatively high concentrations of zinc in the sediment, were lower than the other areas sampled.

2.4.8.2 Small Mammal Sampling

Small mammal trap lines were placed on the tailings impoundment, in the mine/mill area, and in the area immediately west of the tailings impoundment to characterize the small mammal populations at the Site and to collect specimens for whole-body tissue analysis. Snap traps were laid at 10-foot intervals and samples collected over the course of three days. A total of 135 snap traps were set at the Site as well as ten Have-a-Heart© traps. Traps were baited with peanut butter. The location of the small mammal trap lines are shown on Figure 13. Small mammals collected were identified and enumerated by area and observations were made of the collected specimens. All trapped mammals were placed in plastic bags and frozen for analysis of whole body COPCs concentrations.

A total of 25 small mammals were collected as part of the sampling. With the exception of two shrews collected along the trap line located south of the mill, all collected specimens

were deer mice. No gross abnormalities, such as skin lesions, hair loss, external growths or abnormally low body weights were observed in the small mammals collected.

The Have-a-Heart traps were not productive and all specimens were taken by snap traps. The trap line oriented north-south along the ditch was the most productive line (12 samples); the trap line oriented east-west and located south of the tailings pond was the next most productive line (8 samples). The trap line oriented north-south along the east boundary of the tailings pond was least productive (2 samples). Productivity estimates, assuming a draw of ten feet, are as follows:

- Area south of the mill – 1 shrew per 1,000 square feet;
- Area along the ditch – 1 deer mouse per 450 square feet;
- Area south of the tailings pond – 1 deer mouse per 500 square feet; and
- Area east of the tailings pond – 1 deer mouse per 3,500 square feet.

The most productive areas of the disturbed portion of the Site were the wetlands between the tailings impoundment and the mill area, and a small area south of the tailings impoundment. These areas comprise approximately eight acres of the Site.

After consultation with USEPA, a total of 6 specimens were submitted to the laboratory for whole-body tissue concentrations. At the laboratory, the samples were prepared, digested, and analyzed for the inorganic COPCs.

The results of the whole-body small mammal analyses are provided in Table 19. The greatest whole body concentration for barium and selenium was detected in sample SM-7, which was collected between the drainage ditch and North Fork Deep Creek near the southwest corner of the tailings impoundment. Sample SM-25, collected in the wetlands south of the tailings located south of the mill building, contained the greatest concentrations of cadmium and lead; copper concentration was greatest in the adjacent sample SM-24. Zinc concentration was greatest in sample SM-18 collected in the grassy area south of the tailings impoundment. A comparison of other samples collected in the same area, however, indicates that whole body concentrations are not well correlated with location. For example, samples SM-15 and SM-18, both located south of the tailings impoundment, had whole body barium concentrations of 198 and 14.1 mg/kg, respectively; selenium results for the sample pair also are quite different. The sample pair SM-24 and SM-25, both collected in the wetlands south of the mill building, had whole body barium concentrations of 44 and 21 mg/kg, respectively.

2.5 Deviations from Sampling and Analysis Plan

The following deviations from the SAP occurred.

- Samples from the white crystalline piles were not analyzed for barium, bicarbonate, and carbonate. Additional information concerning the composition of the white crystalline piles was gained by interview of a family member of the owner, and analysis for the deleted parameters was not necessary. The materials have since been removed from the Site by the landowner.

- A sample of benthic macroinvertebrates from the tailings impoundment pond was submitted to the laboratory with two species with instructions to separate the species and perform tissue analyses on each. The laboratory stated that the sample volume was insufficient for separation, and the samples were analyzed as one sample.

2.6 Streamlined Risk Evaluation

This streamlined risk evaluation for the Site was prepared using the general guidance provided in the EPA's *Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA* (EPA, 1993). This risk evaluation is intermediate in scope between limited evaluation conducted for emergency removal actions and the conventional baseline assessment normally conducted for remedial actions.

The purpose of this evaluation is to identify the chemicals of concern (COCs) by comparing the analytical results of the EE/CA and other field investigations with human health and ecological screening criteria. The results of this comparison with screening levels will confirm the potential human health and ecological risks posed by the site that justifies a removal action. The comparison will also help to focus the alternatives development by identifying the particular source or sources of contamination and associated risk. Furthermore, the results of the streamlined risk evaluation will provide the basis for developing appropriate cleanup levels as part of the Removal Action. This EE/CA will only address contaminants present in Site soil/sediments.

The extent of COPCs above human and ecological screening levels in source materials and media is summarized in Table 22. Site investigations have adequately defined the extent of the COPCs that are present in source materials, soils and sediments to proceed with this EE/CA. The source materials and affected media have been found to contain COPC concentrations above human and ecological screening levels (Table 22).

2.6.1 Human Health Streamlined Risk Evaluation

Potentially applicable risk-based concentrations for human receptors were identified for soil in Table 20 from Federal and Washington State established criteria for the protection of human health. Some of the listed criteria include multiple pathways for potential exposures. Other relevant criteria, including Washington State background concentrations and analytical practical quantification limits (PQLs), were considered when selecting screening levels (Table 20).

The potential adverse human health effects attributable to the Site soils/sediments could occur to the following receptors from specific source materials and affected media:

Future On-Site Resident:

- Tailings impoundment (barium and lead)
- Tailings and ore piles south of the mill (barium, cadmium, and lead); and
- Mill area surface soils (barium, cadmium, lead, zinc, diesel and oil range petroleum organics).

Future Industrial/Construction Worker:

- Tailings and ore piles south of mill (lead)
- Mill area surface soils (lead, diesel and oil range petroleum organics).

Recreational Visitor/Trespasser:

- Tailings and ore piles south of the mill (lead)
- Mill area surface soils (lead, diesel and oil range petroleum organics).

Mine Pit sediments exceeded screening criteria for human exposure; however since these sediments are not accessible to potential human receptors, they were removed from further consideration in the EE/CA. The only unacceptable potential impacts are from Site source materials and affected soils through the ingestion and direct contact exposure pathways. The mill area surface soils, tailings, and ore piles south of the mill exceeded screening criteria for all potential human receptors at the Site.

The COCs for the Future On-Site Resident are barium, cadmium, lead, zinc, diesel and oil range petroleum organics. The COCs for the Future Industrial/Construction Worker and Recreational Visitor/Trespasser are lead, diesel and oil range petroleum organics.

2.6.2 Human Health Streamlined Risk Evaluation Uncertainty Analysis

Screening level criteria are based on a series of conservative assumptions regarding exposure and toxicity. For example, although the true exposure area at the Site could potentially be the entire Site area, screening was evaluated for discrete exposure points within the Site area. Since the tailings and ore piles south of the mill represent only a small area, actual risk to humans from the tailings and ore piles might be less because exposure may not be limited to solely these piles while at the Site. In addition, the Anderson-Calhoun Mine Site is located in a rural area with few adjacent residences, which may also limit exposure.

2.6.3 Ecological Streamlined Risk Evaluation

Potentially applicable risk-based concentrations for ecological receptors were identified for soil/sediment in Table 22 from Federal and Washington State established criteria for ecological protection. Each Federal and State applicable criterion is identified in the tables. Washington accepted background concentrations and standard PQLs are also included on the tables, since screening levels or cleanup levels cannot be below background or analytical PQLs. The streamlined nature of an EE/CA uses the clean-up goal as the screening concentration rather than a more conservative toxicity threshold value used in more detailed ERAs that involve multiple iterations. Interpretation of results using the MTCA criteria in some cases relies on more detailed analyses of recent Federal summaries, in particular for:

- Barium in soils for mammalian receptors;
- Cadmium in soils for avian and mammalian receptors; and
- Zinc in soils for plant receptors.

Aquatic Resources/Receptors

Surface water and ground water were not addressed by the EE/CA. North Fork Deep Creek, Site surface water, and ground water monitoring will be conducted as part of long-term monitoring at the Site to document the effects of the proposed Removal Action.

Terrestrial Resources/Receptors

Under the Streamlined Risk Evaluation, potential risks to environmental receptors were identified in soils/sediments at multiple areas on the Site. In the following table, these areas are furthered compared to the corresponding streamlined human health evaluation, and comments/discussion provided for the retention/removal of these areas in the development of the Removal Action scope, goals, and objectives.

Location	Risk to Human Receptors	Comment/Discussion
Tailings Impoundment soils	Yes - Future On-site Resident No - Future Industrial/ Construction Worker, Recreational Visitor/ Trespasser	Retain for consideration in development of Removal Action scope, goals, and objectives
Tailings Impoundment sediment	Yes - Future On-site Resident No - Future Industrial/ Construction Worker, Recreational Visitor/ Trespasser	Retain for consideration in development of Removal Action scope, goals, and objectives
Mill Area Soils (including Tailings/Ore Piles, and stained soils)	Yes - Future On-site Resident Yes - Future Industrial/ Construction Worker, Recreational Visitor/ Trespasser	Retain for consideration in development of Removal Action scope, goals, and objectives
Wetland Sediments	No - Future On-site Resident No - Future Industrial/ Construction Worker, Recreational Visitor/ Trespasser	Waterfowl were observed on the tailings impoundment pond, and in the associated, nearby wetlands. It is not unreasonable to expect that nesting waterfowl would, in fact, derive their entire food source from these local wetlands during important life stages. Retain for consideration in development of Removal Action scope, goals, and objectives
Lower Mine Pit Pond Sediment	No - Future On-site Resident (no exposure route) No - Future Industrial/ Construction Worker, Recreational Visitor/ Trespasser	Although ecological screening criteria were exceeded, there are no exceedences for human receptors. Include in Site Long Term Monitoring to evaluate effects of proposed Removal Action.

Location	Risk to Human Receptors	Comment/Discussion
Downwind Transect Soils	No - Future On-site Resident No - Future Industrial/ Construction Worker, Recreational Visitor/ Trespasser	Although ecological screening criteria were exceeded, there are no exceedences for human receptors. Include in Site Long Term Monitoring to evaluate effects of proposed Removal Action.
North Fork Deep Creek Sediment	No - Future On-site Resident No - Future Industrial/ Construction Worker, Recreational Visitor/ Trespasser	Although ecological screening criteria were exceeded, there are no exceedences for human receptors. Include in Site Long Term Monitoring to evaluate effects of proposed Removal Action.

The COCs for the ecological receptors are barium, cadmium, lead, selenium, zinc, and diesel range petroleum organics.

2.6.4 Ecological Streamlined Risk Evaluation Uncertainty Analysis

In reviewing the results of the ecological streamlined risk evaluation, it should be emphasized that the screening level criteria are based on a series of conservative assumptions regarding exposure and toxicity. For example, although the true exposure area at the Site could potentially be the entire Site area, screening was evaluated for discrete exposure points within the Site area. In addition, the screening criteria utilize several assumptions related to the representativeness of the indicator receptors, their uniform use of the site, bioaccessibility to and bioavailability of individual, respective contaminant.

During data gathering events, qualitative observations of habitat conditions, including obvious overt signs of deleterious effects from the metal COPCs on vegetation and resident wildlife populations were made. These casual observations of “healthy” or “normal” organisms are inherently unreliable indicators of toxic effects; however, such observations can be important factors in building weight-of evidence determinations regarding potential risks to ecological receptors.

3.0 IDENTIFICATION OF REMOVAL ACTION SCOPE, GOALS, AND OBJECTIVES

This section presents the objective for the proposed removal action at the site. The purpose, scope, and scheduling requirements for implementation of the removal action alternatives are also described in this section in order to define removal action requirements based on time, budget, technical feasibility, and relevant criteria and standards.

3.1 Statutory Limits

To the extent that a private entity undertakes the proposed CERCLA removal action, the statutory limits (monetary ceiling and duration) for fund-financed removal actions do not apply.

3.2 Scope of the Removal Action

The removal actions presented within this EE/CA are intended to address the human health and ecological risks identified within the streamlined human health and ecological risk evaluations.

3.3 Goals and Objectives of the Removal Action

The goal of this EE/CA is to effectively address the mine waste related contamination associated with former mining and milling activities in soil and sediment at the Site, and to reduce the potential for this affected media to act as a source to surface water and ground water, in a manner that is protective of human health and the environment and to attain applicable or relevant and appropriate requirements (ARARs) to the extent practicable considering the exigencies of the situation

Based on the potential human health and ecological risks identified for the Site, the following removal action objectives (RAOs) have been identified for the Site:

- Reduce exposure of potential future residents to Site tailings impoundment, tailings and ore piles south of the mill (including oil-stained soils), and mill area soils via direct contact and ingestion exposure pathways;
- Reduce exposure of recreational visitors/trespassers and potential industrial/construction workers to the tailings and ore piles south of the mill (including oil-stained soils); and
- Reduce exposure of waterfowl to sediments and associated benthic macroinvertebrates in the pond on the tailings impoundment and wetlands adjacent to the impoundment.

3.4 Compliance with ARARs and Other Criteria

Section 300.415(i) of the NCP provides that removal actions pursuant to CERCLA section 106 attain ARARs under Federal or State environmental laws or facility siting laws, to the extent practicable considering the urgency of the situation and the scope of the removal. In addition to legally binding laws and regulations, many federal and state environmental and public health programs also develop criteria, policies, guidance, and proposed standards that are not legally binding; however, they may provide useful information or recommended procedures. These “To Be Considered” materials or “TBCs” are not potential ARARs, but

are evaluated along with ARARs. Applicable ARARs and TBCs for this EE/CA are summarized in Appendix E.

3.5 Determination of Removal Schedule

The general schedule for removal activities, including both the start and completion time for the action, will be subject to negotiation of another AOC with the Respondents for conduct of the action itself.

4.0 IDENTIFICATION AND ANALYSIS OF REMOVAL ACTION ALTERNATIVES

Based on the analysis of the nature and extent of contamination and on the cleanup objectives developed in the previous section, a limited number of alternatives appropriate for addressing the removal action objectives were identified.

4.1 Identification of Potential Removal Action Alternatives

The potential removal action alternatives considered are:

- No action;
- Institutional controls;
- Containment;
- Consolidation; and
- Excavation.

For the purposes of this analysis, monitoring alone was not considered as a specific alternative. However, monitoring is considered to have application with all alternatives to determine whether or not a technology is achieving RAOs and to evaluate its continuing effectiveness.

4.1.1 No Action

This alternative would leave the existing conditions as they currently exist. Contamination that is present would remain in-place, and no removal actions would be taken.

4.1.2 Institutional Controls

Institutional controls include administrative and/or legal controls and access modifications that help to minimize the potential for human exposure to contamination and protect the integrity of an action. Monitoring and maintenance is required to ensure the continuing effectiveness of an action.

4.1.3 Containment

In-place and on-site containment alternatives are directed at controlling contaminant movement and preventing contaminated media from coming into contact with potential receptors. Containment includes capping or covering with a variety of materials including gravel, soil, and vegetation.

4.1.4 Consolidation

The foot-print of contaminated media could be reduced by excavating contaminated soil and sediments and hauling the materials to be contained elsewhere on-site. Consolidation would minimize the long-term need for maintenance and possibly reduce access and use modifications.

4.1.5 Excavation

The excavation (removal) of contaminated materials would eliminate the human health and ecological exposure pathways of concern. The excavated materials would be consolidated and contained elsewhere on-site.

4.2 Identification of Removal Action Alternatives

The following alternatives have been developed to provide a range of alternatives to compare effectiveness in addressing the removal action objectives with costs and implementation issues. Removal alternatives were developed to meet the major ARAR (MTCA) requirements [WAC 173-340-360(2)(a)] which include:

- Protect human health and the environment.
- Comply with cleanup standards.
- Comply with applicable laws and regulations (MTCA).
- Provide for compliance monitoring.

Other requirements of cleanup actions that must be considered per MTCA regulation WAC 173-340-360(2)(b) are:

- Use permanent solutions to the maximum extent practicable;
- Provide for reasonable restoration time frame; and
- Consider public concerns.

Based on the identification and analysis of the foregoing removal action alternatives and compliance with ARARs and other criteria, the following alternatives are selected for detailed analysis:

4.2.1 Alternative 1 – No Action

This alternative would leave mine waste contaminated materials in-place with no change in existing conditions. This alternative provides a baseline against which to compare the removal action alternatives.

4.2.2 Alternative 2 – Institutional Controls

This alternative would help to minimize the potential for human exposure to contamination through constructing fences or other barriers around certain areas such as the tailings and ore piles south of the mill building and oil-stained soils to prevent or limit access (refer to Figure 15). Signs to provide location-specific warnings will be placed on fencing. This alternative also would include deed and land use restrictions to prevent residential use at the tailings impoundment, tailings and ore piles south of the mill building and certain soils in the mill area (refer to Figure 15).

A long-term monitoring and maintenance program would be implemented to ensure the continuing effectiveness of the institutional controls and to monitor site conditions.

4.2.3 Alternative 3 – Institutional Controls and Excavation, Limited Consolidation, and Containment

In addition to the institutional controls described in Alternative 2, this alternative would help to minimize the potential for human health exposure to contamination through excavating the tailings/ore piles south of the mill building, oil-stained soils, and staged (mounded) underground storage tank (UST) soils near the mill building and consolidating the materials on-site beneath a protective barrier consisting of six inches of clean soil material and six inches of surface armor rock. All areas affected by the action will be graded to control for surface water run-on and run-off. Ecological exposures will be minimized by placing 12 inches of clean soil material over the tailings impoundment pond and filling the wetlands along the west and south sides of the tailings impoundment and immediately south of the mill area with clean, local rock, where warranted by contaminant concentrations. The pond would be vegetated with native plant species to accelerate re-establishment of the wetland, and the wetlands filled with rock would be mitigated by creating new wetlands (at a 1:1 ratio) south of the tailings impoundment. Large woody debris (LWD) would be placed along the perimeter of the impoundment to protect the surface of the impoundment. Refer to Figure 16 for a schematic representation of A3. Best Management Practices (BMPs) would be implemented during construction to protect workers, the community, and the environment from short-term construction impacts such as erosion, fugitive dust, and other similar potential impacts.

A long-term monitoring and maintenance program would be implemented to ensure the continuing effectiveness of the removal action, particularly with respect to surface water and ground water, and to monitor site conditions. As part of the monitoring program, annual or episodic inspections of capped and rock filled areas, as well as existing drainage systems would be evaluated for functionality, and the soil cover placed on the tailings pond would be cored at several locations, inspected for clean soil cover thickness and analyzed to verify that the COCs remain adequately contained.

4.2.4 Alternative 4 – Institutional Controls and Excavation, Greater Consolidation, and Containment

In addition to the institutional controls described in Alternative 2, this alternative would minimize the potential for human health exposure to contamination by reducing the overall footprint of the tailings impoundment and reducing ecological exposure by eliminating the impoundment pond and by filling the wetlands found along the west and south sides of the impoundment and immediately south of the mill area with clean, local rock, where warranted by contaminant concentrations. The tailings, ore piles, and oil-stained soils would be excavated and consolidated into a smaller footprint of the existing impoundment. While the footprint would likely decrease by about 60 percent, the height would increase by more than 40 feet. The impoundment would be covered with a one-foot thick cap of clean soil, and the impoundment would be sloped at 2.5:1. The cap would be vegetated, and LWD would be placed along its side slopes to discourage vehicular entry. Figure 17 provides a schematic layout of A4, and a cross-section of the impoundment is provided in Figure 18.

A long-term monitoring and maintenance program would be implemented to ensure the continuing effectiveness of the removal action, particularly with respect to surface water and ground water, and to monitor site conditions. As part of the monitoring program, annual or episodic inspections of capped and rock filled areas, as well as existing drainage systems would be evaluated for functionality, and the soil cover placed on the tailings pond would be

cored at several locations, inspected for clean soil cover thickness and analyzed to verify that the COCs remain adequately contained.

5.0 COMPARATIVE ANALYSIS OF REMOVAL ACTION ALTERNATIVES

In this section, removal action alternatives are analyzed against the short- and long-term aspects of three criteria: effectiveness, implementability, and cost. Each of these criteria is described below.

Effectiveness – How well each alternative (1) protects public health and the environment, including long-term effectiveness and permanence and short-term effectiveness, and (2) complies with ARARs.

Implementability – The technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation.

Cost - The direct and indirect capital costs and annual post removal site control (PRSC) costs associated with an alternative.

The analysis of the four alternatives is summarized below.

- **Alternative 1 – No Action:** This alternative does not address the RAOs of reducing the human health risks and ecological threats associated with direct exposure to source materials and site contaminants. This alternative has the least cost, but threats to public and health are not reduced by this alternative.

- **Alternative 2 – Institutional Controls:** This alternative provides greater protection of public health from direct exposure than Alternative 1, but significantly less than Alternatives 3 and 4, which include partial removal and/or containment. Fencing would restrict access to the site, but does not prevent possible direct exposure to source materials and site contaminants by trespassers and potential ecological receptors.

- **Alternative 3 – Institutional Controls and Excavation, Limited Consolidation, and Containment:** Alternatives 3 meets the MTCA protection threshold for human exposures because the deed restrictions would eliminate residential land use of the Site and capping of the tailings and ore piles south of the mill would keep other humans receptors from contacting source materials. Alternatives 3 provides protection to the environment by eliminating waterfowl contact with impacted sediments by capping the tailings impoundment pond and filling other impacted wetlands with waste rock. The wetland losses would be mitigated by the construction of a new wetland in the soil borrow area.

- **Alternative 4 – Institutional Controls and Excavation, Greater Consolidation, and Containment:** Alternatives 4 meets the MTCA protection threshold for human exposures because the deed restrictions would eliminate residential land use of the Site and capping of the tailings and ore piles south of the mill would keep other humans receptors from contacting source materials. Alternatives 4 provides protection to the environment by eliminating waterfowl contact with impacted sediments by capping the tailings impoundment pond and filling other impacted wetlands with waste rock. The wetland losses would be mitigated by the

construction of a new wetland in the soil borrow area. Alternative 4 further reduces the overall footprint of the tailings impoundment.

Below is a summary of comparative evaluation of the alternatives with regard to effectiveness, implementability and cost.

Effectiveness:

Alternative 1, the No Action Alternative, does not mitigate potential human exposure pathways and would not eliminate the risks that were identified in the streamlined risk evaluation (Section 3) and, therefore, is not deemed protective. Alternative 2 reduces human exposures by the use of institutional controls, but does not reduce the potential to ecological exposures and risks associated with wetland sediments. Therefore, Alternative 1 and 2 are not deemed to be protective of the environment.

Alternatives 3 and 4 meet the MTCA protection threshold for human exposures because the deed restrictions would eliminate residential land use of the Site and capping of the tailings and ore piles south of the mill would keep other humans receptors from contacting source materials. Alternatives 3 and 4 provide protection to the environment by eliminating waterfowl contact with impacted sediments by capping the tailings impoundment pond and filling other impacted wetlands with waste rock. The wetland losses would be mitigated by the construction of a new wetland in the soil borrow area.

The long-term effectiveness and reliability is scored based on professional judgment and experience in the ability of the removal actions to achieve and maintain their estimated effectiveness. For human receptors, deed restrictions are effective for reducing potential residential use of the Site, because any development requires permits from local agencies in accordance with zoning and deed restrictions, which follow the property in perpetuity.

Alternatives 3 and 4 involve commonly used and practiced earth moving construction equipment and methods. The major exposure risk to humans would be associated with the tailings and ore piles south of the mill. Both Alternatives 3 and 4 excavate and consolidate this material, but potential worker exposures would be expected to be slightly greater for Alternative 4 because of the haul distance to the tailings impoundment. The magnitude of the construction effort for implementing Alternative 4 is much greater than Alternative 3 and would have a higher probability for worker accidents to occur. Therefore, Alternative 3 poses less short-term worker risk than Alternative 4.

For environmental risk, both Alternatives 3 and 4 would use stormwater and dust suppression BMPs for controlling and minimizing impacts during construction operations; the complexity required for construction BMPs will be much greater, however, for Alternative 4. The noise and human activity during implementation of both alternatives may disrupt wildlife. Because the degree of risk to the environment and the time frame for ecological disturbance depends on the magnitude of construction activities, Alternative 3 poses a lower short-term risk to the environment than Alternative 4.

Implementability:

Alternative 1 is implementable as it does not involve any active removal actions. Alternative 2 is easy to implement when compared to Alternatives 3 and 4. Alternatives 3 and 4 have similar implementation issues. Both capping alternatives would be relatively easy to

implement because both alternatives use common construction techniques and equipment and employ similarly skilled workers. Alternative 4 involves greater amount of construction activities and time than Alternative 3. Alternatives 3 and 4 involve the destruction and mitigation of wetlands adjacent to the tailings impoundment and the mill.

Cost:

The estimated current costs for the alternatives are presented in Table 23 and detailed in Appendix G. The costs include inspection and monitoring (IM) operational costs estimated as present value using a discount factor of 3 percent (interest net of inflation). The cost for Alternative 4 ($5,145,000) is the highest with Alternative 3 cost ($1,463,000) which is lower than that of Alternative 4. The cost of Alternative 1 is zero, while the cost of Alternative 2 ($111,000) is much lower than that of Alternatives 3 and 4.

The cost estimates in this EE/CA are based on the description of the alternatives and associated conceptual design assumptions presented in this EE/CA. The design assumptions used here are representative and sufficient for the purposes of comparative evaluation of the alternatives, but are not necessarily the same as the design basis that would be used for the final, detailed design. Pre-design investigations (i.e., borrow source investigations and topographic mapping) will be included in the final design phase for any of the action remedies, and the results of those investigations could result in changes from the preliminary designs presented in this EE/CA.

The cost estimates were prepared to allow comparative evaluation of alternatives, not for budgeting purposes. The design basis is subject to change during final, detailed design of the selected alternative, and these changes would affect the cost of the remedy. The uncertainties in the EE/CA designs and associated cost estimates are such that actual costs could vary significantly from these estimates. However, the uncertainty in the *relative* cost of the alternatives is much less than the uncertainty in the magnitude of the costs, and these cost estimates are suitable for comparative evaluation of the alternatives.

Under WAC 173-340-360(3)(e), a cleanup action shall not be considered practicable “if the incremental cost of the alternative over that of a lower cost alternative exceeds the incremental degree of benefits achieved by the alternative over that of the other lower cost alternative”. The disproportionate cost analysis is only used for the alternatives that meet the minimum threshold criteria and provide an appropriate level of protection for the identified risks at the Site. Alternatives 3 and 4 achieve the MTCA minimum threshold requirements and are compared in this disproportionate cost analysis. MTCA regulations refer to incremental cost and benefit. Alternative 4 capital and operational IM costs total over $5 million, whereas Alternative 3 totals about $1.46 million. Alternative 4 does not provide additional protection to humans and only provides a slightly higher degree of protection to environmental receptors over Alternative 3. Alternative 3 provides lower short-term risks and is slightly more implementable compared to Alternative 4.

This evaluation reveals that Alternative 3 has a better incremental cost to incremental benefit than Alternative 4. Alternative 4 appears to provide slightly more overall benefits in higher hierarchy of beneficial criteria.

6.0 RECOMMENDED REMOVAL ACTION ALTERNATIVE

Alternative 3 best satisfies the evaluation criteria based on the comparative analysis in the previous section.

In summary, Alternatives 1 and 2 do not meet these criteria: (1) protection of human health and the environment; (2) compliance with ARARs; (3) attainment of cleanup standards through remediation levels; and, (4) provision for compliance monitoring. Alternatives 3 and 4 do achieve the minimum threshold requirements. The restoration time frame for Alternatives 3 and 4 are not significant discriminators between them. Alternative 3 provides a better overall permanent remedy to the maximum extent practicable than Alternative 4 given its similar benefits to Alternative 4 and a more proportionate improvement for cost to benefit evaluation. Therefore, Alternative 3 (Consolidate and Cap Tailings and Ore Piles and Fill Adjacent Wetlands) is the preferred alternative for the Anderson-Calhoun Mine Site.

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TABLES

TABLE 1

Results of Laboratory Analyses of Tailings Impoundment Samples
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Type of Tailings	Depth (inches)	Barium	Cadmium	Copper	Lead	Selenium	Zinc
TP-1 (native soil)	11/3/03		126	219	1.3	20	<10	27	28
TP-3 surface	11/3/03	Barium	0-4	104,900	5.4	59	21	<10	759
TP-3 surface	11/3/03	Barium	4-10	123,100	5.0	57	16	<10	618
TP-3 subsurface	11/3/03	Zinc	96	2,486	3.8	40	207	<10	1,375
TP-4A surface	10/12/04	Barium	0-2	75,000	8.3	72	32	32	970
TP-4B subsurface	10/12/04	Barium	18	300	5.5	110	560	7[a]	2,200
TP4-C subsurface	10/12/04	Zinc	27	30	3.4	37	380	<2.1[a]	1,400
TP-4D (native soil)	10/12/04		168	170	2.8	36	85	<2.6[a]	110
TP-5A surface	10/12/04	Barium	0-2	72,000	8.9	75	21	35	940
TP-5B subsurface	10/12/04	Zinc	30	76	1.5	27	210	<3.3[a]	1,000
TP-5E subsurface	10/12/04	Zinc	10	50	3.1	42	260	<2.2[a]	1,000
TP-5C (native soil)	10/12/04		180	550	3.9	16	170	7.9[a]	290
TP-6A surface	10/12/04	Barium	0-2	340	3.7	38.	160.	<2.3[a]	1,700
TP-6B subsurfae	10/12/04	Zinc	30	20	4.3	34	130	<2.2[a]	2,000
TP-6C subsurface	10/12/04	Zinc	18	31	4.5	20	130	<1.3[a]	1,500
TP-6C (native soil)	10/12/04		144	480	<0.91	28	37	39	50
Human-Unrestricted Screening Level (see Table 20)				16,000	80	3,200	250	400	24,000
Human-Industrial Screening Level (see Table 20)				700,000	3,500	140,000	1,000	17,500	unlimited
Terrestrial Ecological Screening Level (see Table 22)				102	14	217	118	2.0	360
Arithmetic Mean Barium Tailings Concentrations				62,600	6.1	69	135	14.2	1,200
Upper 95% Confidence Limit on Mean for Barium Tailings (Normal)				105,000	7.8	88	312	26.6	1,700
Upper 95% Confidence Limit on Mean for Barium Tailings (Lognormal)				undefined	29.1	361	53,500	134	11,400
Arithmetic Mean Zinc Tailings Concentrations				449	3.4	33	220	1.8	1,400
Arithmetic Mean Concentration in Soil Beneath Tailings				355	2.1	25	74	18.8	120
Arithmetic Mean for all Tailings Concentrations				31,500	4.8	51	177	8	1,200
Upper 95% Confidence Limit on Mean for all Tailings (Normal)				55,600	5.8	64	260	14.1	1,540
Upper 95% Confidence Limit on Mean for all Tailings (Lognormal)				undefined	6.5	69	719	34.5	1,640

Notes:

Results are reported in milligrams per kilogram (mg/kg)

a - Selenium results are either estimated concentrations or represent the laboratory Method Detection Level (MDL)

means not representive distribution using statistical tests of population

TABLE 2

Results of Laboratory Analyses of Tailings and Ore Piles South of the Mill
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	Composition	Barium	Cadmium	Copper	Lead	Selenium	Zinc
SS Mill 1-2"	10/13/04	2	Tailings	47,000	2.9	31	81	19	560
SS Mill 2-2"	10/13/04	2	Tailings	44,000	7	60	110	20	1,300
SS Mill 3-2"	10/13/04	2	Crushed Ore	73	120	98	4,500	4.5	31,000
SS Mill 3-5" (native soil)	10/13/04	5	may contain tailings	380	110	110	7,900	<1.2[a]	31,000
SS Mill 3-22" (native soil)	10/13/04	22	may contain tailings	28	47	35	1,300	<6.3[a]	5,300
SS Mill 4-2"	10/27/04	2	Tailings	47,000	2.3	34	<7.2	16	310
SS Mill 4-18" (native soil)	10/13/04	18	may contain tailings	75,000	7.6	51	*38*	29	830
Human Unrestricted Screening Level (see Table 20)				16,000	80	3,200	250	400	24,000
Human Industrial Screening Level (see Table 20)				700,000	3,500	140,000	1,000	17,500	unlimited
Terrestrial Ecological Screening Level (see Table 22)				102	14	217	118	2.0	360
Arithmetic Mean of Tailings Concentrations				46,000	4.1	42	65	18	723
Arithmetic Mean of Tailings & Soils South of Mill				30,497	42	60	1,990	13	10,043
95% UCL of the Mean for Tailings & Soils South of Mill (normal)				52,500	79	87	4,140	21	20,185
95% UCL of the Mean for Tailings & Soils South of Mill (Lognormal)				undefined	3,350	103	undefined	325	undefined

Notes:
Results are reported in milligrams per kilogram (mg/kg)
a - Selenium results are either estimated concentrations or represent the laboratory Method Detection Level (MDL)

means not representive distribution using statistical tests of population

TABLE 3

Results of Laboratory Analyses of White Crystalline Piles
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulfate	Nitrate/ Nitrite
WCWP-1	10/27/04	0-2	400,000	2,500	<110	110	<3.7	24	<0.76
WCWP-2	10/27/04	0-2	330,000	16,000	130	150	3.8	71	<0.68
WCWP-3	10/27/04	0-2	300,000	15,000	120	<110	<3.6	16	<0.73

Results are reported in mg/kg

TABLE 4

Results of Laboratory Analysis of Stained Soil at Transformer 1-3
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	PCBs
TMR 1-3	10/27/04	0-2	<0.1
Human-Unrestricted Screening Level (see Table 20)			0.5
Human-Industrial Screening Level (see Table 20)			10
Terrestrial Ecological Screening Level (see Table 22)			0.65

Results are reported in mg/kg

TABLE 5

Results of Parameters Detected in Soil Samples from the Assay Dump Area
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	Phenol	2-Methylphenol	3,4-Methylphenol	2,4-Dimethylphenol	BIS (2-Ethylhexyl) Phthalate
ALD-1	10/27/04	0-2	1.1	0.33	1.6	0.7	<0.16
ALD-2	10/27/04	0-2	<0.2	<0.2	<0.2	<0.2	0.58
ALD-3	10/27/04	0-2	<0.1	<0.1	<0.1	<0.1	<0.130
Human-Unrestricted Screening Level (see Table 20)			24,000	1,600	4,000	4,000	71
Human-Industrial Screening Level (see Table 20)			unlimited	70,000	175,000	175,000	9,370
Terrestrial Ecological Screening Level (see Table 22)			300	n/a	n/a	n/a	230

Notes:

Results are reported in mg/kg
n/a means none available

TABLE 6

Results of Laboratory Analyses of Former Underground Storage Tank Samples
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	TPH - Gasoline Range	TPH - Diesel Range	TPH - Lube Oil Range
UST-1	10/12/04	18	<3	<29	<58
UST-2	10/12/04	18	<3	110	260
UST-3	10/12/04	18	<3	<25	75
UST-4	10/12/04	18	<3	<25	<50
UST-5	10/12/04	50	<4	<30	<60
UST-6	10/12/04	50	<8	<64	<130
Human-Unrestricted Screening Level (see Table 20)			30	2,000	2,000
Human-Industrial Screening Level (see Table 20)			30	2,000	2,000
Terrestrial Ecological Screening Level (see Table 22)			100	200	n/a

Notes:

Results are reported in mg/kg
n/a means none available

TABLE 7

Results of Laboratory Analyses of Soil Samples South of the Mill
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	TPH - Gasoline Range	TPH - Diesel Range	TPH - Lube Oil Range
SE SOIL 1A	10/13/04	0-2	<3	15,000	50,000
SE SOIL 2A	10/13/04	0-2	<3	4,500	23,000
Human-Unrestricted Screening Level (see Table 20)			30	2,000	2,000
Human-Industrial Screening Level (see Table 20)			30	2,000	2,000
Terrestrial Ecological Screening Level (see Table 22)			100	200	n/a

Notes:

Results are reported in mg/kg
n/a means none available

TABLE 8

Results of Laboratory Analyses of Sediment Samples
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Barium	Cadmium	Copper	Lead	Selenium	Zinc	TPH-Gasoline Range	TPH-Diesel Range	TPH-Lube Oil Range	PCBs
Composite of SD WET 1 E,M,&W	10/26/04	190	<0.86	20	26	11	1,100	<4	<26	<52	<0.1
Composite of SD WET 2 E,M,&W	10/26/04	280	3.6	26	91	3.1[a]	3,900	<4	<32	<64	<0.1
Composite of SD WET-3 N,M,&S	10/26/04	1,400	<1.7	31	100	13[a]	1,400	<5	<42	<84	<0.1
Composite of SD WET-4 N&M	10/26/04	1,200	<1.5	38	33	4.4[a]	860	<6	<52	<100	<0.1
Composite of SD WET 5 N,M,&S	10/26/04	2,700	6.2	38	77	39	2,600	<8	<73	<150	<0.1
SDDS	10/12/04	<2.9	3.4	24	43	<1.9[a]	1,900	<5	<38	<76	<0.1
SDMS	10/27/04	<3.5	5.3	33	40	19	1,100	<6	<59	<120	<0.1
SDUS	10/12/04	<4.7	<1.2	3.6	11	<3.2[a]	54	<3	<25	<50	<0.1
TPSD-1	10/26/04	450	6.1	77	680	<5.3[a]	2,100	--	--	--	--
LPSD-1	10/27/04	130	39	33	1,400	18	16,000	<3	140	820	<0.1
Human-Unrestricted Screening Level (see Table 20)		16,000	80	3,200	250	400	24,000	30	2,000	2,000	0.5
Human-Industrial Screening Level (see Table 20)		700,000	3,500	140,000	1,000	17,500	unlimited	30	2,000	2,000	10
Ecological Screening Level (see Table 22)		102	1.0	80	335	2.0	140	100	200	n/a	60
Arithmetic Mean		636	6.6	32.4	250	11.3	3,100	NA	NA	NA	NA
95% UCL of the Mean (normal)		1150	13.4	43.20	511	18.1	5,800	NA	NA	NA	NA
95% UCL of the Mean (Lognormal)		undefined	45.5	73.00	1,900	54.9	28,100	NA	NA	NA	NA

Notes:

Results are reported in milligrams per kilogram (mg/kg)
a - Selenium results are either estimated concentrations or represent the laboratory Method Detection Level (MDL)
means not representive distribution using statistical tests of population
n/a means none available

TABLE 9

Results of Metals Analyses in Surface Water Samples
Anderson-Calhoun Mine Site, Washington

		Total Metals						Dissolved Metals					
Location Identifier	**Date Sampled**	**Barium**	**Cadium**	**Copper**	**Lead**	**Selenium**	**Zinc**	**Barium**	**Cadium**	**Copper**	**Lead**	**Selenium**	**Zinc**
TPSW-1	10/26/04	0.3	0.003	<0.005	<0.003	0.09	0.01	0.18	<0.002	<0.005	<0.003	<0.002	<.01
LPSW-0	10/26/04	0.1	<0.002	<0.005	<0.003	0.002	2.3	0.1	<0.002	<0.005	<0.003	<0.002	2.2
LPSW-20	10/26/04	0.1	<0.002	<0.005	0.003	<.002	2	0.1	<0.002	<0.005	<0.003	<0.002	2
UPSW-0	10/26/04	0.07	<0.002	<0.005	<0.003	0.09	0.28	0.06	<0.002	<0.005	<0.003	<0.002	0.22
SW WET-1	10/26/04	0.21	<0.002	<0.005	<0.003	0.002	0.14	0.17	<0.002	<0.005	<0.003	<0.002	0.11
SW WET-2	10/26/04	0.2	<0.002	<0.005	<0.003	0.04	0.08	0.17	<0.002	<0.005	<0.003	<0.002	0.02
SW WET-3	10/26/04	0.18	<0.002	<0.005	<0.003	0.07	0.1	0.17	<0.002	<0.005	<0.003	<0.002	0.09
SW WET 4	10/26/04	1.1	<0.002	<0.005	<0.003	0.06	0.08	0.65	<0.002	<0.005	<0.003	<0.002	0.04
SW WET 5	10/26/04	0.63	<0.002	<0.005	<0.003	0.002	0.03	0.59	<0.002	<0.005	<0.003	<0.002	0.02
SWDS	10/26/04	0.13	<0.002	<0.005	<0.04	0.001	0.02	0.13	<0.002	<0.005	<0.04	<0.001	0.02
SWMS	10/26/04	0.11	<0.002	<0.005	<0.04	0.002	0.05	0.11	<0.002	<0.005	<0.04	<0.001	0.05
SWUS	10/26/04	0.06	<0.002	<0.005	<0.04	0.001	0.01	0.06	<0.002	<0.005	<0.04	<0.001	0.01
Arithmetic Mean		0.265	NA	NA	NA	0.03	0.425	0.208	NA	NA	NA	NA	0.399
95% UCL of the Mean (normal)		0.42	NA	NA	NA	0.050	0.85	0.31	NA	NA	NA	NA	0.81
95% UCL of the Mean (Lognormal)		0.52	NA	NA	NA	1.000	5.10	0.36	NA	NA	NA	NA	1.86

Notes:

Results reported in milligrams per liter (mg/L)
NA means not applicable, because if no detections

TABLE 10

Results of Other Analyses in Surface Water Samples
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Calcium	Magnesium	Potassium	Sodium	Nitrate/ Nitrite	Sulfate	Chloride	Bicarbonate
TPSW-1	10/26/04	59	57	6	3.2	<1.9	190	<3.4	316
LPSW-0	10/25/04	86	35	1	2.4	<0.62	56	0.93	373
LPSW-20	10/25/04	NA	NA	NA	NA	NA	NA	NA	NA
UPSW-8	10/25/04	NA	NA	NA	NA	NA	NA	NA	NA
SW WET-1	10/25/04	91	22	2	3.4	<0.62	41	1.3	345
SW WET-2	10/25/04	91	23	4	3.4	<0.62	47	1.1	346
SW WET-3	10/26/04	150	42	2.5	5.6	<0.62	110	2	543
SW WET 4	10/26/04	150	44	1	9	<0.62	120	2.4	546
SW WET 5	10/26/04	61	26	<1	25	<0.62	97	1	259
SWDS	10/12/04	80	20	3	3	<0.31	29	0.82	318
SWMS	10/12/04	79	20	3	2.9	<0.31	22	0.93	324
SWUS	10/12/04	68	21	2	2.3	<0.31	21	0.5	294

Location Identifier	Date Sampled	TPH-Gasoline Range	TPH-Diesel Range	TPH-Lube Oil Range	PCBs	Hardness[1]	Total Solids	Total Dissolved Solids
TPSW-1	10/12/04	NA	NA	NA	NA	380	510	480
LPSW-0	10/12/04	<0.050	<0.130	<0.250	<0.0001	360	400	390
LPSW-20	10/12/04	<0.050	<0.130	<0.250	<0.0001	350	830	380
UPSW-8	10/12/04	<0.050	<0.130	<0.250	<0.0001	310	350	350
SW WET-1	10/12/04	<0.050	NA	NA	<0.0001	320	380	370
SW WET-2	10/12/04	<0.050	<0.130	<0.250	<0.0001	320	390	360
SW WET-3	10/12/04	NA	<0.130	<0.250	<0.0001	550	670	640
SW WET 4	10/12/04	<0.050	<0.130	<0.250	<0.0001	560	710	630
SW WET 5	10/12/04	<0.050	<0.130	<0.250	<0.0001	260	440	430
SWDS	10/12/04	<0.050	<0.130	<0.250	<0.0001	280	NA	NA
SWMS	10/12/04	<0.050	<0.130	<0.250	<0.0001	280	NA	NA
SWUS	10/12/04	<0.050	<0.130	<0.250	<0.0001	260	NA	NA
Human Screening Level (see Table 21)		0.8	0.5	0.5	0.0001	n/a	n/a	n/a
Aquatic Ecological Screening Level (see Table 23)		0.5	0.5	0.5	0.0001	n/a	n/a	n/a

Notes:

Results reported in milligrams per liter (mg/L)
[1] Hardness reported in mg $CaCo_3$/L
NA = Not analyzed
n/a means none available

TABLE 11

Results of Flow Velocity Measurements in Streams
Anderson-Calhoun Mine Site, Washington

Location	Date Sampled	Average Velocity (ft/sec)	Height (ft)	Width (ft)	Flow (ft^3/sec)
Downstream	10/12/04	0.45	0.75	8.33	2.21
Midstream	10/12/04	0.17	2.96	3.33	1.32
Upstream	10/12/04	2.44	2	4.08	15.64

TABLE 12

Results of Stratification Investigation of Ponds
Anderson-Calhoun Mine Site, Washington

Location	Date Sampled	Temperature (°C)	pH (su)	Specific Conductivity (uS/cm)	Dissolved Oxygen (mg/L)
Upper Pit Pond					
surface	10/26/04	6.3	8.18	188.2	8.3
4 feet	10/26/04	6.3	8.71	189.8	8.5
8 feet	10/26/04	6.4	8.62	167.1	7.8
Lower Pit Pond					
surface	10/26/04	8.6	5.15 R	175.3	5.37
5 feet	10/26/04	8.8	7.9	188.5	7.63
10 feet	10/26/04	8.6	7.6	183.2	7.7
15 feet	10/26/04	9.1	7.1	195.7	2.4
20 feet	10/26/04	9.1	6.5	197.6	1.8
Tailings Pond					
surface	10/27/04	4.4	7.52	9.9	9.0
bottom (3.5 ft)	10/27/04	4.7	7.71	9.6	9.6

Notes:

su - standard units
uS - microsiemens per centimeter
mg/l - milligrams per liter
R - data is rejected (in this case the sample water froze during measurement)

TABLE 13

Ground-Water Levels Measured in October, 2004
Anderson-Calhoun Mine Site, Washington

Well / Measuring Point Name	Top of Casing / Measuring Point Elevation[1]	Depth to Water (feet)	Groundwater Elevation[1]
MW-1	1,999.26	1.27	1,997.99
MW-2	1,992.62	4.62	1,988.00
MW-3	1,993.44	4.53	1,988.91
MW-4	1,994.46	4.82	1,989.64

Notes:

[1] feet above mean sea level

Results of Ground-Water Analyses
Anderson-Calhoun Mine Site, Washington

		Total Metals						Dissolved Metals						Field Parameters	
Location Identifier	**Date Sampled**	**Barium**	**Cadium**	**Copper**	**Lead**	**Selenium**	**Zinc**	**Barium**	**Cadium**	**Copper**	**Lead**	**Selenium**	**Zinc**	**pH**	**Temp**
MW-1	10/27/04	0.18	<0.002	<0.005	<0.003	0.07	0.01	0.17	<0.002	<0.005	<0.003	<0.002	<0.01	5.9	5.7
MW-2	10/27/04	0.27	<0.002	<0.005	<0.003	<0.002	0.02	0.18	<0.002	<0.005	<0.003	<0.002	0.02	5.7	7.3
MW-3	10/27/04	0.23	<0.002	<0.005	<0.003	0.05	0.03	0.19	<0.002	<0.005	<0.003	<0.002	0.02	6.2	10.2
MW-4	10/27/04	0.23	<0.002	<0.005	<0.003	0.08	0.47	0.23	<0.002	<0.005	<0.003	<0.002	0.46	6.0	10.9

Location Identifier	**Date Sampled**	**Calcium**	**Chloride**	**Magnesium**	**Nitrate/ Nitrite**	**Potassium**	**Sodium**	**Sulfate**	**Bicar-bonate[2]**	**TPH-Gasoline Range**	**TPH-Diesel Range**	**TPH-Lube Oil Range**	**Hard-ness[1]**	**Total Solids**	**Total Dissolved Solids**
MW-1	10/27/04	85	0.69	19	<0.62	1	3.1	19	339	<0.050	<0.130	<0.250	290	350	310
MW-2	10/27/04	180	1.4	36	<0.62	3	26	2.0	798	<0.050	<0.130	<0.250	600	1200	670
MW-3	10/27/04	140	5.6	31	<0.31	2	12	<0.32	607	<0.050	<0.130	<0.250	480	690	510
MW-4	10/27/04	160	2.8	42	<1.2	5	13	180	507	<0.050	<0.130	<0.250	570	730	670

Notes:

Results reported in milligrams per liter (mg/L) except pH (standard units), specific conductivity (SC micromhos per centimeter) and temperature (Temp in degrees Farenheit)

[1] Hardness reported in mg $CaCo_3$/L

[2] Calculated by chemical balance.

NA = Not analyzed

n/a means none available

TABLE 15

Corrected Results of XRF Analyses of Site Soils
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	Barium	Cadmium	Copper	Lead	Selenium	Zinc
0,0 @ 2"	10/13/04	2	121	BD	BD	48	BD	785
1,1 @ 2"	10/13/04	2	98	BD	BD	42	BD	1,006
1,-1 @ 2"	10/13/04	2	146	28.3	BD	144	BD	1,500
12,-1 @ 2"	10/13/04	2	134	25.5	BD	357	BD	5,956
12,-2 @ 2"	10/13/04	2	98	23.3	BD	239	BD	2,361
13,-1 @2"	10/13/04	2	63	20.4	BD	326	BD	3,285
13,-2 @ 2"	10/13/04	2	80	25.3	BD	11,910	BD	20,886
14,-2 @ 2"	10/13/04	2	526	27.9	BD	83	BD	2,025
15,2 @ 2"	10/13/04	2	329	BD	BD	312	BD	5,190
15,2 @ 2"	10/14/04	2	1,154	BD	BD	404	BD	7,658
16,1 @ 2"	10/14/04	2	37,732	BD	BD	103	BD	2,905
16,2 @ 2"	10/14/04	2	2,686	51.1	BD	1,421	BD	20,316
16,3 @ 2"	10/14/04	2	284	31.9	BD	1,461	BD	19,873
17,1 @ 2"	10/14/04	2	30	28.6	BD	1,792	BD	18,861
17,2 @ 2"	10/14/04	2	1,631	32.3	BD	1,388	BD	18,608
17,3 @ 2"	10/14/04	2	2,062	68.3	BD	910	BD	26,899
17,3 @ 6"	10/16/04	6	370	26.3	BD	479	BD	5,975
18,1 @ 2"	10/14/04	2	121	19.0	BD	719	BD	7,595
18,-1 @ 2"	10/13/04	0	47	25.9	BD	1,202	BD	9,873
18,3 @ 2"	10/14/04	2	125	BD	BD	312	BD	8,608
18,4 @ 2"	10/14/04	2	167	BD	BD	444	BD	3,867
18,4 @6"	10/16/04	6	6	24.6	BD	652	BD	9,494
19,0 @ 2"	10/13/04	2	454	51.8	BD	71	BD	873
19,0 @ 6"	10/16/04	6	121	17.5	BD	46	BD	646
19,1 @ 2"	10/14/04	2	574	37.8	BD	629	BD	12,468
19,-1 @ 2"	10/13/04	2	77	33.8	BD	1,337	BD	15,506
19,2 @ 2"	10/14/04	2	404	40.6	BD	1,888	BD	33,354
19,-2 @ 2"	10/13/04	2	184	28.8	BD	848	BD	13,228
19,2 @ 6"	10/16/04	6	101	BD	BD	313	BD	8,165
19,3 @ 2"	10/14/04	2	27	24.6	BD	2,404	BD	24,494
19,4 @ 2"	10/14/04	2	1,552	BD	BD	3,831	BD	20,506
2,0 @ 2"	10/13/04	2	82	16.1	BD	167	BD	2,551
20,-1 @ 2"	10/13/04	2	174	21.9	BD	387	BD	5,101
20,1 @ 2"	10/14/04	2	1,214	25.2	BD	560	BD	7,278
20,1 @ 6"	10/16/04	6	223	40.3	BD	222	BD	3,348
20,2 @ 2"	10/14/04	2	115	54.7	BD	1,101	BD	23,228
20,-2 @ 2"	10/13/04	2	22	29.3	BD	1,230	BD	9,557
20,3 @ 2"	10/14/04	2	261	19.2	BD	454	BD	9,684
20,4 @ 2"	10/14/04	2	3,322	105.0	1080	1,994	BD	91,139
20,5 @ 2"	10/14/04	2	6	86.7	BD	276	BD	70,886
20,5 @ 6"	10/16/04	6	15	25.0	BD	85	BD	25,633
20,5 @ 24"	10/17/04	24	15	19.6	BD	193	BD	8,924
21,-2 @ 2"	10/13/04	2	1,320	22.3	BD	596	BD	6,177
21,-1 @ 2"	10/13/04	2	219	38.8	BD	529	BD	6,646
21,0 @ 2"	10/13/04	2	264	15.0	BD	156	BD	2,791
21,1 @ 2"	10/13/04	2	379	BD	BD	324	BD	4,234
21,1 @ 2"	10/14/04	2	440	43.5	BD	1,202	BD	57,152
21,2 @ 2"	10/14/04	2	239	148.9	BD	1,888	BD	273,418

TABLE 15

Corrected Results of XRF Analyses of Site Soils
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	Barium	Cadmium	Copper	Lead	Selenium	Zinc
21,2 @ 6"	10/15/04	6	26	43.2	BD	1,573	BD	38,924
21,3 @ 2"	10/14/04	2	282	22.3	BD	302	BD	19,873
21,4 @ 2"	10/14/04	2	968	112.9	BD	2,096	BD	236,709
21,5 @ 2"	10/14/04	2	38	BD	BD	876	BD	59,747
22,-1 @ 2"	10/13/04	2	53	29.0	BD	1,927	BD	3,475
22,-2 @ 2"	10/13/04	2	99	BD	BD	916	BD	1,551
22,0 @ 2"	10/13/04	2	1,969	25.5	BD	287	BD	4,937
22,0 @ 6"	10/16/04	6	869	24.6	BD	501	BD	6,456
22,0 @ 18"	10/17/04	18	56	19.2	BD	14	BD	268
22,1 @ 2"	10/14/04	2	259	26.4	BD	1,410	BD	24,810
22,2 @ 2"	10/14/04	2	132	BD	BD	70	BD	2,481
22,3 @ 2"	10/14/04	2	259	18.8	BD	303	BD	7,975
22,4 @ 2"	10/14/04	2	1,227	66.5	BD	899	BD	113,924
23,0 @ 12"	10/17/04	12	22	15.0	BD	55	BD	1,589
23,0 @ 2"	10/14/04	2	78	BD	BD	45	BD	1,196
23,0 @ 6"	10/15/04	6	44	BD	BD	61	BD	1,709
23,1 @ 2"	10/14/04	2	1,393	24.9	BD	392	BD	9,684
23,2 @ 2"	10/14/04	2	1,618	BD	BD	488	BD	13,924
23,3 @ 2"	10/14/04	2	151	52.5	BD	1,579	BD	65,823
24,0 @ 2"	10/14/04	2	1,326	20.5	BD	1,112	BD	4,886
24,2 @ 2"	10/14/04	2	21,618	BD	BD	1,382	BD	15,127
24,3 @ 2"	10/14/04	2	162	22.0	BD	73	BD	1,152
24,3 @ 6"	10/15/04	6	115	BD	BD	40	BD	433
24,3 @ 18"	10/17/04	18	50	12.9	BD	16	BD	112
24,4 @ 2"	10/14/04	2	78	BD	BD	122	BD	2,475
25,2 @ 2"	10/14/04	2	313	BD	BD	74	BD	5,880
25,3 @ 2"	10/14/04	2	1,459	20.6	BD	480	BD	7,532
25,4 @ 2"	10/14/04	2	218	BD	BD	127	BD	1,671
26,3 @ 2"	10/14/04	2	412	BD	BD	105	BD	1,703
26,4 @ 2"	10/14/04	2	1,479	BD	BD	197	BD	4,829
27,2 @ 2"	10/14/04	2	729	BD	BD	334	BD	1,171
27,2 @ 6"	10/15/04	6	18,833	BD	BD	787	BD	4,639
27,2 @ 12"	10/17/04	12	1,651	30.2	BD	831	BD	7,278
27,3 @ 2"	10/14/04	2	3,786	BD	BD	142	BD	1,785
27,4 @ 2"	10/14/04	2	60	BD	BD	39	BD	652
28,0 @ 2"	10/14/04	2	265	24.0	BD	101	BD	1,905
28,1 @ 18"	10/17/04	18	33	BD	BD	BD	BD	38
28,1 @ 18"	10/17/04	18	32	BD	BD	14	BD	31
28,-1 @ 2"	10/14/04	2	148	BD	BD	224	BD	892
28,1 @ 6"	10/15/04	6	227	BD	BD	85	BD	772
28,1 @2"	10/14/04	2	1,081	29.9	BD	2,376	BD	15,633
28,2 @ 2"	10/14/04	2	5,749	BD	BD	4,275	BD	19,177
28,4 @ 2"	10/14/04	2	21	BD	BD	90	BD	1,278
28,4 @ 6"	10/15/04	6	21	BD	BD	65	BD	987
29,3 @ 2"	10/14/04	2	38	15.3	BD	202	BD	1,190
29,4 @ 2"	10/14/04	2	31	41.7	BD	303	BD	40,886
3,0 @ 2"	10/13/04	2	45	17.6	BD	225	BD	4,203
3,1 @ 18"	10/17/04	18	11	BD	BD	137	BD	3,399

TABLE 15

Corrected Results of XRF Analyses of Site Soils
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	Barium	Cadmium	Copper	Lead	Selenium	Zinc
3,1 @ 2"	10/13/04	2	80	22.5	BD	487	BD	4,570
3,-1 @ 2"	10/13/04	2	78	27.3	BD	44	BD	722
3,1 @ 6"	10/16/04	6	42	BD	BD	196	BD	3,165
3,3 @ 2"	10/13/04	2	148	19.0	BD	481	BD	5,025
3,3 @ 6"	10/16/04	6	46	BD	BD	215	BD	3,892
3,4 @ 2"	10/13/04	2	253	22.2	BD	365	BD	3,291
3,4 @ 6"	10/16/04	6	26	BD	BD	326	BD	3,190
3,5 @ 2"	10/13/04	2	277	13.8	BD	289	BD	4,899
3,6 @ 12 "	10/17/04	12	32	18.3	BD	267	BD	5,677
3,6 @ 18"	10/17/04	18	22	27.3	BD	775	BD	6,519
3,6 @ 2"	10/13/04	2	49	BD	BD	208	BD	4,070
3,6 @ 24"	10/17/04	24	8	162.6	BD	BD	BD	46,456
3,6 @ 6"	10/16/04	6	44	BD	BD	278	BD	5,259
4,0 @ 2"	10/13/04	2	404	17.2	BD	62	BD	1,316
4,1 @ 2"	10/13/04	2	241	BD	BD	137	BD	2,570
4,-1 @ 2"	10/13/04	2	120	34.7	BD	809	BD	4,392
4,3 @ 12"	10/17/04	12	BD	10.6	BD	128	BD	5,342
4,3 @ 2"	10/13/04	2	34	15.4	BD	657	BD	5,304
4,3 @ 6"	10/16/04	6	22	10.0	BD	949	BD	6,070
4,4 @ 2"	10/13/04	2	67	15.8	BD	691	BD	4,658
5,0 @ 2"	10/13/04	2	146	BD	BD	75	BD	684
5,1 @ 2"	10/13/04	2	20	BD	BD	81	BD	513
5,2 @ 2"	10/13/04	2	288	12.3	BD	317	BD	3,222
5,2 @ 6"	10/16/04	6	66	BD	BD	531	BD	4,057
5,4 @ 2"	10/13/04	2	46	BD	BD	136	BD	3,601
6,2 @ 2"	10/13/04	2	82	20.3	BD	1,028	BD	5,886
6,2 @ 6"	10/16/04	6	42	22.1	BD	1,236	BD	7,785
Human-Unrestricted Screening Level (see Table 20)			16,000	80	3,200	250	400	24,000
Human-Industrial Screening Level (see Table 20)			700,000	3,500	140,000	1,000	17,500	unlimited
Terrestrial Ecological Screening Level (see Table 22)			102	14	217	118	2.0	360
Arithmetic Average Concentration			1,290	23	14	674	8.5	14,700
95% UCL of the Mean (normal)[a]			2,010	27	24	851	10.0	19,800
95% UCL of the Mean (Lognormal)[a]			1,240	27	5,700	980	64.6	21,300

Notes:

Results are reported in milligrams per kilogram (mg/kg)
BD - Below analytical detection limit
a - UCLs calculated with surface soil data from Table 16 included

means not representive distribution using statistical tests of population

TABLE 16

Results of Laboratory Analyses of Soil Grid Samples
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	Barium	Cadmium	Copper	Lead	Selenium	Zinc
5,1	10/12/2004	2	38	1.8	3.5	51	<3.1[a]	230
22,0	10/12/04	2	2,700	18	23	390	14	6,200
20,5	10/13/04	2	32	89	10	290	<2.1[a]	31,000
25,4	10/13/04	2	270	4.8	5	110	3.2	1,700
20,1	10/15/04	2	330	17	11	370	12	5,700
20,5	10/16/04	24	62	22	6	330	5.7	9,100
27,2	10/13/04	2	32,000	3.3	41	58	22	480
Human-Unrestricted Screening Level (see Table 20)			16,000	80	3,200	250	400	24,000
Human-Industrial Screening Level (see Table 20)			700,000	3,500	140,000	1,000	17,500	unlimited
Terrestrial Ecological Screening Level (see Table 22)			102	14	217	118	2.0	360

Notes:

Results are reported in milligrams per kilogram (mg/kg)
a - Selenium results are either estimated concentrations or represent the laboratory Method Detection Level (MDL)

TABLE 17

Results of Laboratory Analyses of Downwind Transect Soil Samples
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Depth (inches)	Downwind distance (feet)	Barium	Cadmium	Copper	Lead	Selenium	Zinc
SS WND-2	10/27/2004	0-2	100	480	3	31	150	11	970
SS WND-3	10/27/2004	0-2	200	390	<1.0	29	26	<2.6[a]	140
SS WND-4	10/27/2004	0-2	300	900	<1.4	34	38	<3.7[a]	190
SS WND-5	10/27/2004	0-2	400	634	1.7	32	45	<2.5[a]	190
SS WND-6	10/27/2004	0-2	500	720	1.6	29	43	<3.7[a]	150
SS WND-7	10/27/2004	0-2	600	530	<1.0	28	36	<2.8[a]	150
SS WND-8	10/27/2004	0-2	700	280	<0.90	26	29	<2.4[a]	140
SS WND-9	10/27/2004	0-2	800	370	1	27	24	<2.7[a]	130
SS WND-10	10/27/2004	0.13	900	200	<0.69	10	12	2.5[a]	64
SS WND-11	10/27/2004	0-2	1000	330	<0.99	25	17	3.6[a]	110
SS WND-13	10/27/2004	0-2	1200	360	<1.5	25	31	4.1[a]	130
SS WND-15	10/27/2004	0-2	1400	220	<1.1	20	13	<2.8[a]	89
Human-Unrestricted Screening Level (see Table 20)				16,000	80	3,200	250	400	24,000
Human-Industrial Screening Level (see Table 20)				700,000	3,500	140,000	1,000	17,500	unlimited
Terrestrial Ecological Screening Level (see Table 22)				102	14	217	118	2.0	360

Notes:

Results are reported in milligrams per kilogram (mg/kg)
a - Selenium results are either estimated concentrations or represent the laboratory Method Detection Level (MDL)

TABLE 18

Results of Benthic Macroinvertebrate Samples
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Barium	Cadmium	Copper	Lead	Selenium	Zinc
BM-US	10/27/04	569	2.4 B	46	13.8	<30	290
BM-DS	10/27/04	210	0.4 B	17	4.4	6 B	195
BM-WET-5	10/27/04	107	0.82	6.2	7.54	2.4 B	138
BM-TP-1	10/27/04	90.7	<1.0	16	1.2	5 B	17 B

Notes:

results are reported in milligrams per kilogram (mg/kg)
B - results were detected above the minimum detection limit, but below the practical quantification limit
< - less than detection limit
RMC - Risk Management Criteria (mg/kg) (i.e., concentration that would result in a Hazard Index (HI) of one.
RMC = [HI*TRV/(P*FIR*AF)]*PT*PF
TRV - toxicity reference dose value
P - Proportion of diet
FIR - Food Ingestion rate
AF - Bioaccumulation Factor
PT - Proportion of time spent in area.
PF - Proportion of foraging area represented by sample.
RMC formula parameters are noted in Section 3.3.2.2

TABLE 19

Results of Small Mammal Samples
Anderson-Calhoun Mine Site, Washington

Location Identifier	Date Sampled	Barium	Cadmium	Copper	Lead	Selenium	Zinc
SM-5	10/14/04	39.3	0.04 B	2.5	1.08	<1.0	32.7
SM-7	10/14/04	661	0.1 B	5.9	0.6	8.9	32
SM-15	10/14/04	198	<0.5	4.9	0.3 B	2.9	31
SM-18	10/14/04	14.1	0.03 B	5	0.99	0.2 B	41.1
SM-24	10/14/04	44	0.03 B	6.1	0.63	<1.0	32
SM-25	10/14/04	20.7	0.06	4.1	1.72	0.2 B	27

Notes:

results are reported in milligrams per kilogram (mg/kg)

B - results were detected above the minimum detection limit, but below the practical quantification limit

< - less than detection limit

RMC - Risk Management Criteria (mg/kg) (i.e., concentration that would result in a Hazard Index (HI) of one.

RMC = [HI*TRV/(P*FIR*AF)]*PT*PF

TRV - toxicity reference dose value

P - Proportion of diet

FIR - Food Ingestion rate

AF-Bioaccumulation Factor

PT - Proportion of time spent in area.

PF - Proportion of foraging area represented by sample

RMC formula parameters are noted in Section 3.3.2.1

TABLE 20

Potentially Applicable Human Health Screening Levels for Soils
Anderson-Calhoun Mine Site, Washington

ANALYTE	Units	MTCA Method A Unrestricted Soil Levels (WAC 173-340)	MTCA Method B Unrestricted Soil Levels (WAC 173-340)	MTCA Method A Industrial Soil Levels (WAC 173-340)	MTCA Method B Industrial Soil Levels (WAC 173-340)	Washington State Background Levels (Ecology, 1994)	Proposed Unrestricted Land Use Screening Level	Proposed Industrial Land Use Screening Level
Metals								
Barium	mg/kg	none	16,000	none	700,000	not determined	16000	700000
Cadmium	mg/kg	2[a]	80	2[a]	3,500	1	80 (Groundwater Unaffected)	3500 (Groundwater Unaffected)
Copper	mg/kg	none	3,200	none	140,000	36	3200	140000
Lead	mg/kg	250	none	1,000	none	17	250	1000
Selenium	mg/kg	none	400	none	17,500	not determined	400	17500
Zinc	mg/kg	none	24,000	none	unlimited	86	24000	unlimited
Petroleum Hydrocarbons								
TPH - Gasoline Range	mg/kg	30 to 100[a]	insufficient data	30 to 100[a]	insufficient data	not determined	30 to 100[a]	30 to 100[a]
THP - Diesel Range	mg/kg	2000[a]	insufficient data	2,000[a]	insufficient data	not determined	2000[a]	2000[a]
THP - Oil Range	mg/kg	2000[a]	insufficient data	2,000[a]	insufficient data	not determined	2000[a]	2000[a]
Semi - Volatile Organic Compounds								
Bis (2-ethylhexyl) Phthalate	mg/kg	none	71	none	9,370	not determined	71	9370
PCBs	mg/kg	1	0.5	10	65.6	not determined	0.5	10
Phenol	mg/kg	none	24,000	none	unlimited	not determined	24000	unlimited
2-Methylphenol	mg/kg	none	1,600	none	70000	not determined	1600	70000
3-Methylphenol	mg/kg	none	4,000	none	175000	not determined	4000	175000
2,4-Dimethylphenol	mg/kg	none	4,000	none	175000	not determined	4000	175000

Footnotes:

a: MTCA Cleanup Level for the protection of groundwater, not human soil injestion or soil direct contact

TABLE 21

Potentially Applicable Terrestrial Ecological Health Screening Levels for Soils and Sediments
Anderson-Calhoun Mine Site, Washington

ANALYTE	Units	MTCA Ecological Indicator Concentration (WAC 173-340)	MTCA Ecological Indicator Concentration (WAC 173-340)	MTCA Ecological Indicator Concentration (WAC 173-340)	Washington State Fresh Water Sediment (Ecology, 2003)	EPA Region X Ecological Soil Criteria (National Eco-SSLs) [Interim Final: Ba, Cd, and Pb March 2005; Cu, Se, Zn, March 2003]				Washington State Background Levels (Ecology, 1994)	Standard Laboratory PQLs	Proposed Soil Screening Criteria	Proposed Sediment Screening Criteria
		Plants	Soil Biota	Wildlife		Plants	Invertebrates	Avian	Mammalian				
Metals													
Barium	mg/kg	500	none	102	none	NA	330	NA	2,000	not determined	5	102	102
Cadmium	mg/kg	4	20	14	0.6	32	140	0.77	0.36	1	1	14	1
Copper	mg/kg	100	50	217	80	95	54	Pending	Pending	36	5	217	80
Lead	mg/kg	50	500	118	335	120	1,700	11	56	17	10	118	335
Selenium	mg/kg	1	70	0.3	none	1	NA	Pending	Pending	not determined	2	2	2
Zinc	mg/kg	86	200	360	140	130	120	Pending	Pending	86	10	360	140
Petroleum Hydrocarbons													
TPH - Gasoline Range	mg/kg	none	100	5000	none	none	none	none	none	not determined	0.25	100	100
THP - Diesel Range	mg/kg	none	200	6000	none	none	none	none	none	not determined	0.5	200	200
THP - Oil Range	mg/kg	none	none	none	none	none	none	none	none	not determined	0.5		
Semi - Volatile Organic Compounds													
Bis (2-ethylhexyl) Phthalate	mg/kg	none	none	none	230	none	none	none	none	not determined	10	230	230
PCBs	mg/kg	40	none	0.65	60	none	none	none	none	not determined	1	0.65	60
Phenol	mg/kg	300	none	none	none	none	none	none	none	not determined	0.1	300	300
2-Methylphenol	mg/kg	none	none	none	none	none	none	none	none	not determined	1	none available	none available
3-Methylphenol	mg/kg	none	none	none	none	none	none	none	none	not determined	1	none available	none available
2,4-Dimethylphenol	mg/kg	none	none	none	none	none	none	none	none	not determined	1	none available	none available

Footnote: There is a difference between MTCA concentrations and EPA values in terms of intended uses. MTCA values are presented as potential cleanup targets; EPA values are presented as screening-level values that are explicitly identified as not being cleanup targets.

Summary of Media Screening Level Exceedances
Anderson-Calhoun Mine Site, Washington

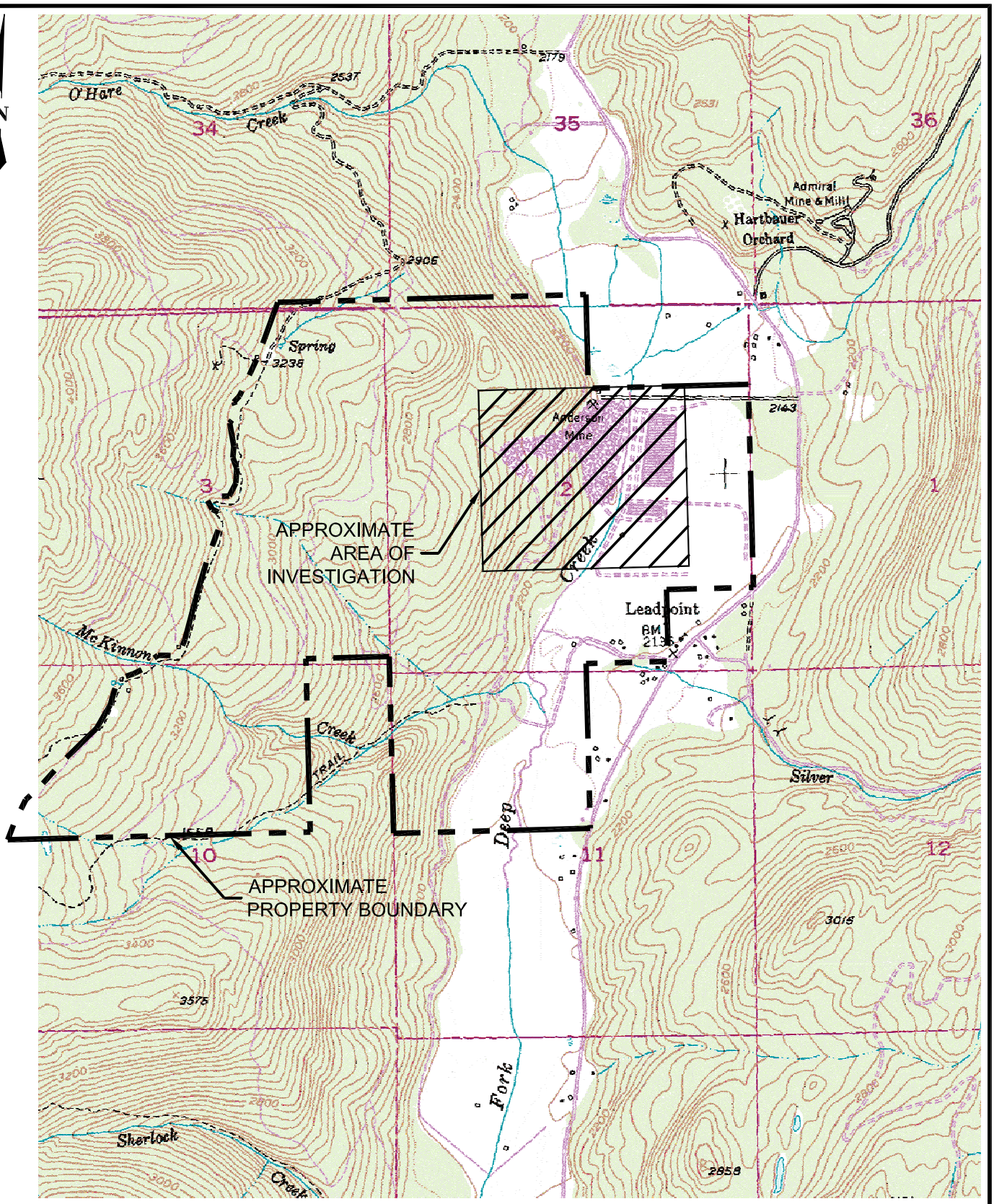
Human Risk Screening Level Exceedances		Ecological Risk Screening Level Exceedances	
Soils - Unrestricted Land Use	**Soils - Industrial Land use**	**Soils**	**Sediments**
Tailings Impoundment Soils for Ba and Pb (See Tables 1 & 20)	Tailing South of Mill for Pb (see Tables 2 & 20)	Tailings Impoundment Soils for Ba, Pb, Se, and Zn (see Tables 1 & 22)	Tailings Impoundment Pond, Sediment for Ba, Cd, Pb, and Zn (see Tables 8 & 22)
Tailings Impoundment Pond Sediment for Pb (See Tables 8 & 20)	Lower Mine Pit Pond Sediment for Pb (see Tables 8 & 20)	Tailings/Ore South of Mill for Ba, Cd, Pb, Se, and Zn (see Tables 2 & 22)	Lower Mine Pit Pond Sediment for Ba, Cd, Pb, Se, and Zn (see Tables 8 & 22)
Tailings South of Mill for Ba, Cd and Pb (see Tables 2 & 20)	Mill Site Soils for Pb (see Tables 15, 16, & 20)	Mill Site Soils for Ba, Cd, Pb, Se, and Zn (see Tables 15, 16, & 22)	North Fork Deep Creek Sediment for Cd, Se, and Zn (see Tables 8 & 22)
Lower Mine Pit Pond Sediment for Pb (see Tables 8 & 20)	Stained Soils South of Mill for Diesel and Oil (see Tables 7 & 20)	Stained Soils South of Mill for Diesel (see Tables 7 & 22)	Wetland Sediment for Ba, Cd, Se, and Zn (see Tables 8 & 22)
Mill Site Soils for Ba, Cd, Pb, and Zn (see Tables 15, 16, & 20)			
Stained Soils South of Mill for Diesel and Oil (see Tables 7 & 20)			

TABLE 23

Summary of Estimated Removal Action Alternatives Costs

Alternative		Estimated Costs		
		Capital	**I&M**	**Total**
1	No Action	$0	$0	$0
2	Institutional Controls and Monitoring	$91,650	$75,000	$166,650
3	Consolidate and Cap Tailings and Ore Piles and Fill Adjacent Wetlands	$1,298,000	$165,000	$1,463,000
4	Consolidate and Cap Tailings and Ore Piles on Tailings Impoundment with Reduction in Tailings Impoundment Footprint and Fill Adjacent Wetlands	$5,034,000	$111,000	$5,145,000

FIGURES



0 2000 4000

SCALE IN FEET

SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005

REFERENCE: USGS 7.5 MINUTE QUADRANGLE; LEADPOINT, WASHINGTON; 1986

FIGURE **1**

SITE LOCATION MAP

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

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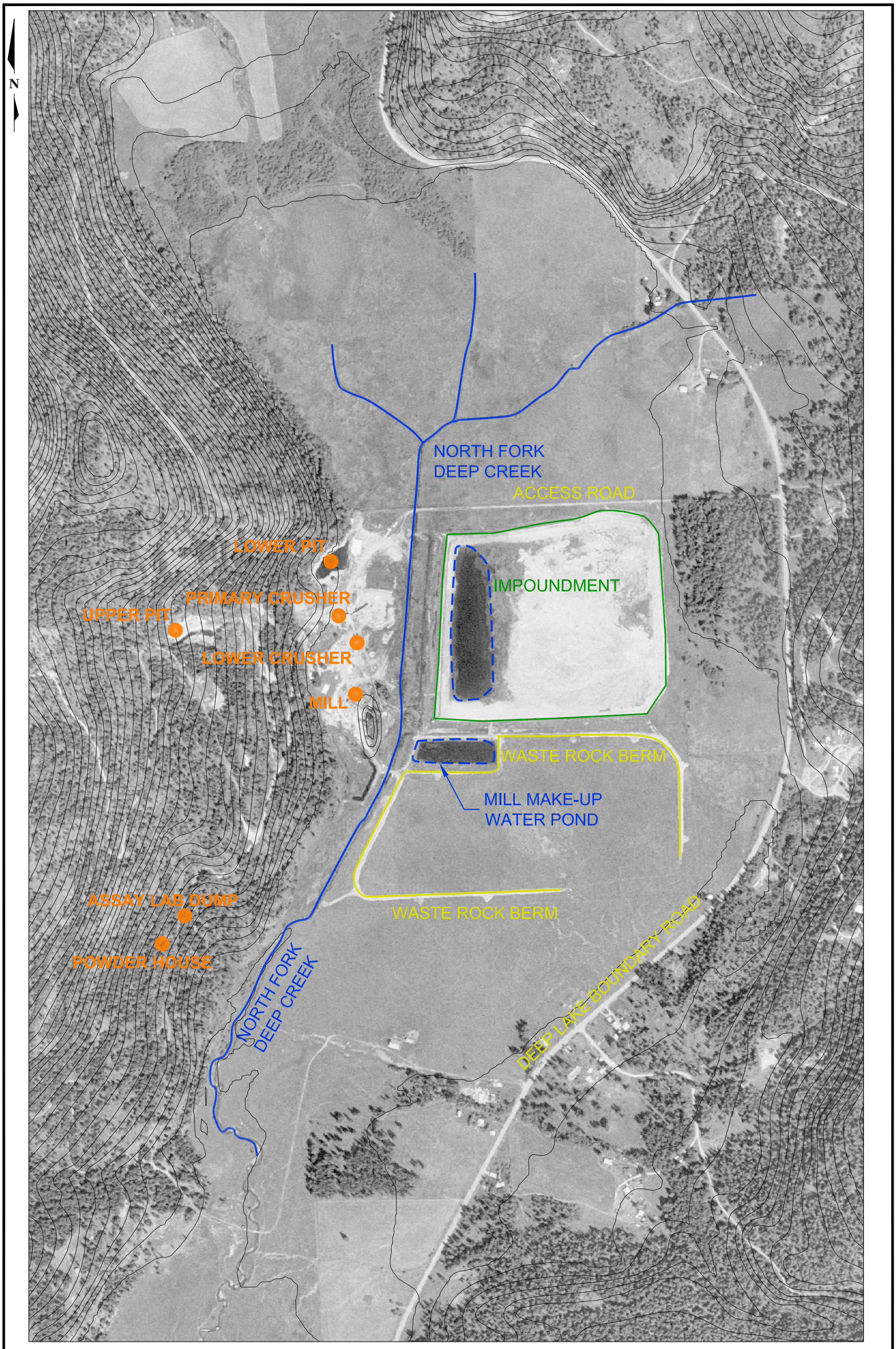
Golder Associates



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SCALE IN FEET

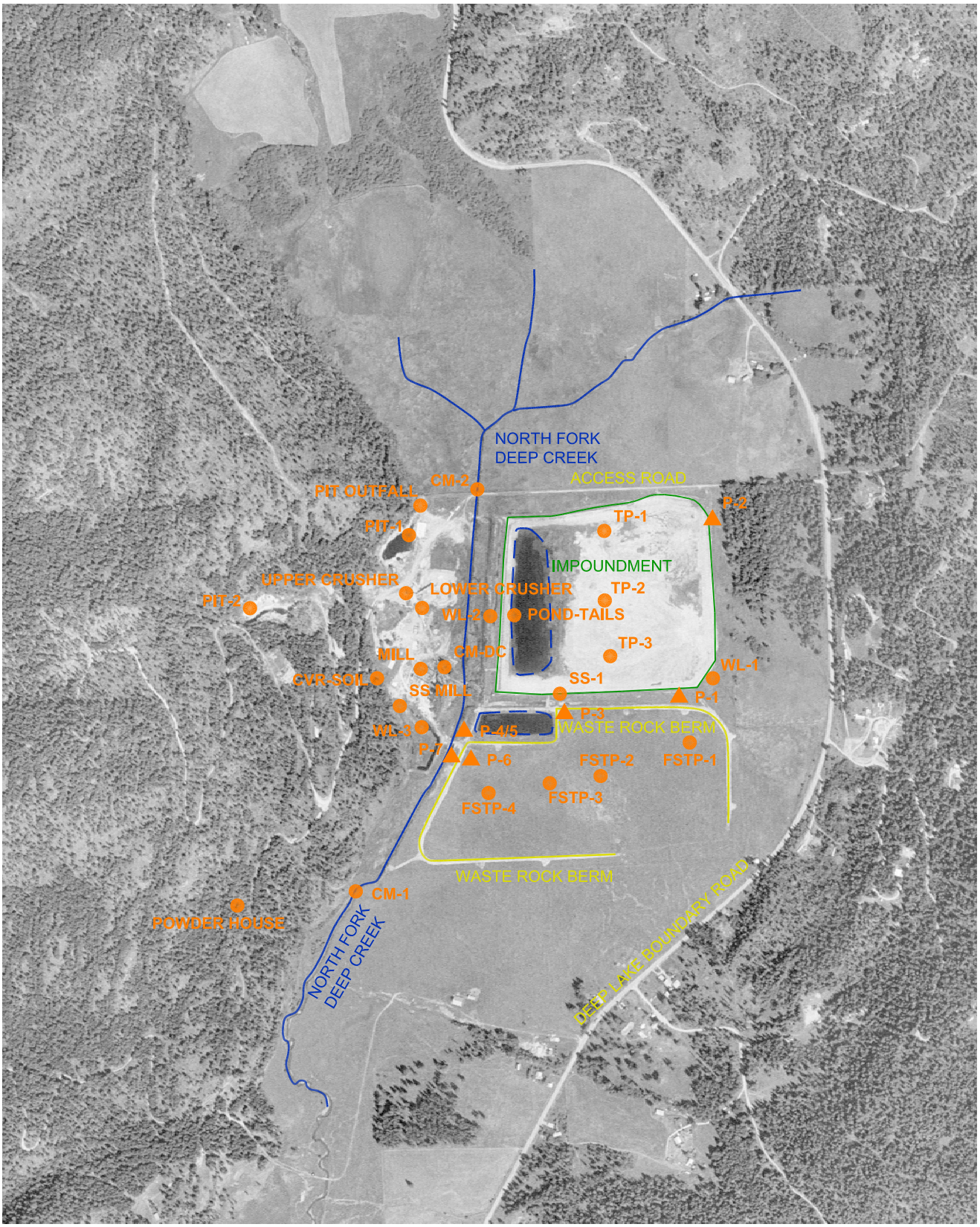
NOTE: CONTOURS ARE APPROXIMATE
SOURCE: ALL FIGURE DATA PROVIDED BY
SECOR, 2005

FIGURE **2**

SITE PLAN

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

Golder Associates



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SCALE IN FEET

FIGURE **3**

NOVEMBER 2003

SITE RECONNAISSANCE

SAMPLE LOCATIONS

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005

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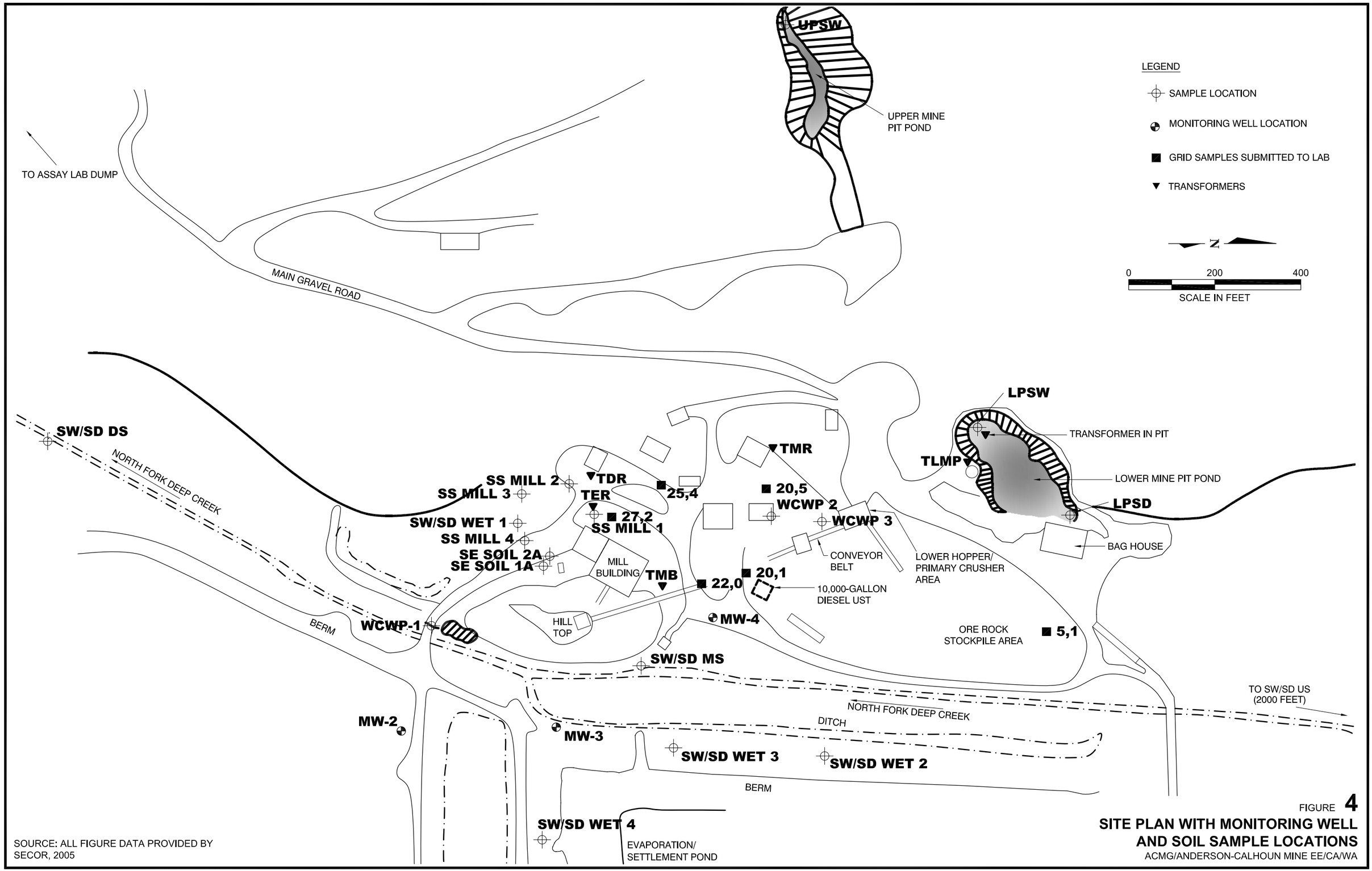

SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005

FIGURE **4**

SITE PLAN WITH MONITORING WELL AND SOIL SAMPLE LOCATIONS

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

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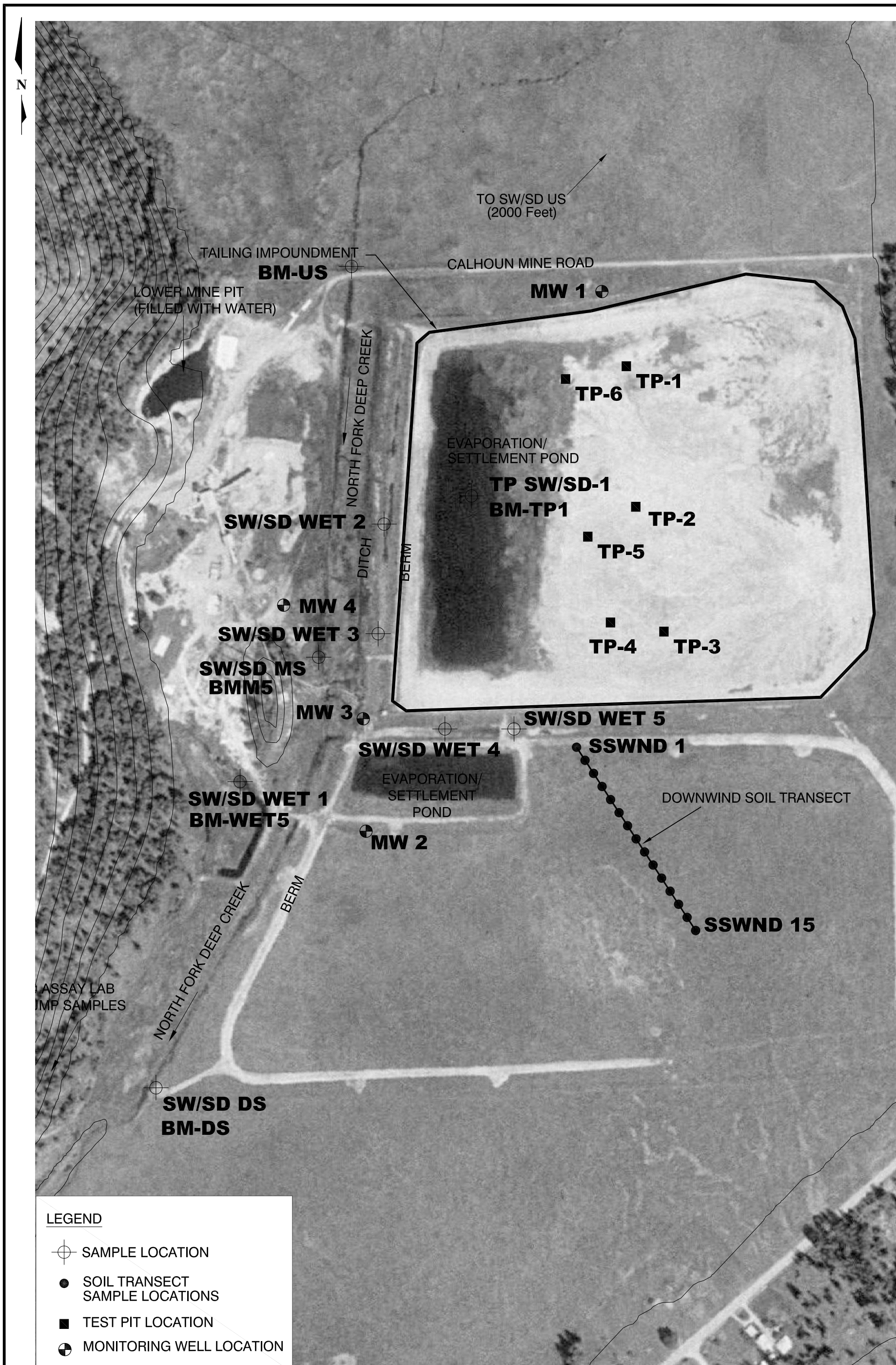
Golder Associates



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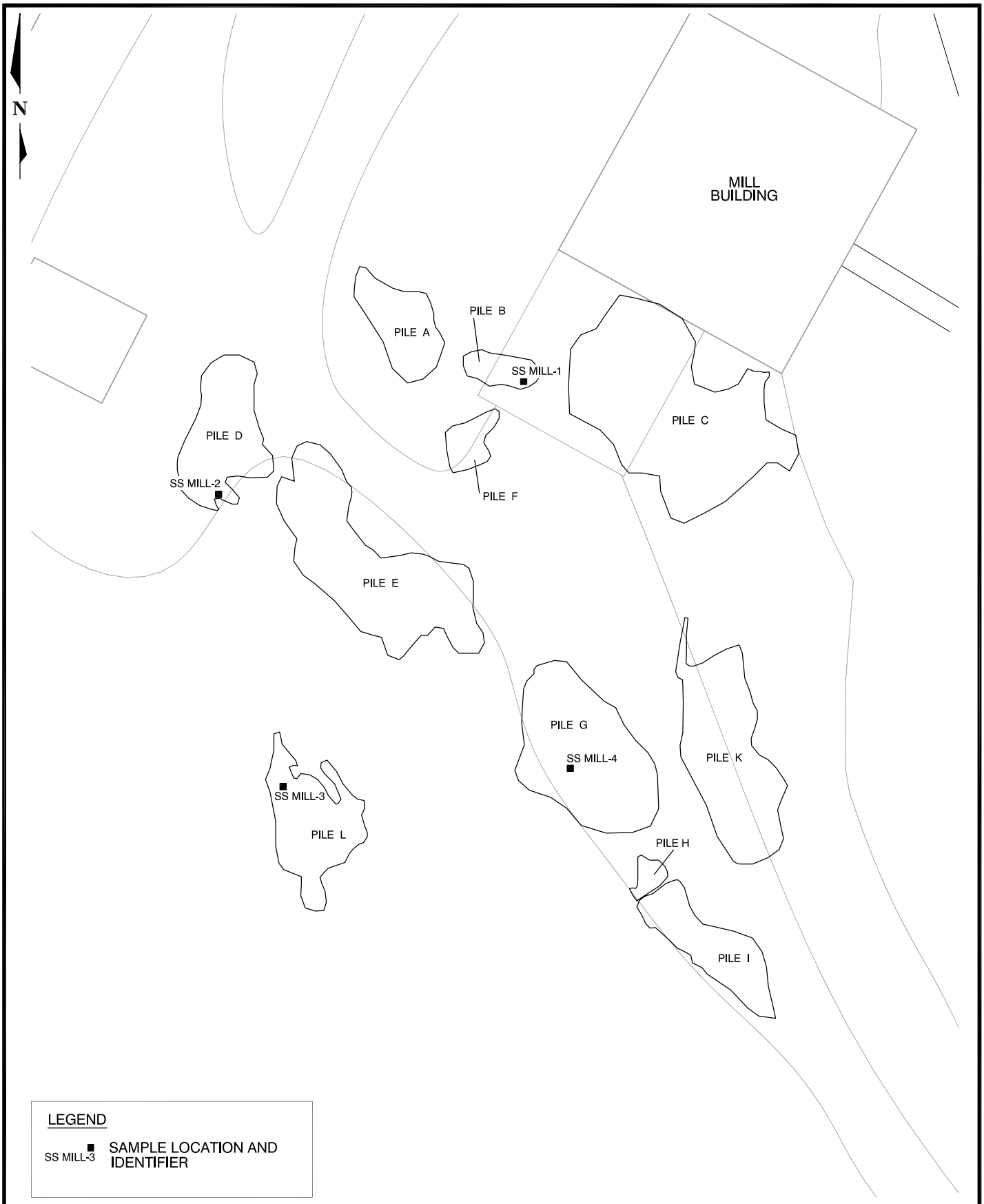
SCALE IN FEET

NOTE: CONTOURS ARE APPROXIMATE
SOURCE: ALL FIGURE DATA PROVIDED BY
SECOR, 2005

FIGURE 5
SAMPLING LOCATIONS FOR AREAS SURROUNDING THE MINE/MILL AREA
ACMG/ANDERSON-CALHOUN MINE EE/CA/WA



SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005

FIGURE **6**

HORIZONTAL EXTENT OF PILES SOUTH OF THE MILL AREA

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

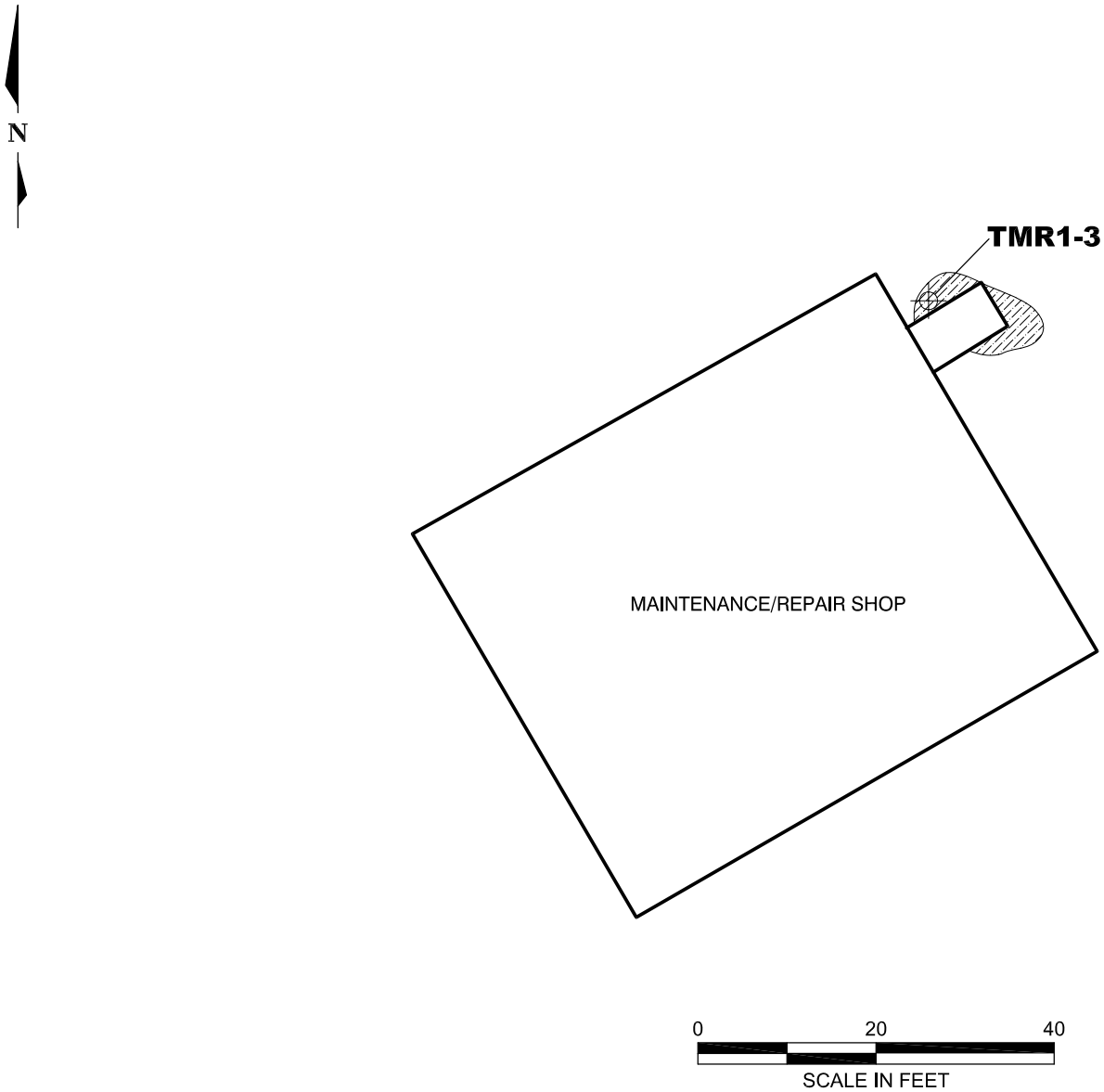


FIGURE 7

EXTENT OF OIL-STAINED SOIL NEAR TRANSFORMERS T1-2

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005

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Golder Associates

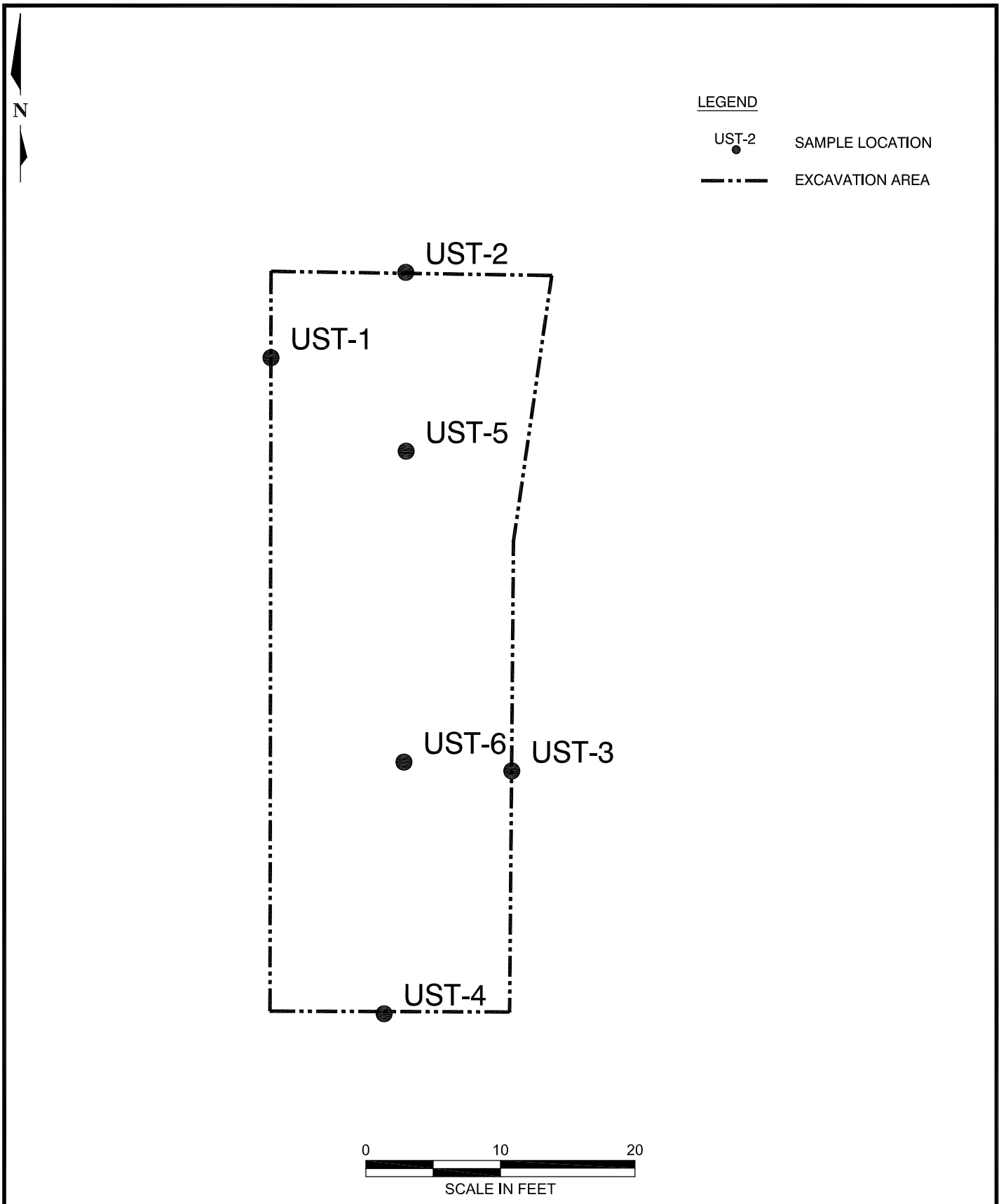


FIGURE **8**

SAMPLING LOCATIONS FOR THE FORMER UNDERGROUND STORAGE TANK EXCAVATION

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005

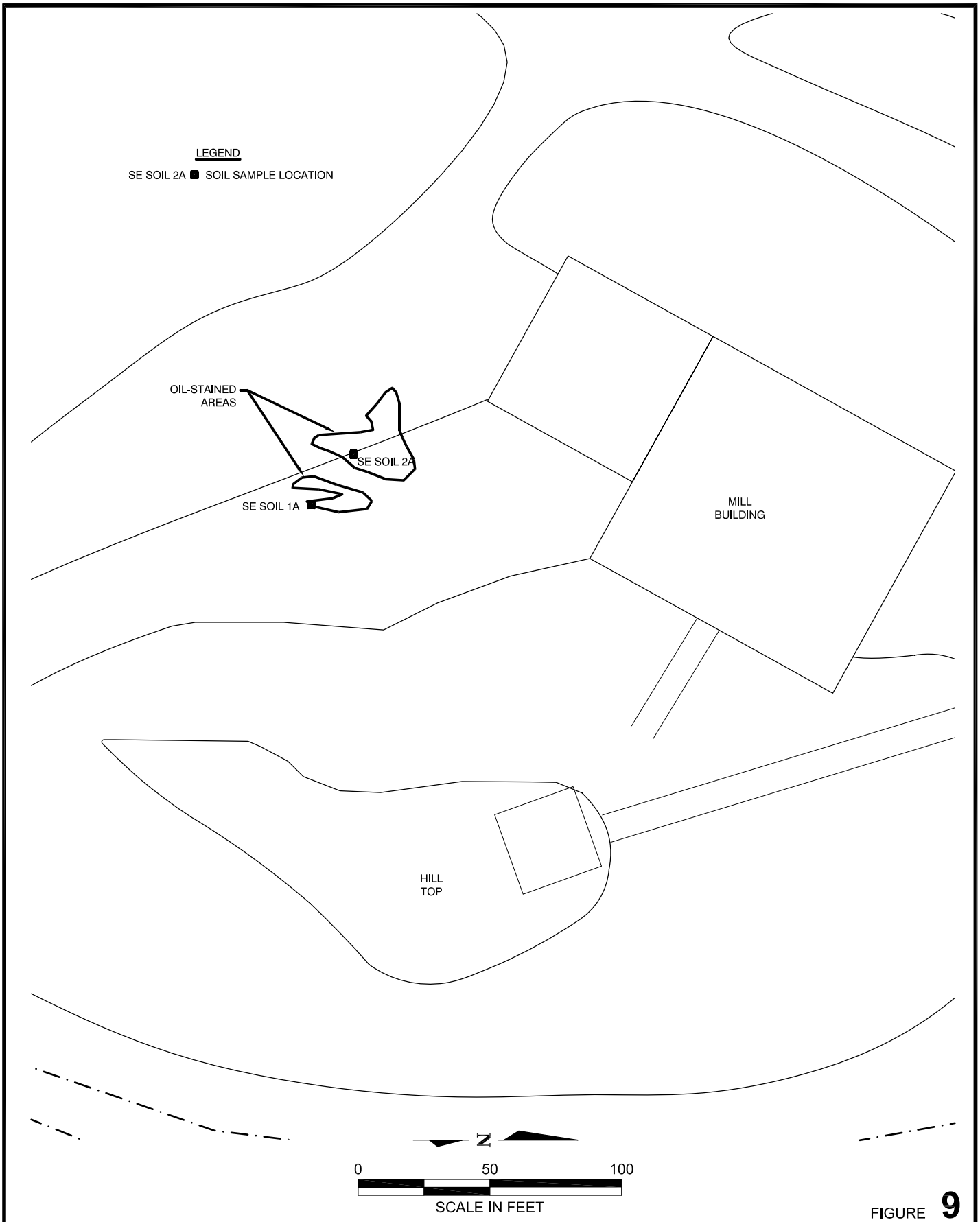


FIGURE **9**

EXTENT OF OIL STAINED SOIL IN THE FORMER DRUM STORAGE AREA SOUTH OF THE MILL AREA

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005

0531656300F09.dwg | Layout: Layout1 | Modified: 12/11/2006, 08:14 | Plotted: 12/11/2006, 08:54

Golder Associates

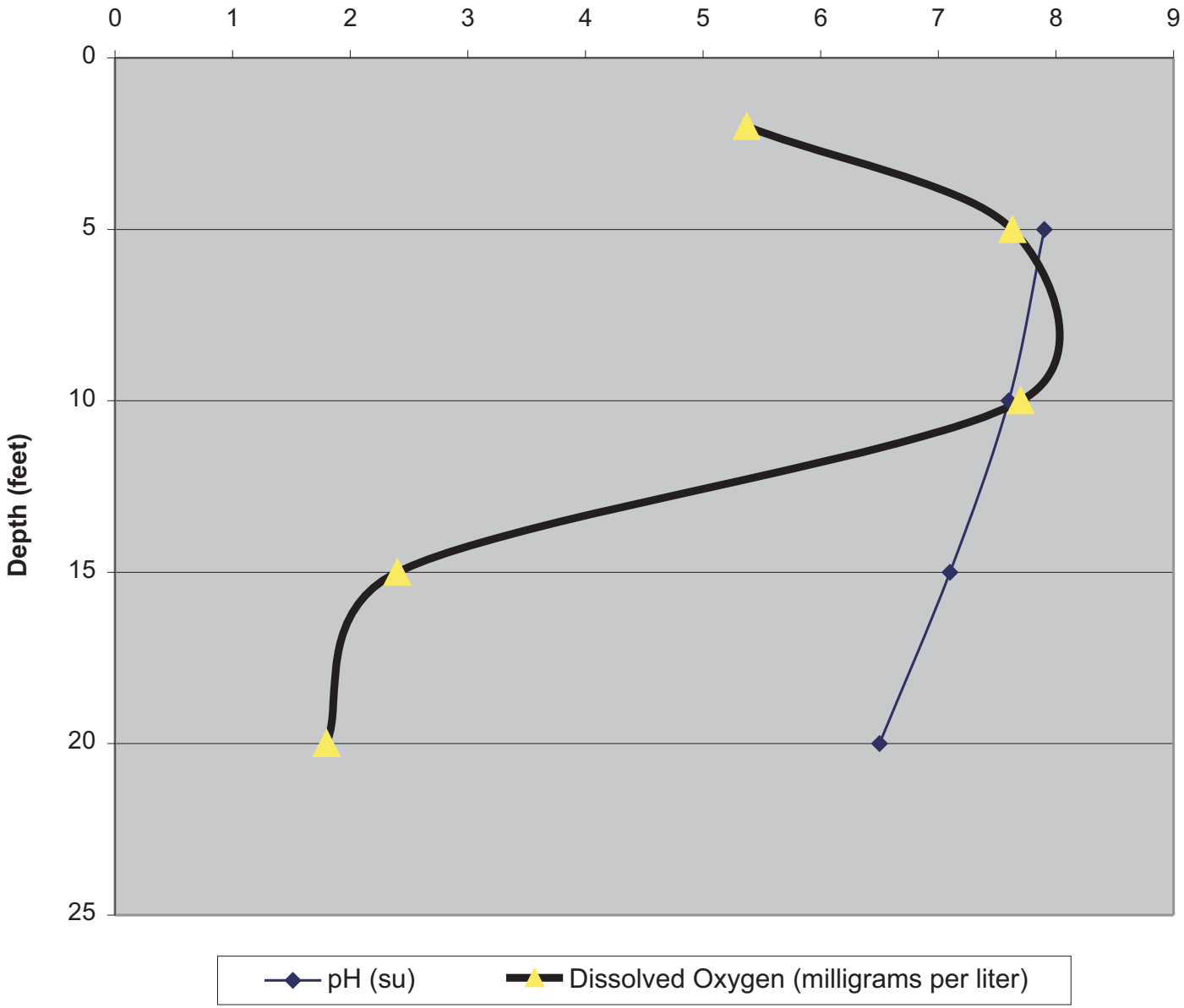


FIGURE **10**

LOWER PIT POND CHANGE IN pH AND DISSOLVED OXYGEN WITH DEPTH

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005

FIGURE **11**

LIMIT OF XRF SAMPLING LOCATIONS

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

0 400 800

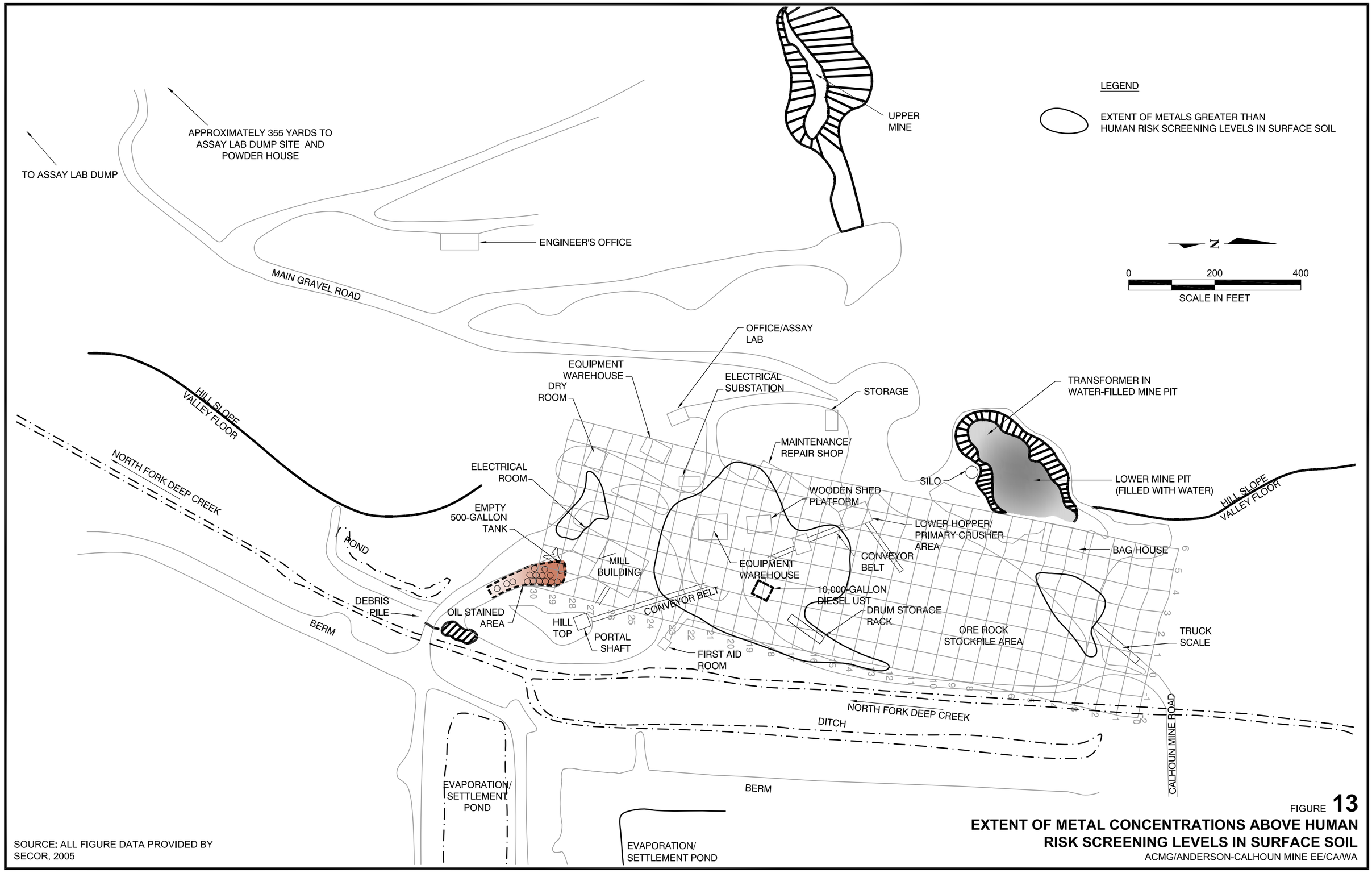
SCALE IN FEET

FIGURE **12**

LOCATIONS OF SMALL MAMMAL TRAPLINES

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005



SOURCE: ALL FIGURE DATA PROVIDED BY SECOR, 2005

FIGURE **13**

EXTENT OF METAL CONCENTRATIONS ABOVE HUMAN RISK SCREENING LEVELS IN SURFACE SOIL

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA

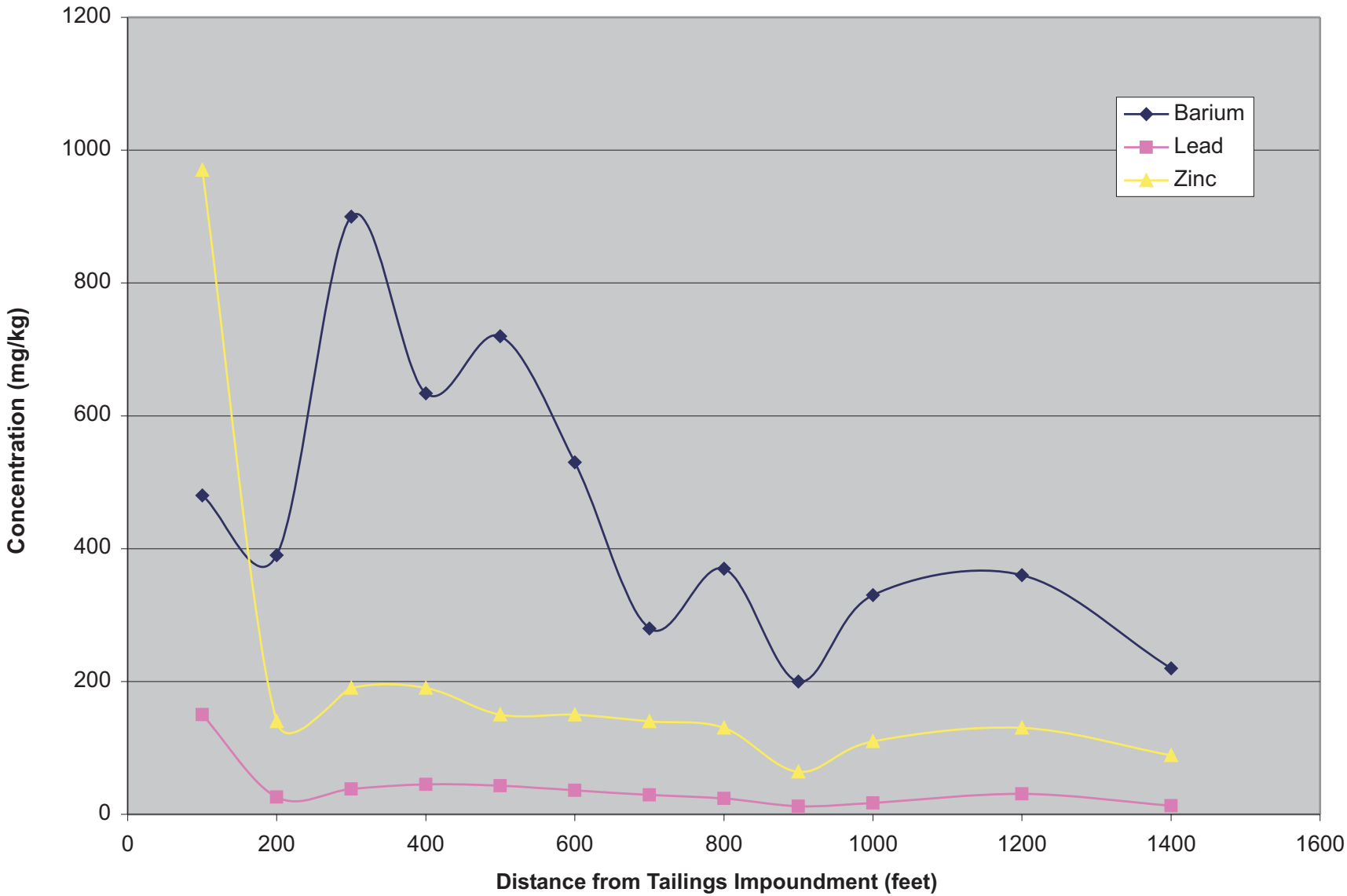
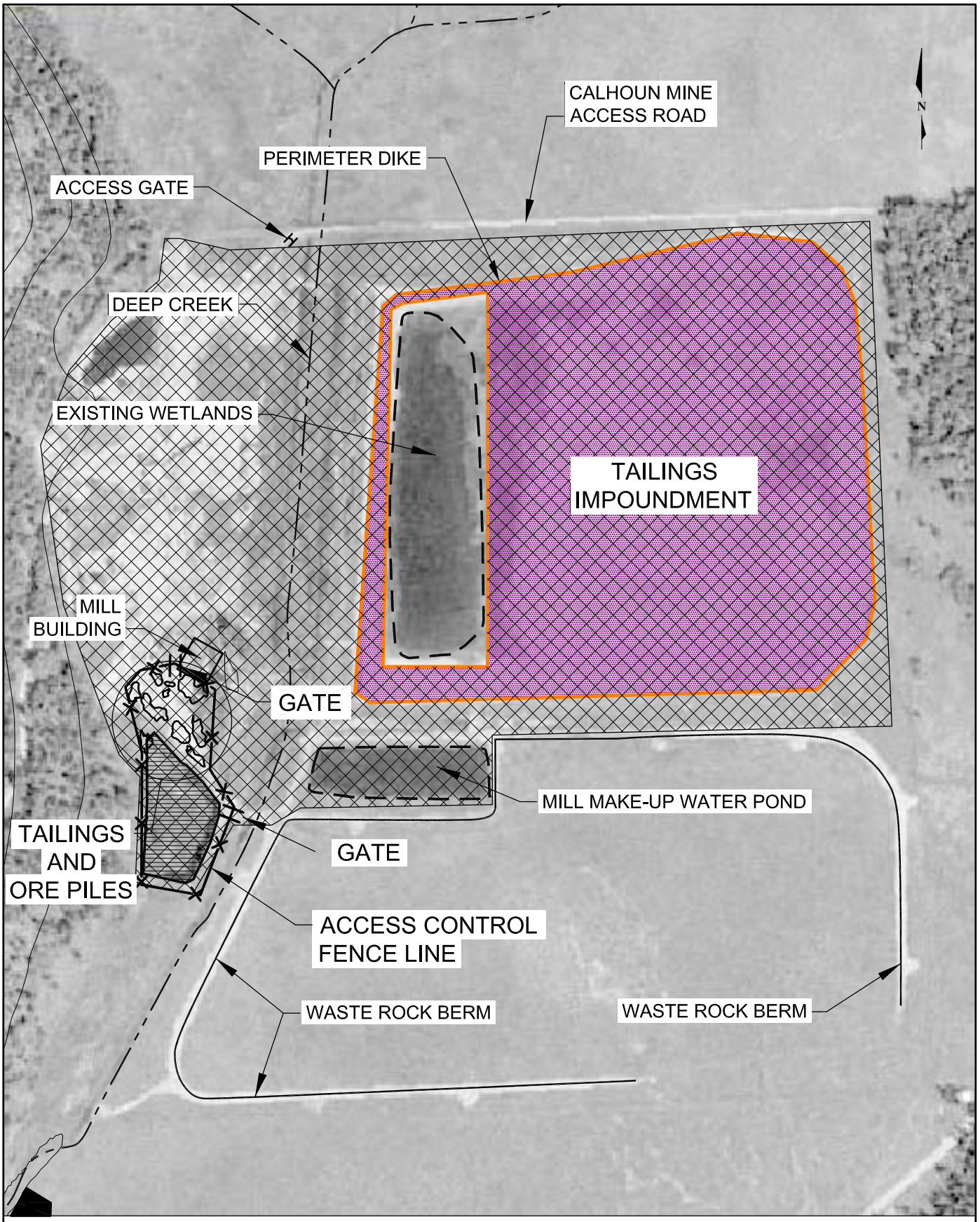


FIGURE **14**

DOWNWIND TRANSECT SAMPLE RESULTS

ACMG/ANDERSON-CALHOUN MINE EE/CA/WA



LEGEND

ACCESS CONTROL FENCE

DEED RESTRICTION AREA

0 400 800

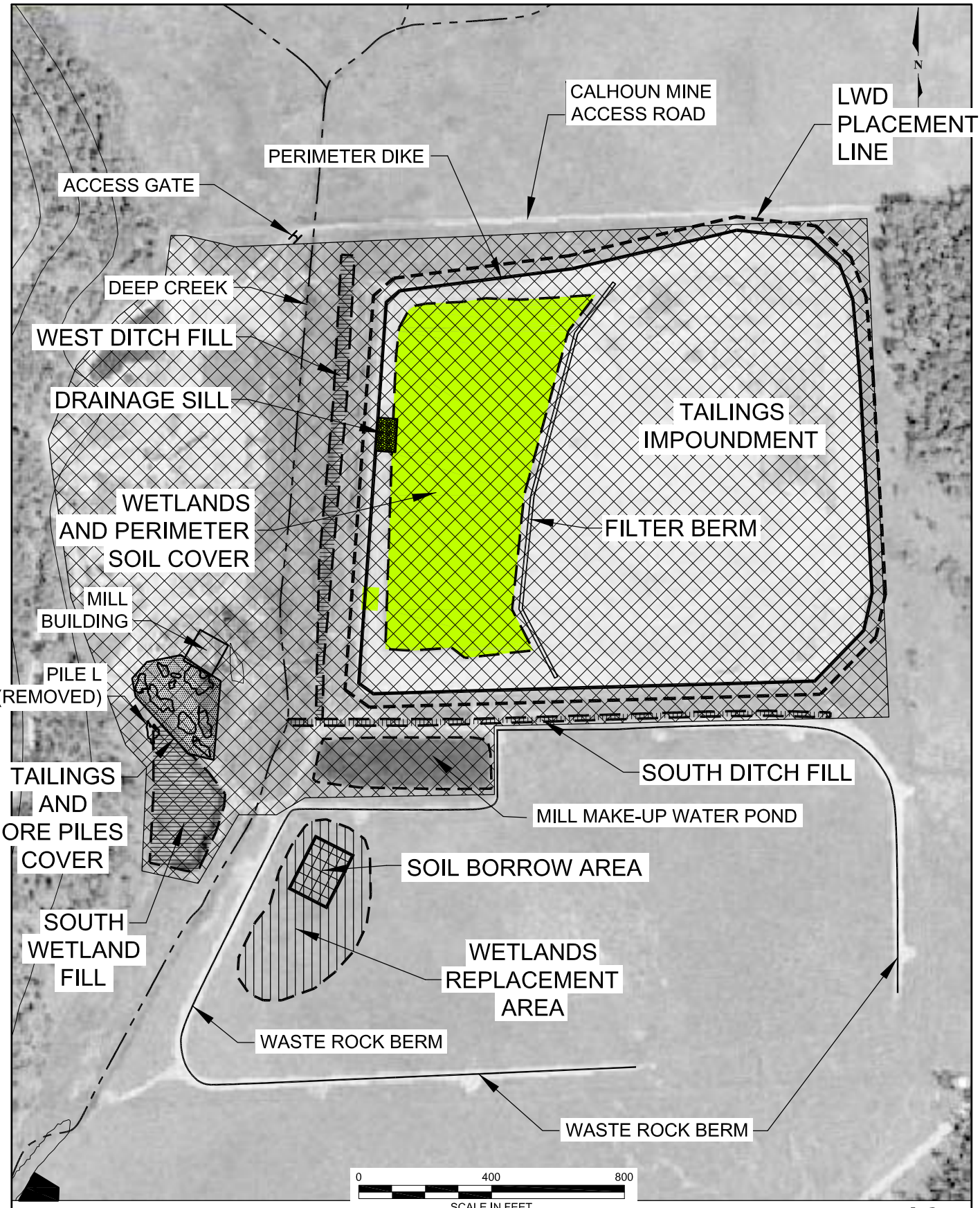
SCALE IN FEET

FIGURE **15**

ALTERNATIVE 2

INSTITUTIONAL CONTROLS AND MONITORING

EE/CA CALHOUN MINE

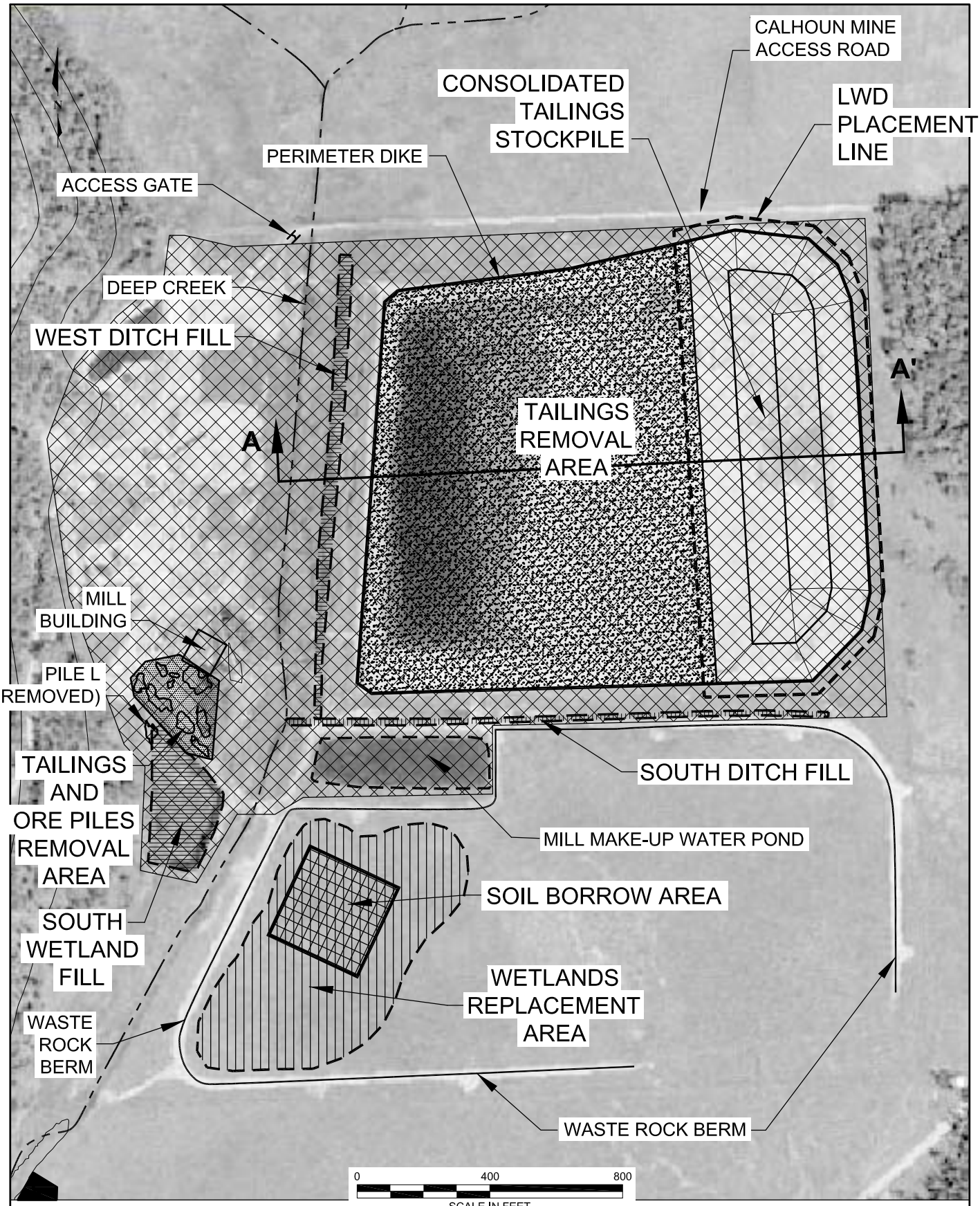


DEED RESTRICTION AREA

FIGURE **16**

ALTERNATIVE 3
CONSOLIDATE AND CAP TAILINGS AND ORE PILES AND FILL ADJACENT WETLANDS

EE/CA CALHOUN MINE



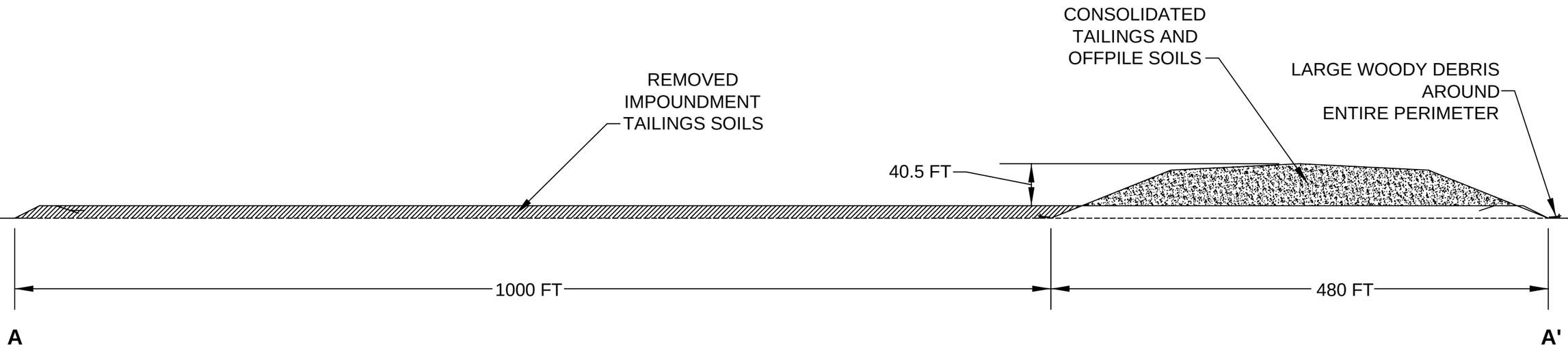
DEED RESTRICTION AREA

FIGURE **17**

ALTERNATIVE 4

CONSOLIDATE AND CAP TAILINGS AND ORE PILES ON TAILINGS IMPOUNDMENT WITH REDUCTION IN TAILINGS IMPOUNDMENT FOOTPRINT AND FILL ADJACENT WETLANDS

EE/CA CALHOUN MINE



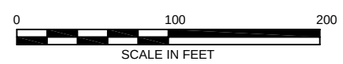


FIGURE **18**

ALTERNATIVE 4 - CROSS SECTION THROUGH CONSOLIDATED STOCKPILE

EE/CA CALHOUN MINE

APPENDIX A

LIST OF SITE SPECIES

Plants observed in the Upland Forest and the Upland Pasture areas include:

Populus tremuloises, Quaking aspen
Pseudotsuga menziessi, Douglas Fir
Pinus ponderosa, Ponderosa Pine
Pinus contortia, Lodgepole pine
Populus trichocarpa, Black cottonwood
Larix occidentalis, Western larch
Symphoricarpos alba, Snowberry
*Calamagrostis rubesce*ns, Pine grass
Duchesnea indica, Indian strawberry
*Berberis nervos*a, Oregon grape
Amellanchier alnifolia, Serviceberry
Lupinus sericieus, Silky lupine
Agropyron trochycaulum, Slender wheatgrass
Festuca arundinacea, Tall fescue
Folium perenne, Perennial ryegrass
Festuca idahoensis, Idaho fescue

Plants observed in the Palustrine Emergent Wetland Habitat include:

Juncus effuses, Soft rush
Typha latifolia, Cattail
Spirea betulifolia, Spirea
Ranunculus repens, Creeping buttercup
Agrostis elata, Bentgrass
Carex flava, Yellow sedge
Equisetum arvense, Field horsetail
Scirpus microcarpus, Small fruited bulrush
Glyceria nervata, Mannagrass
Phalaris arundinacea, Reed canarygrass
Rumex crispus, Dock
Cirsium vulgare, Bull thistle
Verbascum thapsus, Mullein
Scirpus acultus, Hardstem bulrush

Plants observed in the Riverine Habitat include:

Myriophyllum spicatum, Eurasian watermillfoil
Lemma minor, Common duckweed
Typha latifolia, Cattail
Eleocharis ovata, Ovoid spikerush
Ceratophyllum demersum, Coontail

Wildlife at the Site that were observed directly or identified from the literature includes:

Fulica americana, American coot
Aquila chryaetos, Golden eagle
Pandion haliaetus, Osprey
Fuligula clangula, Golden eye duck
Alces alces, Moose
Salvelinus fontinalis, Brook trout
Buteo jamaicensis, Red-tailed hawk
Accipiter cooperii, Cooper's hawk
Procyon lotor, Raccoon
Carduelis tristis, American goldfish
Corvus corax, Raven
Troglodytes troglodytes, Winter wren
Anas platyrhyncos, Mallard
ZXonotrichia leucophrye, White-crowned sparrow
Agelauis phoeniceus, Red-winged blackbird
Rana petiosa, Northern spotted frog
Ondatra zibethicus, Muskrat

APPENDIX B

ADJUSTMENT OF XRF DATA

Appendix B – Adjustment of XRF Data

The correlation between laboratory and XRF measured barium results indicates that the XRF results overestimate barium values significantly; the percent difference between paired results ranges from -96 to 49 percent and the average percent difference is -57 percent. The Pearson correlation coefficient is 0.13, which indicates that sample variation in one data set is not helpful in predicting sample variation in the other data set. The correlation is improved, however, to 89 percent if the data outlier pair (data at grid 20, 5) is removed. The correlation by linear regression with this outlier removed is $y = x/15.08$ where y is the corrected XRF concentration and x is the XRF raw data. The R square statistic or the corrected data set if 0.77, and the average percent difference between laboratory and XRF data is reduced to 20 percent. As a result, XRF data for barium is corrected by this factor and used as screening-level data herein.

The correlation between laboratory and XRF measured zinc results indicates that the XRF consistently overestimate zinc values; the percent difference between paired results ranges from -11 to -59 percent and the average percent difference is 37 percent. The Pearson correlation coefficient is 0.98, which indicates that sample variation in one data set explains up to 98 percent of the variation in the other data set. The correlation is improved to 99 percent if the data outlier pair (data at grid 20, 5) is removed. The correlation by linear regression with the data outlier removed is $y = x/1.58$ where y is the corrected XRF concentration and x is the XRF raw data. The R square statistic or the corrected data set if 0.94, and the average percent difference between laboratory and XRF data is reduced to 17 percent. As a result, XRF data for zinc is corrected by this factor and used as screening-level data herein.

The correlation between laboratory and XRF measured cadmium results indicates that the XRF results consistently overestimate cadmium values; the percent difference between paired results ranges from -43 to -60 percent and the average percent difference is -52 percent. The Pearson correlation coefficient is 0.99, which indicates that sample variation in one data set explains up to 99 percent of the variation in the other data set. The correlation by linear regression is $y = x/2.78$ where y is the corrected XRF concentration and x is the XRF raw data. After application of the correction factor the average percent difference between laboratory and XRF data is reduced to 7 percent. As a result, XRF data for cadmium is corrected by this factor and used as screening-level data herein.

The correlation between laboratory and XRF measured lead results indicates that the XRF results consistently overestimate lead values; the percent difference between paired results ranges from -2 to -82 percent and the average percent difference is -36 percent. The Pearson correlation coefficient is 0.53, which indicates that sample variation in one data set explains up to 53 percent of the variation in the other data set. The correlation by linear regression is $y = x/1.78$ where y is the corrected XRF concentration and x is the XRF raw data. After application of the correction factor the average percent difference between laboratory and XRF data is reduced to 11 percent. As a result, XRF data for lead is corrected by this factor and used as screening-level data herein.

APPENDIX C

LABORATORY RESULTS OF THE IDENTIFICATION AND ENUMERATION OF THE BENTHIC MACROINVERTEBRATE SAMPLES

OtterTail Environmental INC

December 10, 2004

RECEIVED DEC 13 2004

SECOR
Attn: Amanda Magee
12034 134th Ct NE
Ste 102
Redmond, WA 98052

RE: Macroinvertebrate Identifications

Dear Amanda,

Enclosed are an Identification/Enumeration Sheet for each of the four individual samples processed and a Macroinvertebrate Taxa Sheet for the project. Please feel free to contact me with any questions.

Regards,

Ed Fleming

Ed Fleming
Principal Aquatic Biologist

1045, N Ford Street Golden, CO 80403 • Tel (303) 858-8350 • Fax (303) 858-8567
info@OtterTail.us • www.OtterTail.us

Macroinvertebrate Taxa List
For Project ACM EE/CA

Ephemeroptera (Mayflies)
- Tricorythidae
  - *Tricorythodes*

Odonata (Dragon/Damselflies)
- Coenagrionidae
  - *Enallagma*
- Corduliidae
  - Corduliinae

Trichoptera (Caddisflies)
- Limnephilidae
  - *Limnephilus*

Diptera (True flies)
- Tipulidae
  - *Tipula*
- Chironomidae

Coleoptera (Beetles)
- Haliplidae
  - *Haliplus*

Hemiptera (True bugs)
- Corixidae

Mollusca
- Pelecypoda
  - Sphaeriidae
- Gastropoda
  - Physidae
  - Planorbidae

Oligochaeta

Macroinvertebrate Identification and Enumeration

Project Name: ACM EE/CA
Sample ID: BM-US **Sample Date:** 10/27/2004
Sample Time: 1315

IDs Peformed By: OtterTail Environmental

Taxon		Number (Whole Sort)
Hemiptera		
Corixidae		1
Coleoptera		
Haliplidae		
	Haliplus	2
Diptera		
Tipulidae		
	Tipula	1
Chironomidae		52
Mollusca		
Pelecypoda		
	Sphaeriidae	8
Gastropoda		
	Physidae	9
	Planorbidae	4
Oligochaeta		27
	Total # Organisms:	**104**

Macroinvertebrate Identification and Enumeration

Project Name: ACM EE/CA
Sample ID: BM-WET-5 **Sample Date:** 10/27/2004
Sample Time: 1530

IDs Peformed By: OtterTail Environmental

Taxon		Number (Whole Sort)
Diptera		
Chironomidae		27
Mollusca		
Pelecypoda		
	Sphaeriidae	3
Gastropoda		
	Physidae	5
	Planorbidae	21
	Total # Organisms:	**56**

Macroinvertebrate Identification and Enumeration

Project Name: ACM EE/CA
Sample ID: BM-DS **Sample Date:** 10/27/2004
Sample Time: 1130

IDs Peformed By: OtterTail Environmental

Taxon	Number (Whole Sort)
Trichoptera	
Limnephilidae	
Limnephilus	2
Hemiptera	
Corixidae	6
Diptera	
Tipulidae	
Tipula	1
Chironomidae	97
Mollusca	
Pelecypoda	
Sphaeriidae	1
Gastropoda	
Physidae	18
Oligochaeta	11
Total # Organisms:	**136**

Macroinvertebrate Identification and Enumeration

Project Name: ACM EE/CA
Sample ID: BM-TP-1 **Sample Date:** 10/27/2004
Sample Time: 930

IDs Peformed By: OtterTail Environmental

Taxon		Number (Whole Sort)
Ephemeroptera		
Tricorythidae		
	Tricorythodes	68
Odonata		
Coenagrionidae		
	Enallagma	4
Corduliidae		
	Corduliinae	1
Coleoptera		
Haliplidae		
	Haliplus	3
Diptera		
Chironomidae		186
Mollusca		
Gastropoda		
	Planorbidae	1
	Total # Organisms:	**263**

APPENDIX D

BORING LOGS FOR BORING INSTALLED DURING THE EE/CA INVESTIGATION

Well/Boring Location Map	SECOR	Well/Boring: MW-1

Date:	10/15/2004	Drilling Method:	Hollow Stem Auger
Project # :	01OT.16101.01	Sample Method:	NA
Client:	ACW	Boring Diameter:	7.25"
Location:	Anderson Calhoun Mine	Boring Depth:	20.5
City:	Leadpoint	Well Casing:	2" Dia. Schedule 40 PVC
Co./State:	Stevens/Washington	Well Screen:	0.01" Slotted from 10.5-20.5
Driller:	Environmental West	Sand Pack:	8-20.5

Water Level:	artesian	Begin Drilling:	10/15/2004
Time:	NA	End Drilling:	10/15/2004
Date:	NA		

Description/Logged by: Amanda Magee

Well/Boring Completion	First	Stabilized	Time	Recovery Sampler	Field PID Test (ppm)	Sample Number	Recovery (%)	Sample Interval	Depth (Feet)	Graphic	USGS Symbol	Description
2-inch diameter, schedule 40 PVC casing; filter sand pack									0–20		ML	0-20.5' - SILT; grayish brown, nonplastic, damp, organic odor, trace fine-grained sand.

Notes: Boring terminated at 20.5 feet.

Well/Boring Location Map	SECOR	Well/Boring: MW-2

Date:	10/15/2004	Drilling Method:	Hollow Stem Auger
Project # :	01OT.16101.01	Sample Method:	NA
Client:	ACW	Boring Diameter:	7.25"
Location:	Anderson Calhoun Mine	Boring Depth:	12'
City:	Leadpoint	Well Casing:	2" Dia. Schedule 40 PVC
Co./State:	Stevens/Washington	Well Screen:	0.01" Slotted from 7-12'
Driller:	Environmental West	Sand Pack:	5-12'

Water Level:	none	Begin Drilling:	10/15/2004
Time:	NA	End Drilling:	10/15/2004
Date:	NA		

Description/Logged by: Amanda Magee

Well/Boring Completion	First	Stabilized	Time	Recovery Sampler	Field PID Test (ppm)	Sample Number	Recovery (%)	Sample Interval	Depth (Feet)	Graphic	USGS Symbol	Description
2-inch diameter, schedule 40 PVC casing; filter sand pack									1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11		ML	0-12' - SILT; grayish brown, trace plasticity, damp, some fine-grained sand.

Notes: Boring terminated at 12 feet.

Well/Boring Location Map	SECOR	Well/Boring: MW-3
	Date: 10/15/2004	Drilling Method: Hollow Stem Auger
	Project # : 01OT.16101.01	Sample Method: NA
	Client: ACW	Boring Diameter: 7.25"
	Location: Anderson Calhoun Mine	Boring Depth: 15'
	City: Leadpoint	Well Casing: 2" Dia. Schedule 40 PVC
	Co./State: Stevens/Washington	Well Screen: 0.01" Slotted from 10-15'
	Driller: Environmental West	Sand Pack: 8-15'

Water Level:	13'	Begin Drilling:	10/15/2004
Time:	NA	End Drilling:	10/15/2004
Date:	NA		

Description/Logged by: Amanda Magee

Well/Boring Completion	First	Stabilized	Time	Recovery Sampler	Field PID Test (ppm)	Sample Number	Recovery (%)	Sample Interval	Depth (Feet)	Graphic	USGS Symbol	Description
2-inch diameter, schedule 40 PVC casing; filter sand pack									0–13		CL	0-13' - CLAY; dark brown, low plasticity, moist, trace fine-grained sand.
									13–15		ML	13-15' - SILT; bluish gray, no plasticity, wet, soft.

Notes: Boring terminated at 15 feet.

Well/Boring Location Map	SECOR	Well/Boring: MW-4

Date:	10/15/2004	Drilling Method:	Hollow Stem Auger
Project # :	01OT.16101.01	Sample Method:	NA
Client:	ACW	Boring Diameter:	7.25"
Location:	Anderson Calhoun Mine	Boring Depth:	15'
City:	Leadpoint	Well Casing:	2" Dia. Schedule 40 PVC
Co./State:	Stevens/Washington	Well Screen:	0.01" Slotted from 5-15'
Driller:	Environmental West	Sand Pack:	3-15'

Water Level:	8'	Begin Drilling:	10/15/2004
Time:	NA	End Drilling:	10/15/2004
Date:	NA		

Description/Logged by: Amanda Magee

Well/Boring Completion	First	Stabilized	Time	Recovery Sampler	Field PID Test (ppm)	Sample Number	Recovery (%)	Sample Interval	Depth (Feet)	Graphic	USGS Symbol	Description
2-inch diameter, schedule 40 PVC casing; filter sand pack									1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14		ML	0-15' - SILT; brown, low plasticity, moist, trace fine-grained sand.

Notes: Boring terminated at 15 feet.

Well/Boring Location Map	SECOR	Test Pit: TP-4

Date:	10/13/2004	Method:	Excavator
Project # :	01OT.16101.01	Sample Method:	grab from bucket
Client:	ACW	Boring Diameter:	NA
Location:	Anderson Calhoun Mine	Boring Depth:	NA
City:	Leadpoint	Well Casing:	NA
Co./State:	Stevens/Washington	Well Screen:	NA
Excavator:	LS Enterpise	Sand Pack:	NA

Water Level:	NA	Begin Drilling:	10/13/2005
Time:	NA	End Drilling:	10/13/2005
Date:	NA		

Description/Logged by: Amanda Magee

First	Stabilized	Time	Recovery Sampler	Field PID Test (ppm)	Sample Number	Recovery (%)	Sample Interval	Depth (Feet)	Graphic	USGS Symbol	Description
		1105			TP-4A						0-2.3' - Brown and gold barium tailings
								1			
		1112			TP-4B						
								2			
		1115			TP-4C						2.3-14' - Gray zinc tailings
								3			
								4			
								5			
								6			
								7			
								8			
								9			
								10			
								11			
								12			
								13			
		1135			TP-4D			14		PT	14-15.5' - SILT LOAM, dark brown, damp, non-plastic, firm.
		1130			TP-4E			15			

Well/Boring Location Map	SECOR	Test Pit: TP-5

Date:	10/13/2004	Method:	Excavator
Project # :	01OT.16101.01	Sample Method:	grab from bucket
Client:	ACW	Boring Diameter:	NA
Location:	Anderson Calhoun Mine	Boring Depth:	NA
City:	Leadpoint	Well Casing:	NA
Co./State:	Stevens/Washington	Well Screen:	NA
Excavator:	LS Enterpise	Sand Pack:	NA

Water Level:	NA	Begin Drilling:	10/13/2005
Time:	NA	End Drilling:	10/13/2005
Date:	NA		

Description/Logged by: Amanda Magee

First	Stabilized	Time	Recovery Sampler	Field PID Test (ppm)	Sample Number	Recovery (%)	Sample Interval	Depth (Feet)	Graphic	USGS Symbol	Description
		1035			TP-5A						0-2.5' - Brown and gold barium tailings
		1057			TP-5E						
								1			
								2			
		1038			TP-5B						2.5-15' - Gray zinc tailings
								3			
								4			
								5			
								6			
								7			
								8			
								9			
								10			
								11			
								12			
								13			
								14			
		1050			TP-5C			15		PT	15-16' - SILT LOAM, dark brown, damp, non-plastic, firm.
		1055			TP-5D						

Well/Boring Location Map	SECOR	Test Pit: TP-6

Date:	10/13/2004	Method:	Excavator
Project # :	01OT.16101.01	Sample Method:	grab from bucket
Client:	ACW	Boring Diameter:	NA
Location:	Anderson Calhoun Mine	Boring Depth:	NA
City:	Leadpoint	Well Casing:	NA
Co./State:	Stevens/Washington	Well Screen:	NA
Excavator:	LS Enterpise	Sand Pack:	NA

Water Level:	NA	Begin Drilling:	10/13/2005
Time:	NA	End Drilling:	10/13/2005
Date:	NA		

Description/Logged by: Amanda Magee

First	Stabilized	Time	Recovery Sampler	Field PID Test (ppm)	Sample Number	Recovery (%)	Sample Interval	Depth (Feet)	Graphic	USGS Symbol	Description
		0950			TP-6A						0-2.5' - Brown and gold barium tailings
		1530			TP-6E						
								1			
								2			
		1000			TP-6B						2.5-10.5' - Gray zinc tailings
								3			
								4			
								5			
								6			
								7			
								8			
								9			
								10			
		1015			TP-6C					PT	10.5-12' - SILT LOAM, dark brown, damp, non-plastic, firm.
								11			
		1018			TP-6D						

APPENDIX E

SUMMARY OF ARARS

Appendix E
Pertinent Federal and State Laws and Regulations

Safe Drinking Water Act of 1974, 42 USC 300, et seq. National Primary Drinking Water Standards, 40 CFR 141	Establishes maximum contaminant levels (MCLs) and maximum contaminant level goals (MCLGs) that are drinking water criteria designed to protect human health from the potential adverse effects of contaminants in drinking water.	Ground water at the Site is not a current drinking water source, but it is considered a potential future source of drinking water. In addition, ground-water is hydraulically connected to ground-water that is used for drinking water. MCLs and MCLGs should be considered in establishing cleanup levels that are protective of ground-water, points of compliance, and institutional controls.
National Secondary Drinking Water Standards, 40 CFR 143	Establishes secondary drinking water standards for use in establishing cleanup levels.	Federal secondary standards are not enforceable standards and are not typically applicable or relevant and appropriate requirements; however, the State of Washington Model Toxics Control Act requires that these standards be considered in establishing cleanup levels protective of ground-water.
Clean Water Act of 1977, 33 USC 1251, as amended Water Quality Standards, 40 CFR 131	Establishes the requirements and procedures for states to develop and adopt water quality standards based on federal water quality criteria that are at least as stringent as the federal standards. Provides USEPA authority to review and approve state standards. Washington State has received USEPA approval and has adopted more stringent standards under WAC 173-201A.	Not applicable (the requirement to develop standards applies to the states, not individual facilities) but relevant in establishing the basis for state regulation.
Resource Conservation and Recovery Act, 42 USC 6901, et seq. Criteria for Classification of Solid Waste Disposal Facilities and Practices, 40 CFR 257	Criteria specified under this standard are used to determine which solid waste disposal facilities and practices pose a reasonable possibility of adverse risk to human health and the environment.	Mining and ore beneficiation waste are exempted by the Bevel Amendment. Most of the provisions of this chapter have been delegated to the state. (See State Hazardous Waste Management Act.).

Clean Air Act of 1977, as amended 42 USC 7401, et seq. National Ambient Air Quality Standards, 40 CFR 50	Requirements of these regulations are applicable to airborne releases of criteria pollutants specified under the statute. Specific release limits for particulates are set at 50 µg/m 3 annually or 150 µg/m 3 per 24-hour period.	Applicable to airborne releases of criteria pollutants that might be generated during assessment or response actions.
Ambient Air Quality Monitoring, 40 CFR 58 areas.	This regulation presents the criteria and requirements for ambient air quality monitoring and reporting for local air pollution control agencies and operators of new sources of air pollutants.	Applicable to assessment or response actions that meet the regulatory definition of a new source. Also, these requirements may be considered relevant and appropriate to response actions that have the potential to emit air contaminants, even if they are not a new source.
Standards of Performance for New Stationary Sources, 40 CFR 60	These requirements provide standards for new stationary or modifications of existing sources.	Applicable if assessment or response actions include stationary sources.
National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR 61	40 CFR 61 provides general requirements and listings for actions that will generate regulated emissions at a regulated facility.	These requirements are applicable to assessment or response actions that release air emissions into unrestricted
Hazardous Materials Transportation Act, 49 USC 1801, et seq. Hazardous Materials Regulation, 49 CFR 171	These requirements state that no person may offer to accept hazardous material for transportation in commerce unless the material is properly classed, described, packaged, marked, labeled, and in condition for shipment.	These requirements are applicable to hazardous material generated during assessment or response actions, which is sent offsite for disposal.
Hazardous Materials Tables, Hazardous Materials Communications Requirements, and Emergency Response Information Requirements, 49 CFR 172	Tables are used to identify requirements for labeling, packaging, and transportation based on categories of waste types. Small quantities of radioactive wastes are not subject to the requirements of the standard if activity levels are below limits established in paragraph 173.421, 173.422, or 173.424. Specific performance requirements are established for packages used for shipping and transport of hazardous materials.	These requirements are applicable if hazardous materials are transported offsite during assessment or response actions. In the event of a discharge of hazardous waste during transportation from the treatment facility to the disposal facility, this section is applicable.

Hazardous Waste Clean Up/Model Toxics Control Act, Ch. 70.105D RCW Model Toxics Control Act, WAC 173-340	Establishes a process and requirements for cleanup of contaminated sites in the state. MTCA regulations have been authorized for use in implementing corrective action in the state. Specifies that all cleanup actions be protective of human health; comply with all applicable state and federal regulations; and provide for compliance monitoring. Identifies the methods used to develop cleanup standards and their use in selection of a cleanup action. Specifies cleanup goals, which implement the strictest federal or state cleanup criteria. In addition to meeting requirements of other regulations, MTCA uses three basic methods for establishing cleanup levels. These methods may be used to identify cleanup standards for ground-water, surface water, soils, and protection of air quality. Cleanup levels for soils may be calculated using Method A – routine; Method B - standard method; and Method C – conditional standards. MCLs, MCLGs, and secondary drinking water standards are identified in the regulation as ground-water cleanup criteria.	Requirements of MTCA are applicable to the Site.
Hazardous Waste Management Act, 70.105 RCW Dangerous Waste Regulations, WAC 173-303	Establishes the design, operation, and monitoring requirements for managing dangerous waste.	Dangerous waste is not present at the Site.
Solid Waste Management, Recovery and Recycling Act, Ch. 70.95 RCW Minimum Functional Standards for Solid Waste Handling, WAC 173-304	These standards establish requirements to be met for the management of solid waste. Solid waste controlled by this Act includes garbage, industrial waste, construction waste, and ashes. Requirements for containerized storage, collection, transportation, treatment, and disposal of solid waste are included. These standards set ground-water MCLs at the same levels as the state drinking water standards.	The active operations at the Site pre-date the regulation; therefore the regulation is not applicable. These regulations are applicable when solid waste is generated during assessment or response actions.

Water Pollution Control/Water Resource Act of 1971, Ch. 90.48 RCW/Ch.90.54 RCW Surface Water Quality Standards, WAC 173-201A	These standards set water quality standards at levels protective of aquatic life.	Surface water quality criteria established under this chapter are not applicable in assessing risk and response actions.
Protection of Upper Aquifer Zones, WAC 173-154	This regulation directs Ecology to provide for protection of upper aquifers and upper aquifer zones to avoid depletions, excessive water level declines, or reductions in water quality.	This regulation is not applicable because it establishes the policy and program for Ecology. However, the regulation is relevant and appropriate because protection of the aquifer from adverse impacts caused by solid waste is a primary goal.
State Waste Discharge Program, WAC 173-216	The regulation establishes requirements for industrial and commercial operations that discharge to the ground-water, surface waters, or municipal sewerage systems. Specific discharges prohibited under the program are identified. The intent of the regulation is to maintain the highest possible standards, and the law requires the use of all known available and reasonable methods to prevent and control the discharge of wastes into the waters of the state.	Requirements of this program are applicable to assessment or response actions that include discharges to the ground.
Department of Health Standards for Public Water Supplies, WAC 246-290	The rule established under WAC 246-290 defines the regulatory requirements necessary to protect consumers using public drinking water supplies. The rules are intended to conform with the federal SDWA, as amended. WAC 246-290-310 establishes MCLs that define the water quality requirements for public water supplies. WAC 246-290-310 establishes both primary and secondary MCLs and identifies that enforcement of the primary standards is the Department of Health's first priority.	The requirements of WAC 246-290-310 are relevant and appropriate because the ground-water at the Site is a source of drinking water.
State Environmental Policy Act, Chapter 43.21C RCW SEPA Rules, WAC 197-11	These requirements establish compliance with the State Environmental Policy Act.	These requirements are applicable.

Water Quality Standards for Ground Waters of the State of Washington; WAC 173-200	Establishes ground-water quality standards to provide for protection of the environment and human health, as well as an antidegradation policy to protect existing and future beneficial uses of ground-water.	WAC 173-200 standards do not apply to cleanup actions undertaken pursuant to the Model Toxics Control Act (MTCA). Instead, MTCA establishes ground-water cleanup standards at such sites.
Ambient Air Quality Standards for Particulate Matter, WAC 173-470	These requirements set maximum acceptable levels for particulate matter in the ambient air and the 24-hour ambient air concentration standard for particles less than 10 μm in diameter (PM10). The section defines standards for particle fallout in industrial, commercial, and residential areas. Alternate levels are set for areas where natural dust levels are high.	These requirements are applicable to assessment and response actions (e.g., drilling) that might emit particulate matter to the air.

Washington Clean Air Act, Ch. 70.94 RCW and Ch. 43.21A RCW General Regulations for Air Pollution, WAC 173-400	The regulation requires that all sources of air contaminants meet emission standards for visible, particulate, fugitive, odors, and hazardous air emissions. This section requires that all emission units use reasonably available control technology, which may be determined for some source categories to be more stringent than the emission limitations listed in this chapter. The regulation requires that source testing and monitoring be performed. A new source would include any process or source that may increase emissions or ambient air concentration of any contaminant for which federal or state ambient or emission standards have been established.	Requirements of this standard are applicable to assessment and response actions that could result in the emission of hazardous air pollutants.
Controls for New Sources of Air Pollution, WAC 173-460	This standard requires that new sources of air emissions provide emission estimates for toxic air contaminants listed in the regulation. The standard requires that emissions be quantified and used in risk modeling to evaluate ambient impacts and to establish acceptable source impact levels. The standard establishes three major requirements for new sources of air pollutants: use of best available control technology; quantification of toxic emissions; and demonstration that human health is protected.	The standard is applicable to assessment and response actions where contaminants identified as toxic air pollutants are present and air emissions might be generated.
Water Well Construction, Ch. 18.104 RCW Minimum Standards for Construction and Maintenance of Water Wells, WAC 173-160	These requirements establish minimum standards for design, construction, capping, and sealing of all wells. The requirements set additional requirements, including disinfection of equipment, decommissioning of wells, and quality of drilling water.	These requirements are applicable because assessment or response actions include construction of wells for ground-water monitoring of ground-water.
Rules and Regulations Governing the Licensing of Well Contractors and Operators, WAC 173-162	This regulation establishes training standards for well contractors and operators.	This regulation is relevant and appropriate because assessment or response actions could involve ground-water well installation or construction of geotechnical borings.

CFR = Code of Federal Regulations
Ecology = Washington Department of Ecology
MCL = maximum contaminant level
MCLG = maximum contaminant level goal
MTCA = Model Toxics Control Act
RCW = Revised Code of Washington
SEPA = State Environmental Policy Act
SDWA = Safe Drinking Water Act
WAC = Washington Administrative Code.

APPENDIX F

ANALYTICAL DATA AND QUALITY ASSURANCE/QUALITY CONTROL EVALUATION RESULTS FOR THE 2004 SECOR SITE INVESTIGATION

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/17/04
CCIL JOB #: 410072
CCIL SAMPLE #: 1
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA
CLIENT SAMPLE ID: SWDS 10/13/04 906

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	10/20/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	10/20/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	10/20/04	DLC
TOTAL BARIUM	EPA-6010	0.13	MG/L	10/19/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	10/19/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	10/19/04	RAB
TOTAL LEAD	EPA-6010	ND(<0.04)	MG/L	10/19/04	RAB
TOTAL SELENIUM	EPA-6020	0.001	MG/L	11/12/04	STL
TOTAL ZINC	EPA-6010	0.02	MG/L	10/19/04	RAB
DISSOLVED BARIUM	EPA-6010	0.13	MG/L	10/19/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	10/19/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	10/19/04	RAB
DISSOLVED LEAD	EPA-6010	ND(<0.04)	MG/L	10/19/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.001)	MG/L	11/12/04	STL
DISSOLVED ZINC	EPA-6010	0.02	MG/L	10/19/04	RAB
CALCIUM	EPA-6010	80	MG/L	10/19/04	RAB
MAGNESIUM	EPA-6010	20	MG/L	10/19/04	RAB
POTASSIUM	EPA-6010	3	MG/L	10/19/04	RAB
SODIUM	EPA-6010	3.0	MG/L	10/19/04	RAB
NITRATE/NITRATE AS N	EPA-300.0	ND(<0.31)	MG/L	10/21/04	RAB
SULFATE	EPA-300.0	29	MG/L	10/21/04	RAB
CHLORIDE	EPA-300.0	0.82	MG/L	11/1/04	RAB
HARDNESS	SM-2340B	280	MG CaCO3/L	10/19/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	10/27/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	10/27/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	10/27/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	10/27/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	10/27/04	LAH

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CCIL SAMPLE #: 1
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WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA
CLIENT SAMPLE ID: SWDS 10/13/04 906

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	10/27/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	10/27/04	LAH

NOTE: SAMPLE RECEIVED AT 14°C

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CLIENT: SECOR
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REDMOND, WA 98052

DATE: 11/17/04
CCIL JOB #: 410072
CCIL SAMPLE #: 2
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA
CLIENT SAMPLE ID: SWMS 10/13/04 1107

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	10/20/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	10/20/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	10/20/04	DLC
TOTAL BARIUM	EPA-6010	0.11	MG/L	10/19/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	10/19/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	10/19/04	RAB
TOTAL LEAD	EPA-6010	ND(<0.04)	MG/L	10/19/04	RAB
TOTAL SELENIUM	EPA-6020	0.002	MG/L	11/12/04	STL
TOTAL ZINC	EPA-6010	0.05	MG/L	10/19/04	RAB
DISSOLVED BARIUM	EPA-6010	0.11	MG/L	10/19/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	10/19/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	10/19/04	RAB
DISSOLVED LEAD	EPA-6010	ND(<0.04)	MG/L	10/19/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.001)	MG/L	11/12/04	STL
DISSOLVED ZINC	EPA-6010	0.05	MG/L	10/19/04	RAB
CALCIUM	EPA-6010	79	MG/L	10/19/04	RAB
MAGNESIUM	EPA-6010	20	MG/L	10/19/04	RAB
POTASSIUM	EPA-6010	3	MG/L	10/19/04	RAB
SODIUM	EPA-6010	2.9	MG/L	10/19/04	RAB
NITRATE/NITRATE AS N	EPA-300.0	ND(<0.31)	MG/L	10/21/04	RAB
SULFATE	EPA-300.0	22	MG/L	10/21/04	RAB
CHLORIDE	EPA-300.0	0.93	MG/L	11/1/04	RAB
HARDNESS	SM-2340B	280	MG CaCO3/L	10/19/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH

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DATE: 11/17/04
CCIL JOB #: 410072
CCIL SAMPLE #: 2
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA
CLIENT SAMPLE ID: SWMS 10/13/04 1107

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH

NOTE: SAMPLE RECEIVED AT 14°C

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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DATE: 11/17/04
CCIL JOB #: 410072
CCIL SAMPLE #: 3
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA
CLIENT SAMPLE ID: SWUS 10/13/04 1252

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	10/20/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	10/20/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	10/20/04	DLC
TOTAL BARIUM	EPA-6010	0.06	MG/L	10/19/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	10/19/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	10/19/04	RAB
TOTAL LEAD	EPA-6010	ND(<0.04)	MG/L	10/19/04	RAB
TOTAL SELENIUM	EPA-6020	0.001	MG/L	11/12/04	STL
TOTAL ZINC	EPA-6010	0.01	MG/L	10/19/04	RAB
DISSOLVED BARIUM	EPA-6010	0.06	MG/L	10/19/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	10/19/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	10/19/04	RAB
DISSOLVED LEAD	EPA-6010	ND(<0.04)	MG/L	10/19/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.001)	MG/L	11/12/04	STL
DISSOLVED ZINC	EPA-6010	0.01	MG/L	10/19/04	RAB
CALCIUM	EPA-6010	68	MG/L	10/19/04	RAB
MAGNESIUM	EPA-6010	21	MG/L	10/19/04	RAB
POTASSIUM	EPA-6010	2	MG/L	10/19/04	RAB
SODIUM	EPA-6010	2.3	MG/L	10/19/04	RAB
NITRATE/NITRATE AS N	EPA-300.0	ND(<0.31)	MG/L	10/21/04	RAB
SULFATE	EPA-300.0	21	MG/L	10/21/04	RAB
CHLORIDE	EPA-300.0	0.50	MG/L	11/1/04	RAB
HARDNESS	SM-2340B	260	MG CaCO3/L	10/19/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH

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REDMOND, WA 98052

DATE: 11/17/04
CCIL JOB #: 410072
CCIL SAMPLE #: 3
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA
CLIENT SAMPLE ID: SWUS 10/13/04 1252

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	10/28/04	LAH

NOTE: SAMPLE RECEIVED AT 14°C

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GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
410072-01	NWTPH-GX	TFT	98
410072-01	NWTPH-DX W/CLEANUP	C25	99
410072-01	EPA-8082 MOD	TCMX	53
410072-01	EPA-8082 MOD	DBC	56
410072-02	NWTPH-GX	TFT	98
410072-02	NWTPH-DX W/CLEANUP	C25	121
410072-02	EPA-8082 MOD	TCMX	68
410072-02	EPA-8082 MOD	DBC	72
410072-03	NWTPH-GX	TFT	92
410072-03	NWTPH-DX W/CLEANUP	C25	123
410072-03	EPA-8082 MOD	TCMX	63
410072-03	EPA-8082 MOD	DBC	67

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLS	DUP RESULT	ORIG RESULT	%RPD	ASSOC SMPLS
NWTPH-GX (GAS)	ND(<50)	410072-01, 02, 03				
NWTPH-DX (DSL)	ND(<130)	410072-01, 02, 03				
NWTPH-DX (OIL)	ND(<250)	410072-01, 02, 03				
EPA-6010 (BA)	ND(<0.02)	410072-01, 02, 03				
EPA-6010 (CD)	ND(<0.002)	410072-01, 02, 03				
EPA-6010 (CU)	ND(<0.005)	410072-01, 02, 03				
EPA-6010 PB)	ND(<0.04)	410072-01, 02, 03				
EPA-6020 (TOTAL SE)	ND(<0.001)	410072-01, 02, 03	ND(<0.001)	0.001	****	SAME
EPA-6020 (DISS SE)	ND(<0.001)	410072-01, 02, 03	ND(<0.001)	ND(<0.001)	****	SAME
EPA-6010 (ZN)	ND(<0.01)	410072-01, 02, 03				

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CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA

QUALITY CONTROL RESULTS

EPA-6010 (CA)	ND(<0.05)	410072-01, 02, 03
EPA-6010 (MG)	ND(<0.1)	410072-01, 02, 03
EPA-6010 (K)	ND(<1)	410072-01, 02, 03
EPA-6010 (NA)	ND(<0.08)	410072-01, 02, 03
EPA-300.0 (NO3/NO2)	ND(<0.14)	410072-01, 02, 03
EPA-300.0 (SULFATE)	ND(<0.08)	410072-01, 02, 03
EPA-300.0 (CHLORIDE)	ND(<0.14)	410072-01, 02, 03
EPA-8082 MOD	ND(<0.1)	410072-01, 02, 03

SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED SAMPLES	% SPIKE RECOVERY	% SPIKE DUP RECOVERY	REL % DIFF
NWTPH-GX	GASOLINE	410072-01, 02, 03	100	102	2
NWTPH-DX	DIESEL	410072-01, 02, 03	92	92	0
EPA-6010 (BA)	BARIUM	410072-01, 02, 03	97	97	0
EPA-6010 (CD)	CADMIUM	410072-01, 02, 03	90	91	1
EPA-6010 (CU)	COPPER	410072-01, 02, 03	96	96	0
EPA-6010 PB)	LEAD	410072-01, 02, 03	102	102	0
EPA-6020 (TOTAL SE)	SELENIUM	410072-01, 02, 03	95	NA	NA
EPA-6020 (DISS. SE)	SELENIUM	410072-01, 02, 03	91	NA	NA
EPA-6010 (ZN)	ZINC	410072-01, 02, 03	94	95	1
EPA-6010 (CA)	CALCIUM	410072-01, 02, 03	106	105	1
EPA-6010 (MG)	MAGNESIUM	410072-01, 02, 03	106	111	5
EPA-6010 (K)	POTASSIUM	410072-01, 02, 03	90	92	2
EPA-6010 (NA)	SODIUM	410072-01, 02, 03	90	92	2
EPA-300.0	NITRATE	410072-01, 02, 03	102	103	1
EPA-300.0	CHLORIDE	410072-01, 02, 03	93	96	3
EPA-8082 MOD	1016/1260	410072-01, 02, 03	96	91	5

**** %RPD NOT REPORTED FOR VALUES <X5 THE REPORTING LIMIT

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410071
CCIL SAMPLE #: 1
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA
CLIENT SAMPLE ID: SDDS 10/13/04 09:35

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
BARIUM	EPA-6010	ND(<2.9)	MG/KG	10/19/04	RAB
CADMIUM	EPA-6010	3.4	MG/KG	10/19/04	RAB
COPPER	EPA-6010	24	MG/KG	10/19/04	RAB
LEAD	EPA-6010	43	MG/KG	10/19/04	RAB
SELENIUM	EPA-6010	ND(<5.7)	MG/KG	10/19/04	RAB
ZINC	EPA-6010	1900	MG/KG	10/19/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH

NOTE: SAMPLE RECEIVED AT 14°C

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 5 MG/KG
DIESEL RANGE REPORTING LIMIT IS 38 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 76 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410071
CCIL SAMPLE #: 2
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA
CLIENT SAMPLE ID: SDMS 10/13/04 11:17

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
BARIUM	EPA-6010	ND(<3.5)	MG/KG	10/19/04	RAB
CADMIUM	EPA-6010	5.3	MG/KG	10/19/04	RAB
COPPER	EPA-6010	33	MG/KG	10/19/04	RAB
LEAD	EPA-6010	40	MG/KG	10/19/04	RAB
SELENIUM	EPA-6010	19	MG/KG	10/19/04	RAB
ZINC	EPA-6010	1100	MG/KG	10/19/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH

NOTE: SAMPLE RECEIVED AT 14°C

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 6 MG/KG
DIESEL RANGE REPORTING LIMIT IS 59 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 120 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410071
CCIL SAMPLE #: 3
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA
CLIENT SAMPLE ID: SDUS 10/13/04 13:04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
BARIUM	EPA-6010	ND(<4.7)	MG/KG	10/19/04	RAB
CADMIUM	EPA-6010	ND(<1.2)	MG/KG	10/19/04	RAB
COPPER	EPA-6010	3.6	MG/KG	10/19/04	RAB
LEAD	EPA-6010	11	MG/KG	10/19/04	RAB
SELENIUM	EPA-6010	ND(<9.5)	MG/KG	10/19/04	RAB
ZINC	EPA-6010	54	MG/KG	10/19/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	10/27/04	LAH

NOTE: SAMPLE RECEIVED AT 14°C

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 3 MG/KG
DIESEL RANGE REPORTING LIMIT IS 25 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 50 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410071
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
410071-01	NWTPH-GX	TFT	19*
410071-01	NWTPH-DX W/CLEANUP	C25	124
410071-01	EPA-8082 MOD	TCMX	57
410071-01	EPA-8082 MOD	DBC	67
410071-02	NWTPH-GX	TFT	17*
410071-02	NWTPH-DX W/CLEANUP	C25	127
410071-02	EPA-8082 MOD	TCMX	76
410071-02	EPA-8082 MOD	DBC	88
410071-03	NWTPH-GX	TFT	63
410071-03	NWTPH-DX W/CLEANUP	C25	125
410071-03	EPA-8082 MOD	TCMX	75
410071-03	EPA-8082 MOD	DBC	86

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLS
NWTPH-GX (GAS)	ND(<3)	410071-01, 02, 03
NWTPH-DX (DSL)	ND(<25)	410071-01, 02, 03
NWTPH-DX (OIL)	ND(<50)	410071-01, 02, 03
EPA-6010 (BA)	ND(<0.35)	410071-01, 02, 03
EPA-6010 (CD)	ND(<0.10)	410071-01, 02, 03
EPA-6010 (CU)	ND(<0.11)	410071-01, 02, 03
EPA-6010 (PB)	ND(<0.72)	410071-01, 02, 03
EPA-6010 (SE)	ND(<0.78)	410071-01, 02, 03
EPA-6010 (ZN)	ND(<0.23)	410071-01, 02, 03
EPA-8082 MOD	ND(<0.1)	410071-01, 02, 03

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12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410071
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE-CA

QUALITY CONTROL RESULTS

SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED SAMPLES	% SPIKE RECOVERY	% SPIKE DUP RECOVERY	REL % DIFF
NWTPH-GX	GASOLINE	410071-01, 02, 03	78	71	9
NWTPH-DX	DIESEL	410071-01, 02, 03	88	92	5
EPA-6010 (BA)	BARIUM	410071-01, 02, 03	94	96	2
EPA-6010 (CD)	CADMIUM	410071-01, 02, 03	88	90	2
EPA-6010 (CU)	COPPER	410071-01, 02, 03	93	95	2
EPA-6010 (PB)	LEAD	410071-01, 02, 03	96	96	0
EPA-6010 (SE)	SELENIUM	410071-01, 02, 03	87	90	3
EPA-6010 (ZN)	ZINC	410071-01, 02, 03	93	96	3
EPA-8082 MOD	1016/1260	410071-01, 02, 03	107	96	11

* SURROGATE OUTSIDE OF CONTROL LIMITS OF 59-121% DUE TO MATRIX INTERFERENCE

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 1
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-4C 10/13/04 1115

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	30	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	3.4	MG/KG	10/26/04	RAB
COPPER	EPA-6010	37	MG/KG	10/26/04	RAB
LEAD	EPA-6010	380	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<6.2)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	1400	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 2
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-4D 10/13/04 1135

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	170	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	2.8	MG/KG	10/26/04	RAB
COPPER	EPA-6010	36	MG/KG	10/26/04	RAB
LEAD	EPA-6010	85	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<7.9)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	110	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 3
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: UST-1 10/13/04 1335

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 3 MG/KG
DIESEL RANGE REPORTING LIMIT IS 29 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 58 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 4
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: UST-2 10/13/04 1335

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	110	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	260	MG/KG	10/19/04	DLC

NOTES: SAMPLE RECEIVED AT 10°C
CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCTS WHICH ARE LIKELY LATE DIESEL RANGE PRODUCT AND LUBE OIL

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 3 MG/KG
DIESEL RANGE REPORTING LIMIT IS 25 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 50 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 5
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: UST-3 10/13/04 1340

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	75	MG/KG	10/19/04	DLC

NOTES: SAMPLE RECEIVED AT 10°C
CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LUBE OIL

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 3 MG/KG
DIESEL RANGE REPORTING LIMIT IS 25 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 50 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 6
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: UST-4 10/13/04 1340

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 3 MG/KG
DIESEL RANGE REPORTING LIMIT IS 25 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 50 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 7
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: UST-5 10/13/04 1345

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 4 MG/KG
DIESEL RANGE REPORTING LIMIT IS 30 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 60 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CCI
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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 8
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: UST-6 10/13/04 1346

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	10/19/04	DLC

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 8 MG/KG
DIESEL RANGE REPORTING LIMIT IS 64 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 130 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 10
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-1E 10/13/04 1530

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	31	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	4.5	MG/KG	10/26/04	RAB
COPPER	EPA-6010	20	MG/KG	10/26/04	RAB
LEAD	EPA-6010	130	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<3.9)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	1500	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 11
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-6A 10/13/04 0950

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	340	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	3.7	MG/KG	10/26/04	RAB
COPPER	EPA-6010	38	MG/KG	10/26/04	RAB
LEAD	EPA-6010	160	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<7.0)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	1700	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 12
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-6B 10/13/04 1000

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	20	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	4.3	MG/KG	10/26/04	RAB
COPPER	EPA-6010	34	MG/KG	10/26/04	RAB
LEAD	EPA-6010	130	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<6.6)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	2000	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 13
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-6C 10/13/04 1015

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	480	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	ND(<0.91)	MG/KG	10/26/04	RAB
COPPER	EPA-6010	28	MG/KG	10/26/04	RAB
LEAD	EPA-6010	37	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	39	MG/KG	10/26/04	RAB
ZINC	EPA-6010	50	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 15
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-5A 10/13/04 1035

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	72000	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	8.9	MG/KG	10/26/04	RAB
COPPER	EPA-6010	75	MG/KG	10/26/04	RAB
LEAD	EPA-6010	21	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	35	MG/KG	10/26/04	RAB
ZINC	EPA-6010	940	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 16
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-5B 10/13/04 1038

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	76	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	1.5	MG/KG	10/26/04	RAB
COPPER	EPA-6010	27	MG/KG	10/26/04	RAB
LEAD	EPA-6010	210	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<9.9)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	1000	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CLIENT: SECOR
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REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 17
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-5C 10/13/04 1050

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	550	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	3.9	MG/KG	10/26/04	RAB
COPPER	EPA-6010	16	MG/KG	10/26/04	RAB
LEAD	EPA-6010	170	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<11)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	290	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CLIENT: SECOR
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REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 19
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-5E 10/13/04 1057

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	50	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	3.1	MG/KG	10/26/04	RAB
COPPER	EPA-6010	42	MG/KG	10/26/04	RAB
LEAD	EPA-6010	260	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<6.5)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	1000	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 20
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-4A 10/13/04 1105

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	75000	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	8.3	MG/KG	10/26/04	RAB
COPPER	EPA-6010	72	MG/KG	10/26/04	RAB
LEAD	EPA-6010	32	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	32	MG/KG	10/26/04	RAB
ZINC	EPA-6010	970	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 21
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TP-4B 10/13/04 1112

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	300	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	5.5	MG/KG	10/26/04	RAB
COPPER	EPA-6010	110	MG/KG	10/26/04	RAB
LEAD	EPA-6010	560	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<7.1)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	2200	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 22
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS MILL 3-2" 10/14/04 1040

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	73	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	120	MG/KG	10/26/04	RAB
COPPER	EPA-6010	98	MG/KG	10/26/04	RAB
LEAD	EPA-6010	4500	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	4.5	MG/KG	10/26/04	RAB
ZINC	EPA-6010	31000	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 23
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS MILL 2-2" 10/14/04 1020

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	44000	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	7.0	MG/KG	10/26/04	RAB
COPPER	EPA-6010	60	MG/KG	10/26/04	RAB
LEAD	EPA-6010	110	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	20	MG/KG	10/26/04	RAB
ZINC	EPA-6010	1300	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 24
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS MILL 3-5" 10/14/04 1045

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	380	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	110	MG/KG	10/26/04	RAB
COPPER	EPA-6010	110	MG/KG	10/26/04	RAB
LEAD	EPA-6010	7900	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	ND(<3.6)	MG/KG	10/26/04	RAB
ZINC	EPA-6010	31000	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 25
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS MILL-1 10/14/04 1014

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	47000	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	2.9	MG/KG	10/26/04	RAB
COPPER	EPA-6010	31	MG/KG	10/26/04	RAB
LEAD	EPA-6010	81	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	19	MG/KG	10/26/04	RAB
ZINC	EPA-6010	560	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/20/04
CCIL JOB #: 410073
CCIL SAMPLE #: 26
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS MILL 3-22" 10/14/04 1050

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	28	MG/KG	12/15/04	RAB
CADMIUM	EPA-6010	47	MG/KG	12/15/04	RAB
COPPER	EPA-6010	35	MG/KG	12/15/04	RAB
LEAD	EPA-6010	1300	MG/KG	12/15/04	RAB
SELENIUM	EPA-6010	ND(<19)	MG/KG	12/15/04	RAB
ZINC	EPA-6010	5300	MG/KG	12/15/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 28
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS MILL 4-18" 10/14/04 1110

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	75000	MG/KG	10/26/04	RAB
CADMIUM	EPA-6010	7.6	MG/KG	10/26/04	RAB
COPPER	EPA-6010	51	MG/KG	10/26/04	RAB
LEAD	EPA-6010	38	MG/KG	10/26/04	RAB
SELENIUM	EPA-6010	29	MG/KG	10/26/04	RAB
ZINC	EPA-6010	830	MG/KG	10/26/04	RAB

NOTE: SAMPLE RECEIVED AT 10°C

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 29
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SE SOIL 1A 10/14/04 1145

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	15000	MG/KG	10/21/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	50000	MG/KG	10/21/04	DLC

NOTES: SAMPLE RECEIVED AT 10°C
CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCTS WHICH ARE LIKELY LIGHT OIL AND LUBE OIL
DIESEL RANGE RESULT BIASED HIGH DUE TO OVERLAP FROM LUBE OIL RANGE PRODUCT

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 3 MG/KG
DIESEL RANGE REPORTING LIMIT IS 1300 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 2500 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/1/04
CCIL JOB #: 410073
CCIL SAMPLE #: 30
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SE SOIL 2A 10/14/04 1155

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	10/21/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	4500	MG/KG	10/19/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	23000	MG/KG	10/19/04	DLC

NOTES: SAMPLE RECEIVED AT 10°C
CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCTS WHICH ARE LIKELY LIGHT OIL AND LUBE OIL
DIESEL RANGE RESULT BIASED HIGH DUE TO OVERLAP FROM LUBE OIL RANGE PRODUCT

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 3 MG/KG
DIESEL RANGE REPORTING LIMIT IS 500 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 1000 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/20/04
CCIL JOB #: 410073
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

REPORT AMENDED TO INCLUDE ADDITIONAL PARAMETERS

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
410073-03	NWTPH-GX	TFT	47
410073-03	NWTPH-DX W/CLEANUP	C25	122
410073-04	NWTPH-GX	TFT	76
410073-04	NWTPH-DX W/CLEANUP	C25	119
410073-05	NWTPH-GX	TFT	81
410073-05	NWTPH-DX W/CLEANUP	C25	77
410073-06	NWTPH-GX	TFT	82
410073-06	NWTPH-DX W/CLEANUP	C25	115
410073-07	NWTPH-GX	TFT	56*
410073-07	NWTPH-DX W/CLEANUP	C25	124
410073-08	NWTPH-GX	TFT	40*
410073-08	NWTPH-DX W/CLEANUP	C25	114
410073-29	NWTPH-GX	TFT	80
410073-29	NWTPH-DX W/CLEANUP	C25	**
410073-30	NWTPH-GX	TFT	86
410073-30	NWTPH-DX W/CLEANUP	C25	**

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CLIENT: SECOR
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REDMOND, WA 98052

DATE: 12/20/04
CCIL JOB #: 410073
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

REPORT AMENDED TO INCLUDE ADDITIONAL PARAMETERS

QUALITY CONTROL RESULTS

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLS
NWTPH-GX (GAS)	ND(<3)	410073-3 TO 8, 29, 30
NWTPH-DX (DSL)	ND(<25)	410073-3 TO 8, 29, 30
NWTPH-DX (OIL)	ND(<50)	410073-3 TO 8, 29, 30
EPA-6010 (BA)	ND(<0.35)	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28
EPA-6010 (CD)	ND(<0.10)	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28
EPA-6010 (CU)	ND(<0.11)	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28
EPA-6010 (PB)	ND(<0.72)	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28
EPA-6010 (SE)	ND(<0.78)	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28
EPA-6010 (ZN)	ND(<0.23)	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28
EPA-6010 (BA)	ND(<0.35)	410073-26
EPA-6010 (CD)	ND(<0.10)	410073-26
EPA-6010 (CU)	ND(<0.11)	410073-26
EPA-6010 (PB)	ND(<0.72)	410073-26
EPA-6010 (SE)	ND(<0.78)	410073-26
EPA-6010 (ZN)	ND(<0.23)	410073-26

SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED SAMPLES	% SPIKE RECOVERY	% SPIKE DUP RECOVERY	REL % DIFF
NWTPH-GX	GASOLINE	410073-03 TO 08, 29, 30	78	71	9
NWTPH-DX	DIESEL	410073-03 TO 08, 29, 30	88	92	5
EPA-6010 (BA)	BARIUM	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28	94	93	1
EPA-6010 (CD)	CADMIUM	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28	89	87	2
EPA-6010 (CU)	COPPER	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28	94	93	1
EPA-6010 (PB)	LEAD	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28	95	96	1
EPA-6010 (SE)	SELENIUM	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28	90	87	3

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REDMOND, WA 98052

DATE: 12/20/04
CCIL JOB #: 410073
DATE RECEIVED: 10/18/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

REPORT AMENDED TO INCLUDE ADDITIONAL PARAMETERS

QUALITY CONTROL RESULTS

EPA-6010 (ZN)	ZINC	410073-1, 2,10,11,13,15 TO 19,20 TO 23,24,25 28	94	92	2
EPA-6010 (BA)	BARIUM	410073-26	102	104	2
EPA-6010 (CD)	CADMIUM	410073-26	95	97	2
EPA-6010 (CU)	COPPER	410073-26	99	102	3
EPA-6010 (PB)	LEAD	410073-26	101	104	3
EPA-6010 (SE)	SELENIUM	410073-26	104	107	3
EPA-6010 (ZN)	ZINC	410073-26	103	104	1

* SURROGATE OUTSIDE OF CONTROL LIMITS OF 59-121% DUE TO MATRIX INTERFERENCE
** SURROGATE DILUTED OUT OF CALIBRATION RANGE

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/3/04
CCIL JOB #: 410085
CCIL SAMPLE #: 1
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: 5,1 (2") 10/13/04 13:30

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	38	MG/KG	10/21/04	RAB
CADMIUM	EPA-6010	1.8	MG/KG	10/21/04	RAB
COPPER	EPA-6010	3.5	MG/KG	10/21/04	RAB
LEAD	EPA-6010	51	MG/KG	10/21/04	RAB
SELENIUM	EPA-6010	ND(<9.2)	MG/KG	10/21/04	RAB
ZINC	EPA-6010	230	MG/KG	10/21/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/3/04
CCIL JOB #: 410085
CCIL SAMPLE #: 2
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: 22,0 (2") 10/13/04 16:45

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	2700	MG/KG	10/21/04	RAB
CADMIUM	EPA-6010	18	MG/KG	10/21/04	RAB
COPPER	EPA-6010	23	MG/KG	10/21/04	RAB
LEAD	EPA-6010	390	MG/KG	10/21/04	RAB
SELENIUM	EPA-6010	14	MG/KG	10/21/04	RAB
ZINC	EPA-6010	6200	MG/KG	10/21/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/3/04
CCIL JOB #: 410085
CCIL SAMPLE #: 3
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: 20,5 (2") 10/14/04 11:20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	32	MG/KG	10/21/04	RAB
CADMIUM	EPA-6010	89	MG/KG	10/21/04	RAB
COPPER	EPA-6010	10	MG/KG	10/21/04	RAB
LEAD	EPA-6010	290	MG/KG	10/21/04	RAB
SELENIUM	EPA-6010	ND(<6.3)	MG/KG	10/21/04	RAB
ZINC	EPA-6010	31000	MG/KG	10/21/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CLIENT: SECOR
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REDMOND, WA 98052

DATE: 11/3/04
CCIL JOB #: 410085
CCIL SAMPLE #: 4
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: 25,4 (2") 10/14/04 13:40

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	270	MG/KG	10/21/04	RAB
CADMIUM	EPA-6010	4.8	MG/KG	10/21/04	RAB
COPPER	EPA-6010	5.0	MG/KG	10/21/04	RAB
LEAD	EPA-6010	110	MG/KG	10/21/04	RAB
SELENIUM	EPA-6010	3.2	MG/KG	10/21/04	RAB
ZINC	EPA-6010	1700	MG/KG	10/21/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/3/04
CCIL JOB #: 410085
CCIL SAMPLE #: 5
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: 20,1 (6") 10/16/04 10:10

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	330	MG/KG	10/21/04	RAB
CADMIUM	EPA-6010	17	MG/KG	10/21/04	RAB
COPPER	EPA-6010	11	MG/KG	10/21/04	RAB
LEAD	EPA-6010	370	MG/KG	10/21/04	RAB
SELENIUM	EPA-6010	12	MG/KG	10/21/04	RAB
ZINC	EPA-6010	5700	MG/KG	10/21/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
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REDMOND, WA 98052

DATE: 11/3/04
CCIL JOB #: 410085
CCIL SAMPLE #: 6
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: 20,5 (24") 10/17/04 13:50

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	62	MG/KG	10/21/04	RAB
CADMIUM	EPA-6010	22	MG/KG	10/21/04	RAB
COPPER	EPA-6010	6	MG/KG	10/21/04	RAB
LEAD	EPA-6010	330	MG/KG	10/21/04	RAB
SELENIUM	EPA-6010	5.7	MG/KG	10/21/04	RAB
ZINC	EPA-6010	9100	MG/KG	10/21/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/3/04
CCIL JOB #: 410085
CCIL SAMPLE #: 7
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: 27,2 (2") 10/14/04 14:26

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	32000	MG/KG	10/21/04	RAB
CADMIUM	EPA-6010	3.3	MG/KG	10/21/04	RAB
COPPER	EPA-6010	41	MG/KG	10/21/04	RAB
LEAD	EPA-6010	58	MG/KG	10/21/04	RAB
SELENIUM	EPA-6010	22	MG/KG	10/21/04	RAB
ZINC	EPA-6010	480	MG/KG	10/21/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/17/04
CCIL JOB #: 410085
CCIL SAMPLE #: 8
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS DECON. RINSEATE (1) 10/15/04 13:40

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TOTAL BARIUM	EPA-6010	0.06	MG/L	10/27/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	10/27/04	RAB
TOTAL COPPER	EPA-6010	0.008	MG/L	10/27/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/2/04	RAB
TOTAL SELENIUM	EPA-6020	ND(<0.001)	MG/L	11/12/04	STL
TOTAL ZINC	EPA-6010	0.06	MG/L	10/27/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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APPROVED BY: C Rat

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/17/04
CCIL JOB #: 410085
CCIL SAMPLE #: 9
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS DECON. RINSEATE (2) 10/16/04 16:00

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TOTAL BARIUM	EPA-6010	ND(<0.02)	MG/L	10/27/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	10/27/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	10/27/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/2/04	RAB
TOTAL SELENIUM	EPA-6020	ND(<0.001)	MG/L	11/12/04	STL
TOTAL ZINC	EPA-6010	0.02	MG/L	10/27/04	RAB

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/17/04
CCIL JOB #: 410085
CCIL SAMPLE #: 10
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS DECON. RINSEATE (3) 10/17/04 15:47

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TOTAL BARIUM	EPA-6010	ND(<0.02)	MG/L	10/27/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	10/27/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	10/27/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/2/04	RAB
TOTAL SELENIUM	EPA-6020	ND(<0.001)	MG/L	11/12/04	STL
TOTAL ZINC	EPA-6010	0.04	MG/L	10/27/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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REDMOND, WA 98052

DATE: 11/3/04
CCIL JOB #: 410085
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLS	DUP RESULT	ORIG RESULT	%RPD	ASSOC SMPLS
EPA-6010 (BA)	ND(<0.35)	410085-01 TO 07				
EPA-6010 (CD)	ND(<0.10)	410085-01 TO 07				
EPA-6010 (CU)	ND(<0.11)	410085-01 TO 07				
EPA-6010 (PB)	ND(<0.72)	410085-01 TO 07				
EPA-6010 (SE)	ND(<0.78)	410085-01 TO 07				
EPA-6010 (ZN)	ND(<0.23)	410085-01 TO 07				
EPA-6010 (BA)	ND(<0.02)	410085-08, 09, 10				
EPA-6010 (CD)	ND(<0.002)	410085-08, 09, 10				
EPA-6010 (CU)	ND(<0.005)	410085-08, 09, 10				
EPA-7421 (PB)	ND(<0.003)	410085-08, 09, 10				
EPA-6020 (SE)	ND(<0.001)	410085-08, 09, 10	ND(<0.001)	0.001	****	SAME
EPA-6010 (ZN)	ND(<0.02)	410085-08, 09, 10				

SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED SAMPLES	% SPIKE RECOVERY	% SPIKE DUP RECOVERY	REL % DIFF
EPA-6010 (BA)	BARIUM	410085-01 TO 07	93	94	1
EPA-6010 (CD)	CADMIUM	410085-01 TO 07	88	89	1
EPA-6010 (CU)	COPPER	410085-01 TO 07	91	92	1
EPA-6010 (PB)	LEAD	410085-01 TO 07	95	98	3
EPA-6010 (SE)	SELENIUM	410085-01 TO 07	87	87	0
EPA-6010 (ZN)	ZINC	410085-01 TO 07	92	94	2
EPA-6010 (BA)	BARIUM	410085-08, 09, 10	97	101	4
EPA-6010 (CD)	CADMIUM	410085-08, 09, 10	89	92	3
EPA-6010 (CU)	COPPER	410085-08, 09, 10	97	99	2
EPA-7421 (PB)	LEAD	410085-08, 09, 10	102	102	0
EPA-6020 (SE)	SELENIUM	410085-08, 09, 10	95	NA	NA
EPA-6010 (ZN)	ZINC	410085-08, 09, 10	101	103	2

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/3/04
CCIL JOB #: 410085
DATE RECEIVED: 10/20/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

**** %RPD NOT REPORTED FOR VALUES <X5 THE REPORTING LIMIT

APPROVED BY: C Ph

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 1
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: LPSW-20 10/26/04 9:55-10:20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	0.10	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	0.003	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
TOTAL ZINC	EPA-6010	2.0	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.10	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	2.0	MG/L	11/4/04	RAB
HARDNESS	SM-2340B	350	MG CaCO3/L	11/4/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
TOTAL SOLIDS	EPA-160.3	830	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	380	MG/L	11/2/04	HJK

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 1
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: LPSW-20 10/26/04 9:55-10:20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruff

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 2
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: LPSW-0 10/26/04 10:12-11:07

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	0.10	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6020	0.002	MG/L	11/17/04	STL
TOTAL ZINC	EPA-6010	2.3	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.10	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	2.2	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	86	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	35	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	1	MG/L	11/4/04	RAB
SODIUM	EPA-6010	2.4	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<0.62)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	56	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	0.93	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	360	MG CaCO3/L	11/4/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 2
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: LPSW-0 10/26/04 10:12-11:07

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
TOTAL SOLIDS	EPA-160.3	400	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	390	MG/L	11/2/04	HJK

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruff

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410132
CCIL SAMPLE #: 4
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TRIP BLANK 10/26/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DICHLORODIFLUOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CHLOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
VINYL CHLORIDE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMOMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TRICHLOROFLUOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
ACETONE	EPA-8260	ND(<25)	UG/L	11/2/04	CCN
1,1-DICHLOROETHENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
METHYLENE CHLORIDE	EPA-8260	ND(<5)	UG/L	11/2/04	CCN
ACRYLONITRILE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
METHYL T-BUTYL ETHER	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TRANS-1,2-DICHLOROETHENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1-DICHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
2-BUTANONE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
CIS-1,2-DICHLOROETHENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
2,2-DICHLOROPROPANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMOCHLOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CHLOROFORM	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1,1-TRICHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1-DICHLOROPROPENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CARBON TETRACHLORIDE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DICHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TRICHLOROETHENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DICHLOROPROPANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
DIBROMOMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMODICHLOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TRANS-1,3-DICHLOROPROPENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
4-METHYL-2-PENTANONE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
TOLUENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CIS-1,3-DICHLOROPROPENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1,2-TRICHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
2-HEXANONE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
1,3-DICHLOROPROPANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TETRACHLOROETHYLENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410132
CCIL SAMPLE #: 4
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TRIP BLANK 10/26/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DIBROMOCHLOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DIBROMOETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1,1,2-TETRACHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
ETHYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
M+P XYLENE	EPA-8260	ND(<4)	UG/L	11/2/04	CCN
STYRENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
O-XYLENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMOFORM	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
ISOPROPYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1,2,2-TETRACHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2,3-TRICHLOROPROPANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMOBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
N-PROPYL BENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
2-CHLOROTOLUENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,3,5-TRIMETHYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
4-CHLOROTOLUENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
T-BUTYL BENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2,4-TRIMETHYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
S-BUTYL BENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
P-ISOPROPYLTOLUENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,3 DICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,4-DICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
N-BUTYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DIBROMO 3-CHLOROPROPANE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
HEXACHLOROBUTADIENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
NAPHTHALENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2,3-TRICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410132
CCIL SAMPLE #: 4
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TRIP BLANK 10/26/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 5
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET 1 10/26/04 14:30-14:40

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TOTAL BARIUM	EPA-6010	0.21	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6020	0.002	MG/L	11/17/04	STL
TOTAL ZINC	EPA-6010	0.14	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.17	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	0.11	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	91	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	22	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	2	MG/L	11/4/04	RAB
SODIUM	EPA-6010	3.4	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<0.62)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	41	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	1.3	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	320	MG CaCO3/L	11/4/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 5
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET 1 10/26/04 14:30-14:40

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TOTAL SOLIDS	EPA-160.3	380	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	370	MG/L	11/2/04	HJK

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 6
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET 2 10/26/04 14:55-15:15

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	0.20	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6010	0.04	MG/L	11/4/04	RAB
TOTAL ZINC	EPA-6010	0.08	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.17	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	0.02	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	91	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	23	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	4	MG/L	11/4/04	RAB
SODIUM	EPA-6010	3.4	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<0.62)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	47	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	1.1	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	320	MG CaCO3/L	11/4/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 6
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET 2 10/26/04 14:55-15:15

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	11/3/04	LAH
TOTAL SOLIDS	EPA-160.3	390	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	360	MG/L	11/2/04	HJK

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruff

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 7
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: UPSW-0 10/26/04 12:30-12:40

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	0.07	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6010	0.09	MG/L	11/4/04	RAB
TOTAL ZINC	EPA-6010	0.28	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.06	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	0.22	MG/L	11/4/04	RAB
HARDNESS	SM-2340B	310	MG CaCO3/L	11/4/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
TOTAL SOLIDS	EPA-160.3	350	MG/L	11/12/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	350	MG/L	11/12/04	HJK

NOTE: TOTAL SOLIDS AND TOTAL DISSOLVED SOLIDS ANALYZED OUTSIDE OF HOLD TIME

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
CCIL SAMPLE #: 7
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: UPSW-0 10/26/04 12:30-12:40

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruff

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DATE: 11/22/04
CCIL JOB #: 410132
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
410132-01	NWTPH-GX	TFT	104
410132-01	NWTPH-DX W/CLEANUP	C25	100
410132-01	EPA-8082 MOD	TCMX	65
410132-01	EPA-8082 MOD	DBC	68
410132-02	NWTPH-GX	TFT	112
410132-02	NWTPH-DX W/CLEANUP	C25	92
410132-02	EPA-8082 MOD	TCMX	60
410132-02	EPA-8082 MOD	DBC	67
410132-04	EPA-8260	1,2-DCE-d4	97
410132-04	EPA-8260	TOLUENE-d8	101
410132-04	EPA-8260	4-BFB	100
410132-05	NWTPH-GX	TFT	108
410132-05	EPA-8082 MOD	TCMX	61
410132-05	EPA-8082 MOD	DBC	72
410132-06	NWTPH-GX	TFT	101
410132-06	NWTPH-DX W/CLEANUP	C25	100
410132-06	EPA-8082 MOD	TCMX	61
410132-06	EPA-8082 MOD	DBC	72
410132-07	NWTPH-GX	TFT	103
410132-07	NWTPH-DX W/CLEANUP	C25	92
410132-07	EPA-8082 MOD	TCMX	58
410132-07	EPA-8082 MOD	DBC	48

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLS	DUP RESULT	ORIG RESULT	%RPD	ASSOC SMPLS
NWTPH-GX (GAS)	ND(<50)	410132-01, 02, 05, 06, 07				
NWTPH-DX (DSL)	ND(<130)	410132-01, 02, 06, 07				
NWTPH-DX (OIL)	ND(<250)	410132-01, 02, 06, 07				
EPA-6010 (TOTAL BA)	ND(<0.02)	410132-01, 02, 05, 06, 07				
EPA-6010 (TOTAL CD)	ND(<0.002)	410132-01, 02, 05, 06, 07				
EPA-6010 (TOTAL CU)	ND(<0.005)	410132-01, 02, 05, 06, 07				
EPA-7421 (TOTAL PB)	ND(<0.003)	410132-01, 02, 05, 06, 07				
EPA-6020 (TOTAL SE)	ND(<.002)	410132-01, 02, 05	ND(<.002)	ND(<.002)	****	SAME
EPA-6010 (TOTAL SE)	ND(<0.04)	410132-06, 07				
EPA-6010 (TOTAL ZN)	ND(<0.01)	410132-01, 02, 05, 06, 07				
EPA-6010 (DISS. BA)	ND(<0.02)	410132-01, 02, 05, 06, 07				
EPA-6010 (DISS. CD)	ND(<0.002)	410132-01, 02, 05, 06, 07				
EPA-6010 (DISS. CU)	ND(<0.005)	410132-01, 02, 05, 06, 07				
EPA-7421 (DISS. PB)	ND(<0.003)	410132-01, 02, 05, 06, 07				
EPA-6020 (DISS. SE)	ND(<.002)	410132-01, 02, 05, 06, 07	ND(<.002)	ND(<.002)	****	SAME
EPA-6010 (DISS. ZN)	ND(<0.01)	410132-01, 02, 05, 06, 07				
EPA-6010 (CA)	ND(<0.05)	410132-02, 05, 06				
EPA-6010 (MG)	ND(<0.1)	410132-02, 05, 06				
EPA-6010 (K)	ND(<1)	410132-02, 05, 06				
EPA-6010 (NA)	ND(<0.08)	410132-02, 05, 06				
EPA-300.0 (NO3/NO2)	ND(<0.08)	410132-02, 05, 06				
EPA-300.0 (SULFATE)	ND(<0.08)	410132-02, 05, 06				
EPA-300.0 (CHLORIDE)	ND(<0.14)	410132-02, 05, 06				
EPA-8082 MOD	ND(<0.1)	410132-01, 02, 05, 06, 07				
EPA-160.3 (TS)	ND(<5)	410132-01, 02, 05, 06	730	730	0	SAME
EPA-160.1 (TDS)	ND(<5)	410132-01, 02, 05, 06	330	310	6	SAME
EPA-160.3 (TS)	ND(<5)	410132-07	360	350	3	SAME
EPA-160.1 (TDS)	ND(<5)	410132-07	350	350	0	SAME
EPA-8260	SEE BLANK REPORT					

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REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED SAMPLES	% SPIKE RECOVERY	% SPIKE DUP RECOVERY	REL % DIFF
NWTPH-GX	GASOLINE	410132-01, 02, 05, 06, 07	114	112	2
NWTPH-DX	DIESEL	410132-01, 02, 06, 07	96	92	4
EPA-6010 (TOTAL BA)	BARIUM	410132-01, 02, 05, 06, 07	93	93	0
EPA-6010 (TOTAL CD)	CADMIUM	410132-01, 02, 05, 06, 07	86	85	1
EPA-6010 (TOTAL CU)	COPPER	410132-01, 02, 05, 06, 07	92	92	0
EPA-7421 (TOTAL PB)	LEAD	410132-01, 02, 05, 06, 07	99	101	2
EPA-6020 (TOTAL SE)	SELENIUM	410132-01, 02, 05	93	N/A	N/A
EPA-6010 (TOTAL SE)	SELENIUM	410132-06, 07	89	91	2
EPA-6010 (TOTAL ZN)	ZINC	410132-01, 02, 05, 06, 07	93	92	1
EPA-6010 (DISS. BA)	BARIUM	410132-01, 02, 05, 06, 07	106	105	1
EPA-6010 (DISS. CD)	CADMIUM	410132-01, 02, 05, 06, 07	95	97	2
EPA-6010 (DISS. CU)	COPPER	410132-01, 02, 05, 06, 07	107	107	0
EPA-7421 (DISS. PB)	LEAD	410132-01, 02, 05, 06, 07	99	101	2
EPA-6020 (DISS. SE)	SELENIUM	410132-01, 02, 05, 06, 07	105	N/A	N/A
EPA-6010 (DISS. ZN)	ZINC	410132-01, 02, 05, 06, 07	104	107	3
EPA-6010 (CA)	CALCIUM	410132-02, 05, 06	90	90	0
EPA-6010 (MG)	MAGNESIUM	410132-02, 05, 06	112	111	1
EPA-6010 (K)	POTASSIUM	410132-02, 05, 06	97	92	5
EPA-6010 (NA)	SODIUM	410132-02, 05, 06	86	88	2
EPA-300.0 (NO3/NO2)	NITRATE	410132-02, 05, 06	99	103	4
EPA-300.0 (SULFATE)	SULFATE	410132-02, 05, 06	98	102	4
EPA-300.0 (CHLORIDE)	CHLORIDE	410132-02, 05, 06	95	95	0
EPA-8082 MOD	1016/1260	410132-01, 02, 05, 06, 07	104	110	6
EPA-160.1 (TDS)	SODIUM CHLORIDE	410132-01, 02, 05, 06	97	N/A	N/A
EPA-160.1 (TDS)	SODIUM CHLORIDE	410132-07	102	N/A	N/A
EPA-8260	1,1 DICHLOROETHENE	410132-04	104	103	2
EPA-8260	BENZENE	410132-04	104	100	5
EPA-8260	TRICHLOROETHENE	410132-04	101	96	5

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410132
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

EPA-8260	TOLUENE	410132-04	99	96	3
EPA-8260	CHLOROBENZENE	410132-04	98	98	0

**** %RPD NOT REPORTED FOR VALUES <X5 THE REPORTING LIMIT

APPROVED BY: C Ruf

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410132
CCIL SAMPLE #: BLK
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: METHOD BLANK FOR EPA-8260

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DICHLORODIFLUOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CHLOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
VINYL CHLORIDE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMOMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TRICHLOROFLUOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
ACETONE	EPA-8260	ND(<25)	UG/L	11/2/04	CCN
1,1-DICHLOROETHENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
METHYLENE CHLORIDE	EPA-8260	ND(<5)	UG/L	11/2/04	CCN
ACRYLONITRILE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
METHYL T-BUTYL ETHER	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TRANS-1,2-DICHLOROETHENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1-DICHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
2-BUTANONE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
CIS-1,2-DICHLOROETHENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
2,2-DICHLOROPROPANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMOCHLOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CHLOROFORM	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1,1-TRICHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1-DICHLOROPROPENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CARBON TETRACHLORIDE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DICHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TRICHLOROETHENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DICHLOROPROPANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
DIBROMOMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMODICHLOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TRANS-1,3-DICHLOROPROPENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
4-METHYL-2-PENTANONE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
TOLUENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CIS-1,3-DICHLOROPROPENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1,2-TRICHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
2-HEXANONE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
1,3-DICHLOROPROPANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
TETRACHLOROETHYLENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410132
CCIL SAMPLE #: BLK
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: METHOD BLANK FOR EPA-8260

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DIBROMOCHLOROMETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DIBROMOETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
CHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1,1,2-TETRACHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
ETHYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
M+P XYLENE	EPA-8260	ND(<4)	UG/L	11/2/04	CCN
STYRENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
O-XYLENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMOFORM	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
ISOPROPYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,1,2,2-TETRACHLOROETHANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2,3-TRICHLOROPROPANE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
BROMOBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
N-PROPYL BENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
2-CHLOROTOLUENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,3,5-TRIMETHYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
4-CHLOROTOLUENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
T-BUTYL BENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2,4-TRIMETHYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
S-BUTYL BENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
P-ISOPROPYLTOLUENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,3 DICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,4-DICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
N-BUTYLBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2-DIBROMO 3-CHLOROPROPANE	EPA-8260	ND(<10)	UG/L	11/2/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
HEXACHLOROBUTADIENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
NAPHTHALENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN
1,2,3-TRICHLOROBENZENE	EPA-8260	ND(<2)	UG/L	11/2/04	CCN

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410132
CCIL SAMPLE #: BLK
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: METHOD BLANK FOR EPA-8260

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410136
CCIL SAMPLE #: 1
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET-3 10/27/04 11:53

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410136
CCIL SAMPLE #: 2
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET-4 10/27/04 10:47-10:57

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	1.1	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6010	0.06	MG/L	11/4/04	RAB
TOTAL ZINC	EPA-6010	0.08	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.65	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	0.04	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	150	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	44	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	1	MG/L	11/4/04	RAB
SODIUM	EPA-6010	9.0	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<0.62)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	120	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	2.4	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	560	MG CaCO3/L	11/4/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410136
CCIL SAMPLE #: 2
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET-4 10/27/04 10:47-10:57

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
TOTAL SOLIDS	EPA-160.3	710	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	630	MG/L	11/2/04	HJK

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruff

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410136
CCIL SAMPLE #: 3
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET-5 10/27/04 14:30

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	0.63	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6020	0.002	MG/L	11/17/04	STL
TOTAL ZINC	EPA-6010	0.03	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.59	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	0.02	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	61	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	26	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	ND(<1)	MG/L	11/4/04	RAB
SODIUM	EPA-6010	25	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<0.62)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	97	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	1.0	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	260	MG CaCO3/L	11/4/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410136
CCIL SAMPLE #: 3
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET-5 10/27/04 14:30

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
TOTAL SOLIDS	EPA-160.3	440	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	430	MG/L	11/2/04	HJK

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruff

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410136
CCIL SAMPLE #: 18
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: COMPOSITE OF SD WET-5 N,M,&S 10/27/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
BARIUM	EPA-6010	2700	MG/KG	11/11/04	RAB
CADMIUM	EPA-6010	6.2	MG/KG	11/11/04	RAB
COPPER	EPA-6010	38	MG/KG	11/11/04	RAB
LEAD	EPA-6010	77	MG/KG	11/11/04	RAB
SELENIUM	EPA-6010	39	MG/KG	11/11/04	RAB
ZINC	EPA-6010	2600	MG/KG	11/11/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH

NOTE: GASOLINE, DIESEL AND LUBE OIL RANGE REPORTING LIMITS ARE RAISED DUE TO LOW SAMPLE DRY WEIGHT

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 8 MG/KG
DIESEL RANGE REPORTING LIMIT IS 73 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 150 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410136
CCIL SAMPLE #: 19
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: COMPOSITE OF SD WET-4 N&M 10/27/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
BARIUM	EPA-6010	1200	MG/KG	11/11/04	RAB
CADMIUM	EPA-6010	ND(<1.5)	MG/KG	11/11/04	RAB
COPPER	EPA-6010	38	MG/KG	11/11/04	RAB
LEAD	EPA-6010	33	MG/KG	11/11/04	RAB
SELENIUM	EPA-6010	ND(<12)	MG/KG	11/11/04	RAB
ZINC	EPA-6010	860	MG/KG	11/11/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH

NOTE: GASOLINE, DIESEL AND LUBE OIL RANGE REPORTING LIMITS ARE RAISED DUE TO LOW SAMPLE DRY WEIGHT

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 6 MG/KG
DIESEL RANGE REPORTING LIMIT IS 52 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 100 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410136
CCIL SAMPLE #: 20
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: COMPOSITE OF SD WET-3 N,M&S 10/27/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
BARIUM	EPA-6010	1400	MG/KG	11/11/04	RAB
CADMIUM	EPA-6010	ND(<1.7)	MG/KG	11/11/04	RAB
COPPER	EPA-6010	31	MG/KG	11/11/04	RAB
LEAD	EPA-6010	100	MG/KG	11/11/04	RAB
SELENIUM	EPA-6010	ND(<13)	MG/KG	11/11/04	RAB
ZINC	EPA-6010	1400	MG/KG	11/11/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH

NOTE: GASOLINE, DIESEL AND LUBE OIL RANGE REPORTING LIMITS ARE RAISED DUE TO LOW SAMPLE DRY WEIGHT

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 5 MG/KG
DIESEL RANGE REPORTING LIMIT IS 42 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 84 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410136
CCIL SAMPLE #: 21
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: COMPOSITE OF SD WET-2 E,M&W 10/26, 10/27/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
BARIUM	EPA-6010	280	MG/KG	11/11/04	RAB
CADMIUM	EPA-6010	3.6	MG/KG	11/11/04	RAB
COPPER	EPA-6010	26	MG/KG	11/11/04	RAB
LEAD	EPA-6010	91	MG/KG	11/11/04	RAB
SELENIUM	EPA-6010	ND(<7.4)	MG/KG	11/11/04	RAB
ZINC	EPA-6010	3900	MG/KG	11/11/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH

NOTE: GASOLINE, DIESEL AND LUBE OIL RANGE REPORTING LIMITS ARE RAISED DUE TO LOW SAMPLE DRY WEIGHT

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 4 MG/KG
DIESEL RANGE REPORTING LIMIT IS 32 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 64 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410136
CCIL SAMPLE #: 22
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: COMPOSITE OF SD WET-1 E,M&W 10/26, 10/27/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	MG/KG	11/1/04	DLC
BARIUM	EPA-6010	190	MG/KG	11/11/04	RAB
CADMIUM	EPA-6010	ND(<0.86)	MG/KG	11/11/04	RAB
COPPER	EPA-6010	20	MG/KG	11/11/04	RAB
LEAD	EPA-6010	26	MG/KG	11/11/04	RAB
SELENIUM	EPA-6010	11	MG/KG	11/11/04	RAB
ZINC	EPA-6010	1100	MG/KG	11/11/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH

NOTE: GASOLINE, DIESEL AND LUBE OIL RANGE REPORTING LIMITS ARE RAISED DUE TO LOW SAMPLE DRY WEIGHT

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 4 MG/KG
DIESEL RANGE REPORTING LIMIT IS 26 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 52 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410136
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
410136-01	NWTPH-GX	TFT	106
410136-02	NWTPH-GX	TFT	109
410136-02	NWTPH-DX W/CLEANUP	C25	88
410136-02	EPA-8082 MOD	TCMX	59
410136-02	EPA-8082 MOD	DBC	54
410136-03	NWTPH-GX	TFT	107
410136-03	NWTPH-DX W/CLEANUP	C25	88
410136-03	EPA-8082 MOD	TCMX	55
410136-03	EPA-8082 MOD	DBC	49
410136-18	NWTPH-GX	TFT	27*
410136-18	NWTPH-DX W/CLEANUP	C25	90
410136-18	EPA-8082 MOD	TCMX	57
410136-18	EPA-8082 MOD	DBC	68
410136-19	NWTPH-GX	TFT	34*
410136-19	NWTPH-DX W/CLEANUP	C25	86
410136-19	EPA-8082 MOD	TCMX	56
410136-19	EPA-8082 MOD	DBC	66
410136-20	NWTPH-GX	TFT	29*
410136-20	NWTPH-DX W/CLEANUP	C25	85
410136-20	EPA-8082 MOD	TCMX	60
410136-20	EPA-8082 MOD	DBC	66
410136-21	NWTPH-GX	TFT	40*

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DATE: 11/22/04
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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

410136-21	NWTPH-DX W/CLEANUP	C25	89
410136-21	EPA-8082 MOD	TCMX	61
410136-21	EPA-8082 MOD	DBC	74
410136-22	NWTPH-GX	TFT	38*
410136-22	NWTPH-DX W/CLEANUP	C25	90
410136-22	EPA-8082 MOD	TCMX	64
410136-22	EPA-8082 MOD	DBC	70

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLS	DUP RESULT	ORIG RESULT	%RPD	ASSOC SMPLS
NWTPH-GX (GAS)	ND(<50)	410136-01, 02, 03				
NWTPH-GX (GAS)	ND(<3)	410136-18 TO 22				
NWTPH-DX (DSL)	ND(<130)	410136-02, 03				
NWTPH-DX (OIL)	ND(<250)	410136-02, 03				
NWTPH-DX (DSL)	ND(<25)	410136-18 TO 22				
NWTPH-DX (OIL)	ND(<50)	410136-18 TO 22				
EPA-6010 (TOTAL BA)	ND(<0.02)	410136-02, 03				
EPA-6010 (TOTAL CD)	ND(<0.002)	410136-02, 03				
EPA-6010 (TOTAL CU)	ND(<0.005)	410136-02, 03				
EPA-7421 (TOTAL PB)	ND(<0.003)	410136-02, 03				
EPA-6020 (TOTAL SE)	ND(<.002)	410136-03	ND(<.002)	ND(<.002)	****	SAME
EPA-6010 (TOTAL SE)	ND(<0.04)	410136-02				
EPA-6010 (TOTAL ZN)	ND(<0.01)	410136-02, 03				
EPA-6010 (DISS. BA)	ND(<0.02)	410136-02, 03				
EPA-6010 (DISS. CD)	ND(<0.002)	410136-02, 03				
EPA-6010 (DISS. CU)	ND(<0.005)	410136-02, 03				
EPA-7421 (DISS. PB)	ND(<0.003)	410136-02, 03				
EPA-6020 (DISS. SE)	ND(<.002)	410132-01, 02, 05, 06, 07	ND(<.002)	ND(<.002)	****	SAME
EPA-6010 (DISS. ZN)	ND(<0.01)	410136-02, 03				
EPA-6010 (BA)	ND(<0.35)	410136-18 TO 22				
EPA-6010 (CD)	ND(<0.10)	410136-18 TO 22				

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410136
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

EPA-6010 (CU)	ND(<0.11)	410136-18 TO 22				
EPA-6010 (PB)	ND(<0.72)	410136-18 TO 22				
EPA-6010 (SE)	ND(<0.78)	410136-18 TO 22				
EPA-6010 (ZN)	ND(<0.23)	410136-18 TO 22				
EPA-6010 (CA)	ND(<0.05)	410136-02, 03				
EPA-6010 (MG)	ND(<0.1)	410136-02, 03				
EPA-6010 (K)	ND(<1)	410136-02, 03				
EPA-6010 (NA)	ND(<0.08)	410136-02, 03				
EPA-300.0 (NO3/NO2)	ND(<0.08)	410136-02, 03				
EPA-300.0 (SULFATE)	ND(<0.08)	410136-02, 03				
EPA-300.0 (CHLORIDE)	ND(<0.14)	410136-02, 03				
EPA-8082 MOD	ND(<0.1)	410136-02, 03				
EPA-8082 MOD	ND(<0.1)	410136-18 TO 22				
EPA-160.3 (TS)	ND(<5)	410136-02, 03	730	730	0	SAME
EPA-160.1 (TDS)	ND(<5)	410136-02, 03	330	310	6	SAME

SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED SAMPLES	% SPIKE RECOVERY	% SPIKE DUP RECOVERY	REL % DIFF
NWTPH-GX	GASOLINE	410136-01, 02, 03	114	112	2
NWTPH-GX	GASOLINE	410136-18 TO 22	68	69	2
NWTPH-DX	DIESEL	410136-02, 03	96	92	4
NWTPH-DX	DIESEL	410136-18 TO 22	97	101	4
EPA-6010 (TOTAL BA)	BARIUM	410136-02, 03	93	93	0
EPA-6010 (TOTAL CD)	CADMIUM	410136-02, 03	86	85	1
EPA-6010 (TOTAL CU)	COPPER	410136-02, 03	92	92	0
EPA-7421 (TOTAL PB)	LEAD	410136-02, 03	99	101	2
EPA-6020 (TOTAL SE)	SELENIUM	410136-03	93	N/A	N/A
EPA-6010 (TOTAL SE)	SELENIUM	410136-02	89	91	2
EPA-6010 (TOTAL ZN)	ZINC	410136-02, 03	93	92	1
EPA-6010 (DISS. BA)	BARIUM	410136-02, 03	106	105	1
EPA-6010 (DISS. CD)	CADMIUM	410136-02, 03	95	97	2
EPA-6010 (DISS. CU)	COPPER	410136-02, 03	107	107	0

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410136
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

EPA-7421 (DISS. PB)	LEAD	410136-02, 03	99	101	2
EPA-6020 (DISS. SE)	SELENIUM	410136-02, 03	105	N/A	N/A
EPA-6010 (DISS. ZN)	ZINC	410136-02, 03	104	107	3
EPA-6010 (BA)	BARIUM	410136-18 TO 22	101	102	1
EPA-6010 (CD)	CADMIUM	410136-18 TO 22	86	86	0
EPA-6010 (CU)	COPPER	410136-18 TO 22	94	95	1
EPA-6010 (PB)	LEAD	410136-18 TO 22	89	89	0
EPA-6010 (SE)	SELENIUM	410136-18 TO 22	100	94	6
EPA-6010 (ZN)	ZINC	410136-18 TO 22	92	93	1
EPA-6010 (CA)	CALCIUM	410136-02, 03	90	90	0
EPA-6010 (MG)	MAGNESIUM	410136-02, 03	112	111	1
EPA-6010 (K)	POTASSIUM	410136-02, 03	97	92	5
EPA-6010 (NA)	SODIUM	410136-02, 03	86	88	2
EPA-300.0 (NO3/NO2)	NITRATE	410136-02, 03	99	103	4
EPA-300.0 (SULFATE)	SULFATE	410136-02, 03	98	102	4
EPA-300.0 (CHLORIDE)	CHLORIDE	410136-02, 03	95	95	0
EPA-8082 MOD	1016/1260	410136-02, 03	104	110	6
EPA-8082 MOD	1016/1260	410136-18 TO 22	104	114	9
EPA-160.1 (TDS)	SODIUM CHLORIDE	410136-02, 03	97	N/A	N/A

* SURROGATE OUTSIDE OF CONTROL LIMITS OF 59-121% DUE TO MATRIX INTERFERENCE
**** %RPD NOT REPORTED FOR VALUES <X5 THE REPORTING LIMIT

APPROVED BY: C Ruff

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410138
CCIL SAMPLE #: 1
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: MW-1 10/28/04 10:28

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	0.18	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6010	0.07	MG/L	11/4/04	RAB
TOTAL ZINC	EPA-6010	0.01	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.17	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	ND(<0.01)	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	85	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	19	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	1	MG/L	11/4/04	RAB
SODIUM	EPA-6010	3.1	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<0.62)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	19	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	0.69	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	290	MG CaCO3/L	11/4/04	RAB
TOTAL SOLIDS	EPA-160.3	350	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	310	MG/L	11/2/04	HJK

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410138
CCIL SAMPLE #: 1
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: MW-1 10/28/04 10:28

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410138
CCIL SAMPLE #: 2
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: MW-2 10/28/04 10:20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	0.27	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
TOTAL ZINC	EPA-6010	0.02	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.18	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	0.02	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	180	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	36	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	3	MG/L	11/4/04	RAB
SODIUM	EPA-6010	26	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<0.62)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	2.0	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	1.4	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	600	MG CaCO3/L	11/4/04	RAB
TOTAL SOLIDS	EPA-160.3	1200	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	670	MG/L	11/3/04	HJK

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410138
CCIL SAMPLE #: 2
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: MW-2 10/28/04 10:20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 50 UG/L
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410138
CCIL SAMPLE #: 3
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: MW-3 10/28/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	0.23	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6010	0.05	MG/L	11/4/04	RAB
TOTAL ZINC	EPA-6010	0.03	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.19	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	0.02	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	140	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	31	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	2	MG/L	11/4/04	RAB
SODIUM	EPA-6010	12	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<0.31)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	ND(<0.32)	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	5.6	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	480	MG CaCO3/L	11/4/04	RAB
TOTAL SOLIDS	EPA-160.3	690	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	510	MG/L	11/3/04	HJK

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12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410138
CCIL SAMPLE #: 3
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: MW-3 10/28/04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

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LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410138
CCIL SAMPLE #: 4
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: MW-4 10/28/04 12:20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	UG/L	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/3/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/3/04	DLC
TOTAL BARIUM	EPA-6010	0.23	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6010	0.08	MG/L	11/4/04	RAB
TOTAL ZINC	EPA-6010	0.47	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.23	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	0.46	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	160	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	42	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	5	MG/L	11/4/04	RAB
SODIUM	EPA-6010	13	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<1.2)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	180	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	2.8	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	570	MG CaCO3/L	11/4/04	RAB
TOTAL SOLIDS	EPA-160.3	730	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	670	MG/L	11/3/04	HJK

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
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REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410138
CCIL SAMPLE #: 4
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: MW-4 10/28/04 12:20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

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** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/15/04
CCIL JOB #: 410138
CCIL SAMPLE #: 5
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TMR-1/3 10/28/04 12:25

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	11/5/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	11/5/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	11/5/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	11/5/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	11/5/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	11/5/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	11/5/04	LAH

NOTE: SAMPLE LIKELY CONTAINS AROCHLOR 1262 AT APPROXIMATELY 0.7 MG/KG

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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
410138-01	NWTPH-GX	TFT	96
410138-01	NWTPH-DX W/CLEANUP	C25	93
410138-02	NWTPH-GX	TFT	84
410138-02	NWTPH-DX W/CLEANUP	C25	104
410138-03	NWTPH-GX	TFT	87
410138-03	NWTPH-DX W/CLEANUP	C25	97
410138-04	NWTPH-GX	TFT	77
410138-04	NWTPH-DX W/CLEANUP	C25	105
410138-05	EPA-8082 MOD	TCMX	47
410138-05	EPA-8082 MOD	DBC	56

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLS	DUP RESULT	ORIG RESULT	%RPD	ASSOC SMPLS
NWTPH-GX (GAS)	ND(<50)	410138-01 TO 04				
NWTPH-DX (DSL)	ND(<130)	410138-01 TO 04				
NWTPH-DX (OIL)	ND(<250)	410138-01 TO 04				
EPA-6010 (TOTAL BA)	ND(<0.02)	410138-01 TO 04				
EPA-6010 (TOTAL CD)	ND(<0.002)	410138-01 TO 04				
EPA-6010 (TOTAL CU)	ND(<0.005)	410138-01 TO 04				
EPA-7421 (TOTAL PB)	ND(<0.003)	410138-01 TO 04				
EPA-6020 (TOTAL SE)	ND(<.002)	410138-02	ND(<.002)	ND(<.002)	****	SAME

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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

QUALITY CONTROL RESULTS

EPA-6010 (TOTAL SE)	ND(<0.04)	410138-01, 03, 04				
EPA-6010 (TOTAL ZN)	ND(<0.01)	410138-01 TO 04				
EPA-6010 (DISS. BA)	ND(<0.02)	410138-01 TO 04				
EPA-6010 (DISS. CD)	ND(<0.002)	410138-01 TO 04				
EPA-6010 (DISS. CU)	ND(<0.005)	410138-01 TO 04				
EPA-7421 (DISS. PB)	ND(<0.003)	410138-01 TO 04				
EPA-6020 (DISS. SE)	ND(<.002)	410138-01 TO 04	ND(<.002)	ND(<.002)	****	SAME
EPA-6010 (DISS. ZN)	ND(<0.01)	410138-01 TO 04				
EPA-6010 (CA)	ND(<0.05)	410138-01 TO 04				
EPA-6010 (MG)	ND(<0.1)	410138-01 TO 04				
EPA-6010 (K)	ND(<1)	410138-01 TO 04				
EPA-6010 (NA)	ND(<0.08)	410138-01 TO 04				
EPA-300.0 (NO3/NO2)	ND(<0.08)	410138-01 TO 04				
EPA-300.0 (SULFATE)	ND(<0.08)	410138-01 TO 04				
EPA-300.0 (CHLORIDE)	ND(<0.14)	410138-01 TO 04				
EPA-8082 MOD	ND(<0.1)	410138-05				
EPA-160.3 (TS)	ND(<5)	410138-01 TO 04	730	730	0	SAME
EPA-160.1 (TDS)	ND(<5)	410138-01	330	310	6	SAME
EPA-160.1 (TDS)	ND(<5)	410138-02 TO 04	460	430	7	SAME

SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED SAMPLES	% SPIKE RECOVERY	% SPIKE DUP RECOVERY	REL % DIFF
NWTPH-GX	GASOLINE	410138-01 TO 04	103	109	6
NWTPH-DX	DIESEL	410138-01 TO 04	96	88	9
EPA-6010 (TOTAL BA)	BARIUM	410138-01 TO 04	93	93	0
EPA-6010 (TOTAL CD)	CADMIUM	410138-01 TO 04	86	85	1
EPA-6010 (TOTAL CU)	COPPER	410138-01 TO 04	92	92	0
EPA-7421 (TOTAL PB)	LEAD	410138-01 TO 04	99	101	2
EPA-6020 (TOTAL SE)	SELENIUM	410138-02	93	N/A	N/A
EPA-6010 (TOTAL SE)	SELENIUM	410138-01, 03, 04	89	91	2
EPA-6010 (TOTAL ZN)	ZINC	410138-01 TO 04	93	92	1
EPA-6010 (DISS. BA)	BARIUM	410138-01 TO 04	106	105	1
EPA-6010 (DISS. CD)	CADMIUM	410138-01 TO 04	95	97	2

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QUALITY CONTROL RESULTS

EPA-6010 (DISS. CU)	COPPER	410138-01 TO 04	107	107	0
EPA-7421 (DISS. PB)	LEAD	410138-01 TO 04	99	101	2
EPA-6020 (DISS. SE)	SELENIUM	410138-01 TO 04	105	N/A	N/A
EPA-6010 (DISS. ZN)	ZINC	410138-01 TO 04	104	107	3
EPA-6010 (CA)	CALCIUM	410138-01 TO 04	90	90	0
EPA-6010 (MG)	MAGNESIUM	410138-01 TO 04	112	111	1
EPA-6010 (K)	POTASSIUM	410138-01 TO 04	97	92	5
EPA-6010 (NA)	SODIUM	410138-01 TO 04	86	88	2
EPA-300.0 (NO3/NO2)	NITRATE	410138-01 TO 04	99	103	4
EPA-300.0 (SULFATE)	SULFATE	410138-01 TO 04	98	102	4
EPA-300.0 (CHLORIDE)	CHLORIDE	410138-01 TO 04	95	95	0
EPA-8082 MOD	1016/1260	410138-05	104	114	9
EPA-160.1 (TDS)	SODIUM CHLORIDE	410138-01	97	N/A	N/A
EPA-160.1 (TDS)	SODIUM CHLORIDE	410138-02 TO 4	98	N/A	N/A

**** %RPD NOT REPORTED FOR VALUES <X5 THE REPORTING LIMIT

APPROVED BY: C Ph

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 2
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-2 10/28/04 1502

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	480	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	3.0	MG/KG	11/10/04	RAB
COPPER	EPA-6010	31	MG/KG	11/10/04	RAB
LEAD	EPA-6010	150	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	11	MG/KG	11/10/04	RAB
ZINC	EPA-6010	970	MG/KG	11/10/04	RAB

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APPROVED BY: C Rat

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CCIL SAMPLE #: 3
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WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-3 10/28/04 1500

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	390	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	ND(<1.0)	MG/KG	11/10/04	RAB
COPPER	EPA-6010	29	MG/KG	11/10/04	RAB
LEAD	EPA-6010	26	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	ND(<8.0)	MG/KG	11/10/04	RAB
ZINC	EPA-6010	140	MG/KG	11/10/04	RAB

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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-4 10/28/04 1459

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	900	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	ND(<1.4)	MG/KG	11/10/04	RAB
COPPER	EPA-6010	34	MG/KG	11/10/04	RAB
LEAD	EPA-6010	38	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	ND(<11)	MG/KG	11/10/04	RAB
ZINC	EPA-6010	190	MG/KG	11/10/04	RAB

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REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 5
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-5 10/28/04 1457

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	634	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	1.7	MG/KG	11/10/04	RAB
COPPER	EPA-6010	32	MG/KG	11/10/04	RAB
LEAD	EPA-6010	45	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	ND(<7.6)	MG/KG	11/10/04	RAB
ZINC	EPA-6010	190	MG/KG	11/10/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 6
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-6 10/28/04 1456

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	720	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	1.6	MG/KG	11/10/04	RAB
COPPER	EPA-6010	29	MG/KG	11/10/04	RAB
LEAD	EPA-6010	43	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	ND(<11)	MG/KG	11/10/04	RAB
ZINC	EPA-6010	150	MG/KG	11/10/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 7
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-7 10/28/04 1454

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	530	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	ND(<1.0)	MG/KG	11/10/04	RAB
COPPER	EPA-6010	28	MG/KG	11/10/04	RAB
LEAD	EPA-6010	36	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	ND(<8.3)	MG/KG	11/10/04	RAB
ZINC	EPA-6010	150	MG/KG	11/10/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 8
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-8 10/28/04 1453

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	280	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	ND(<0.90)	MG/KG	11/10/04	RAB
COPPER	EPA-6010	26	MG/KG	11/10/04	RAB
LEAD	EPA-6010	29	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	ND(<7.2)	MG/KG	11/10/04	RAB
ZINC	EPA-6010	140	MG/KG	11/10/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 9
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-9 10/28/04 1451

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	370	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	1.0	MG/KG	11/10/04	RAB
COPPER	EPA-6010	27	MG/KG	11/10/04	RAB
LEAD	EPA-6010	24	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	ND(<8.0)	MG/KG	11/10/04	RAB
ZINC	EPA-6010	130	MG/KG	11/10/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 10
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-10 10/28/04 1450

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	200	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	ND(<0.69)	MG/KG	11/10/04	RAB
COPPER	EPA-6010	10	MG/KG	11/10/04	RAB
LEAD	EPA-6010	12	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	ND(<5.6)	MG/KG	11/10/04	RAB
ZINC	EPA-6010	64	MG/KG	11/10/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 11
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-11 10/28/04 1448

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	330	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	ND(<0.99)	MG/KG	11/10/04	RAB
COPPER	EPA-6010	25	MG/KG	11/10/04	RAB
LEAD	EPA-6010	17	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	ND(<7.9)	MG/KG	11/10/04	RAB
ZINC	EPA-6010	110	MG/KG	11/10/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/22/04
CCIL JOB #: 410137
CCIL SAMPLE #: 13
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-13 10/28/04 1445

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	360	MG/KG	12/21/04	RAB
CADMIUM	EPA-6010	ND(<1.5)	MG/KG	12/21/04	RAB
COPPER	EPA-6010	25	MG/KG	12/21/04	RAB
LEAD	EPA-6010	31	MG/KG	12/21/04	RAB
SELENIUM	EPA-6010	ND(<12)	MG/KG	12/21/04	RAB
ZINC	EPA-6010	130	MG/KG	12/21/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/22/04
CCIL JOB #: 410137
CCIL SAMPLE #: 15
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS WND-15 10/28/04 1441

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	220	MG/KG	12/21/04	RAB
CADMIUM	EPA-6010	ND(<1.1)	MG/KG	12/21/04	RAB
COPPER	EPA-6010	20	MG/KG	12/21/04	RAB
LEAD	EPA-6010	13	MG/KG	12/21/04	RAB
SELENIUM	EPA-6010	ND(<8.5)	MG/KG	12/21/04	RAB
ZINC	EPA-6010	89	MG/KG	12/21/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/16/04
CCIL JOB #: 410137
CCIL SAMPLE #: 16
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: WCWP-1 10/28/04 1511

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
CALCIUM	EPA-6010	400000	MG/KG	11/4/04	STL
MAGNESIUM	EPA-6010	2500	MG/KG	11/4/04	STL
POTASSIUM	EPA-6010	ND(<110)	MG/KG	11/4/04	STL
SODIUM	EPA-6010	110	MG/KG	11/4/04	STL
CHLORIDE	EPA-300A	ND(<3.7)	MG/KG	11/11/04	STL
SULFATE	EPA-300A	24	MG/KG	11/11/04	STL
NITRATE/NITRITE	EPA-300A	ND(<0.76)	MG/KG	11/11/04	STL

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
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DATE: 11/16/04
CCIL JOB #: 410137
CCIL SAMPLE #: 17
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: WCWP-2 10/28/04 1518

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
CALCIUM	EPA-6010	330000	MG/KG	11/4/04	STL
MAGNESIUM	EPA-6010	16000	MG/KG	11/4/04	STL
POTASSIUM	EPA-6010	130	MG/KG	11/4/04	STL
SODIUM	EPA-6010	150	MG/KG	11/4/04	STL
CHLORIDE	EPA-300A	3.8	MG/KG	11/11/04	STL
SULFATE	EPA-300A	71	MG/KG	11/11/04	STL
NITRATE/NITRITE	EPA-300A	ND(<0.68)	MG/KG	11/11/04	STL

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
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DATE: 11/16/04
CCIL JOB #: 410137
CCIL SAMPLE #: 18
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: WCWP-3 10/28/04 1521

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
CALCIUM	EPA-6010	300000	MG/KG	11/4/04	STL
MAGNESIUM	EPA-6010	15000	MG/KG	11/4/04	STL
POTASSIUM	EPA-6010	120	MG/KG	11/4/04	STL
SODIUM	EPA-6010	ND(<110)	MG/KG	11/4/04	STL
CHLORIDE	EPA-300A	ND(<3.6)	MG/KG	11/11/04	STL
SULFATE	EPA-300A	16	MG/KG	11/11/04	STL
NITRATE/NITRITE	EPA-300A	ND(<0.73)	MG/KG	11/11/04	STL

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 19
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-1 10/28/04 1525

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DICHLORODIFLUOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
VINYL CHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRICHLOROFLUOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ACETONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,1-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
METHYLENE CHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ACRYLONITRILE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
METHYL T-BUTYL ETHER	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRANS-1,2-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1-DICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-BUTANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
CIS-1,2-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2,2-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOCHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROFORM	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,1-TRICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CARBON TETRACHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
DIBROMOMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMODICHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRANS-1,3-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
4-METHYL-2-PENTANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
TOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CIS-1,3-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,2-TRICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-HEXANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,3-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TETRACHLOROETHYLENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 19
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-1 10/28/04 1525

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DIBROMOCHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DIBROMOETHANE	EPA-8260	ND(<5)	UG/KG	11/11/04	CCN
CHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,1,2-TETRACHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
M+P XYLENE	EPA-8260	ND(<20)	UG/KG	11/11/04	CCN
STYRENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
O-XYLENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOFORM	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ISOPROPYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,2,2-TETRACHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,3-TRICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
N-PROPYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-CHLOROTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,3,5-TRIMETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
4-CHLOROTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
T-BUTYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,4-TRIMETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
S-BUTYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
P-ISOPROPYLTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,3 DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,4-DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
N-BUTYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DIBROMO 3-CHLOROPROPANE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
HEXACHLOROBUTADIENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
NAPHTHALENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,3-TRICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
PYRIDINE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
N-NITROSODIMETHYLAMINE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
PHENOL	EPA-8270	1100	UG/KG	11/10/04	CCN
ANILINE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 19
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-1 10/28/04 1525

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BIS(2-CHLOROETHYL)ETHER	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2-CHLOROPHENOL	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
1,3-DICHLOROBENZENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
1,4-DICHLOROBENZENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
BENZYL ALCOHOL	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
1,2-DICHLOROBENZENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2-METHYLPHENOL	EPA-8270	330	UG/KG	11/10/04	CCN
BIS(2-CHLOROISOPROPYL)ETHER	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
3,4-METHYLPHENOL	EPA-8270	1600	UG/KG	11/10/04	CCN
N-NITROSO-DI-N-PROPYLAMINE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
HEXACHLOROETHANE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
NITROBENZENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
ISOPHORONE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2-NITROPHENOL	EPA-8270	ND(<300)	UG/KG	11/10/04	CCN
2,4-DIMETHYLPHENOL	EPA-8270	700	UG/KG	11/10/04	CCN
BENZOIC ACID	EPA-8270	ND(<1200)	UG/KG	11/10/04	CCN
BIS(2-CHLOROETHOXY)METHANE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2,4-DICHLOROPHENOL	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
NAPHTHALENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
4-CHLOROANILINE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2,6-DICHLOROPHENOL	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
HEXACHLOROBUTADIENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
4-CHLORO-3-METHYLPHENOL	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2-METHYLNAPHTHALENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
1-METHYLNAPHTHALENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
HEXACHLOROCYCLOPENTADIENE	EPA-8270	ND(<600)	UG/KG	11/10/04	CCN
2,4,6-TRICHLOROPHENOL	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2,4,5-TRICHLOROPHENOL	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2-CHLORONAPHTHANLENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2-NITROANILINE	EPA-8270	ND(<300)	UG/KG	11/10/04	CCN
ACENAPHTHYLENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
DIMETHYLPHTHALATE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2,6-DINITROTOLUENE	EPA-8270	ND(<300)	UG/KG	11/10/04	CCN
ACENAPHTHENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
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DATE: 11/12/04
CCIL JOB #: 410137
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WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-1 10/28/04 1525

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
3-NITROANILINE	EPA-8270	ND(<300)	UG/KG	11/10/04	CCN
2,4-DINITROPHENOL	EPA-8270	ND(<600)	UG/KG	11/10/04	CCN
4-NITROPHENOL	EPA-8270	ND(<600)	UG/KG	11/10/04	CCN
DIBENZOFURAN	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
2,4-DINITROTOLUENE	EPA-8270	ND(<300)	UG/KG	11/10/04	CCN
2,3,4,6-TETRACHLOROPHENOL	EPA-8270	ND(<300)	UG/KG	11/10/04	CCN
DIETHYLPHTHALATE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
FLUORENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
4-CHLOROPHENYL-PHENYLETHER	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
4-NITROANILINE	EPA-8270	ND(<300)	UG/KG	11/10/04	CCN
4,6-DINITRO-2-METHYLPHENOL	EPA-8270	ND(<600)	UG/KG	11/10/04	CCN
N-NITROSODIPHENYLAMINE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
AZOBENZENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
4-BROMOPHENYL-PHENYLETHER	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
HEXACHLOROBENZENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
PENTACHLOROPHENOL	EPA-8270	ND(<600)	UG/KG	11/10/04	CCN
PHENANTHRENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
ANTHRACENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
CARBAZOLE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
DI-N-BUTYLPHTHALATE	EPA-8270	ND(<160)	UG/KG	11/10/04	CCN
FLUORANTHENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
PYRENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
BUTYLBENZYLPHTHALATE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
3,3'-DICHLOROBENZIDINE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
BENZO[A]ANTHRACENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
CHRYSENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
BIS(2-ETHYLHEXYL)PHTHALATE	EPA-8270	ND(<160)	UG/KG	11/10/04	CCN
DI-N-OCTYLPHTHALATE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
BENZO[B]FLUORANTHENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
BENZO[K]FLUORANTHENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
BENZO[A]PYRENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
INDENO[1,2,3-CD]PYRENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
DIBENZ[A,H]ANTHRACENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN
BENZO[G,H,I]PERYLENE	EPA-8270	ND(<120)	UG/KG	11/10/04	CCN

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12034 134TH COURT NORTHEAST SUITE 102
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CLIENT SAMPLE ID: ALD-1 10/28/04 1525

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 20
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-2 10/28/04 1527

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DICHLORODIFLUOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
VINYL CHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRICHLOROFLUOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ACETONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,1-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
METHYLENE CHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ACRYLONITRILE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
METHYL T-BUTYL ETHER	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRANS-1,2-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1-DICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-BUTANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
CIS-1,2-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2,2-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOCHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROFORM	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,1-TRICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CARBON TETRACHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
DIBROMOMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMODICHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRANS-1,3-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
4-METHYL-2-PENTANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
TOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CIS-1,3-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,2-TRICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-HEXANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,3-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TETRACHLOROETHYLENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN

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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-2 10/28/04 1527

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DIBROMOCHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DIBROMOETHANE	EPA-8260	ND(<5)	UG/KG	11/11/04	CCN
CHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,1,2-TETRACHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
M+P XYLENE	EPA-8260	ND(<20)	UG/KG	11/11/04	CCN
STYRENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
O-XYLENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOFORM	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ISOPROPYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,2,2-TETRACHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,3-TRICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
N-PROPYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-CHLOROTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,3,5-TRIMETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
4-CHLOROTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
T-BUTYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,4-TRIMETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
S-BUTYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
P-ISOPROPYLTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,3 DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,4-DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
N-BUTYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DIBROMO 3-CHLOROPROPANE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
HEXACHLOROBUTADIENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
NAPHTHALENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,3-TRICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
PYRIDINE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
N-NITROSODIMETHYLAMINE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
PHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
ANILINE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN

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CLIENT SAMPLE ID: ALD-2 10/28/04 1527

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BIS(2-CHLOROETHYL)ETHER	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2-CHLOROPHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
1,3-DICHLOROBENZENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
1,4-DICHLOROBENZENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BENZYL ALCOHOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
1,2-DICHLOROBENZENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2-METHYLPHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BIS(2-CHLOROISOPROPYL)ETHER	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
3,4-METHYLPHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
N-NITROSO-DI-N-PROPYLAMINE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
HEXACHLOROETHANE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
NITROBENZENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
ISOPHORONE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2-NITROPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
2,4-DIMETHYLPHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BENZOIC ACID	EPA-8270	ND(<2000)	UG/KG	11/10/04	CCN
BIS(2-CHLOROETHOXY)METHANE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2,4-DICHLOROPHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
NAPHTHALENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
4-CHLOROANILINE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2,6-DICHLOROPHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
HEXACHLOROBUTADIENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
4-CHLORO-3-METHYLPHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2-METHYLNAPHTHALENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
1-METHYLNAPHTHALENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
HEXACHLOROCYCLOPENTADIENE	EPA-8270	ND(<1000)	UG/KG	11/10/04	CCN
2,4,6-TRICHLOROPHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2,4,5-TRICHLOROPHENOL	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2-CHLORONAPHTHANLENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2-NITROANILINE	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
ACENAPHTHYLENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
DIMETHYLPHTHALATE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2,6-DINITROTOLUENE	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
ACENAPHTHENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 20
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-2 10/28/04 1527

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
3-NITROANILINE	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
2,4-DINITROPHENOL	EPA-8270	ND(<1000)	UG/KG	11/10/04	CCN
4-NITROPHENOL	EPA-8270	ND(<1000)	UG/KG	11/10/04	CCN
DIBENZOFURAN	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
2,4-DINITROTOLUENE	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
2,3,4,6-TETRACHLOROPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
DIETHYLPHTHALATE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
FLUORENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
4-CHLOROPHENYL-PHENYLETHER	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
4-NITROANILINE	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
4,6-DINITRO-2-METHYLPHENOL	EPA-8270	ND(<1000)	UG/KG	11/10/04	CCN
N-NITROSODIPHENYLAMINE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
AZOBENZENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
4-BROMOPHENYL-PHENYLETHER	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
HEXACHLOROBENZENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
PENTACHLOROPHENOL	EPA-8270	ND(<1000)	UG/KG	11/10/04	CCN
PHENANTHRENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
ANTHRACENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
CARBAZOLE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
DI-N-BUTYLPHTHALATE	EPA-8270	ND(<260)	UG/KG	11/10/04	CCN
FLUORANTHENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
PYRENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BUTYLBENZYLPHTHALATE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
3,3'-DICHLOROBENZIDINE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BENZO[A]ANTHRACENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
CHRYSENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BIS(2-ETHYLHEXYL)PHTHALATE	EPA-8270	580	UG/KG	11/10/04	CCN
DI-N-OCTYLPHTHALATE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BENZO[B]FLUORANTHENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BENZO[K]FLUORANTHENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BENZO[A]PYRENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
INDENO[1,2,3-CD]PYRENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
DIBENZ[A,H]ANTHRACENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN
BENZO[G,H,I]PERYLENE	EPA-8270	ND(<200)	UG/KG	11/10/04	CCN

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-2 10/28/04 1527

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 21
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-3 10/28/04 1529

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DICHLORODIFLUOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
VINYL CHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRICHLOROFLUOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ACETONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,1-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
METHYLENE CHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ACRYLONITRILE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
METHYL T-BUTYL ETHER	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRANS-1,2-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1-DICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-BUTANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
CIS-1,2-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2,2-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOCHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROFORM	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,1-TRICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CARBON TETRACHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
DIBROMOMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMODICHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRANS-1,3-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
4-METHYL-2-PENTANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
TOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CIS-1,3-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,2-TRICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-HEXANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,3-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TETRACHLOROETHYLENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN

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WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: ALD-3 10/28/04 1529

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DIBROMOCHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DIBROMOETHANE	EPA-8260	ND(<5)	UG/KG	11/11/04	CCN
CHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,1,2-TETRACHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
M+P XYLENE	EPA-8260	ND(<20)	UG/KG	11/11/04	CCN
STYRENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
O-XYLENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOFORM	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ISOPROPYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,2,2-TETRACHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,3-TRICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
N-PROPYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-CHLOROTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,3,5-TRIMETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
4-CHLOROTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
T-BUTYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,4-TRIMETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
S-BUTYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
P-ISOPROPYLTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,3 DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,4-DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
N-BUTYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DIBROMO 3-CHLOROPROPANE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
HEXACHLOROBUTADIENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
NAPHTHALENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,3-TRICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
PYRIDINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
N-NITROSODIMETHYLAMINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
PHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
ANILINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN

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DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BIS(2-CHLOROETHYL)ETHER	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-CHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1,3-DICHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1,4-DICHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZYL ALCOHOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1,2-DICHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-METHYLPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BIS(2-CHLOROISOPROPYL)ETHER	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
3,4-METHYLPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
N-NITROSO-DI-N-PROPYLAMINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
HEXACHLOROETHANE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
NITROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
ISOPHORONE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-NITROPHENOL	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
2,4-DIMETHYLPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZOIC ACID	EPA-8270	ND(<1000)	UG/KG	11/10/04	CCN
BIS(2-CHLOROETHOXY)METHANE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,4-DICHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
NAPHTHALENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-CHLOROANILINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,6-DICHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
HEXACHLOROBUTADIENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-CHLORO-3-METHYLPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-METHYLNAPHTHALENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1-METHYLNAPHTHALENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
HEXACHLOROCYCLOPENTADIENE	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
2,4,6-TRICHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,4,5-TRICHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-CHLORONAPHTHANLENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-NITROANILINE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
ACENAPHTHYLENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
DIMETHYLPHTHALATE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,6-DINITROTOLUENE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
ACENAPHTHENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN

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CLIENT SAMPLE ID: ALD-3 10/28/04 1529

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ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
3-NITROANILINE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
2,4-DINITROPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
4-NITROPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
DIBENZOFURAN	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,4-DINITROTOLUENE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
2,3,4,6-TETRACHLOROPHENOL	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
DIETHYLPHTHALATE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
FLUORENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-CHLOROPHENYL-PHENYLETHER	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-NITROANILINE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
4,6-DINITRO-2-METHYLPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
N-NITROSODIPHENYLAMINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
AZOBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-BROMOPHENYL-PHENYLETHER	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
HEXACHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
PENTACHLOROPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
PHENANTHRENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
ANTHRACENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
CARBAZOLE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
DI-N-BUTYLPHTHALATE	EPA-8270	ND(<130)	UG/KG	11/10/04	CCN
FLUORANTHENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
PYRENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BUTYLBENZYLPHTHALATE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
3,3'-DICHLOROBENZIDINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[A]ANTHRACENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
CHRYSENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BIS(2-ETHYLHEXYL)PHTHALATE	EPA-8270	ND(<130)	UG/KG	11/10/04	CCN
DI-N-OCTYLPHTHALATE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[B]FLUORANTHENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[K]FLUORANTHENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[A]PYRENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
INDENO[1,2,3-CD]PYRENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
DIBENZ[A,H]ANTHRACENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[G,H,I]PERYLENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN

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CLIENT SAMPLE ID: ALD-3 10/28/04 1529

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DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 22
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SS MILL4@2" 10/28/04 1535

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	47000	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	2.3	MG/KG	11/10/04	RAB
COPPER	EPA-6010	34	MG/KG	11/10/04	RAB
LEAD	EPA-6010	ND(<7.2)	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	16	MG/KG	11/10/04	RAB
ZINC	EPA-6010	310	MG/KG	11/10/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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ANALYTICAL
LABORATORIES, INC.

CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: 23
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: LPSD-1 10/28/04 1350

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-VOLATILE RANGE	NWTPH-GX	ND	MG/KG	11/1/04	LAH
TPH-DIESEL RANGE	NWTPH-DX	140	MG/KG	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX	820	MG/KG	11/1/04	DLC
BARIUM	EPA-6010	130	MG/KG	11/10/04	RAB
CADMIUM	EPA-6010	39	MG/KG	11/10/04	RAB
COPPER	EPA-6010	33	MG/KG	11/10/04	RAB
LEAD	EPA-6010	1400	MG/KG	11/10/04	RAB
SELENIUM	EPA-6010	18	MG/KG	11/10/04	RAB
ZINC	EPA-6010	16000	MG/KG	11/10/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG	11/4/04	LAH

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LUBE OIL
DIESEL RANGE RESULT IS DUE TO OVERLAP FROM LUBE OIL RANGE PRODUCT

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
GASOLINE(VOLATILE RANGE) REPORTING LIMIT IS 3 MG/KG
DIESEL RANGE REPORTING LIMIT IS 25 MG/KG
LUBE OIL RANGE REPORTING LIMIT IS 50 MG/KG

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410137
CCIL SAMPLE #: 24
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TPSW-1 10/27/04 09:10-09:20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TOTAL BARIUM	EPA-6010	0.30	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	0.003	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6010	0.09	MG/L	11/4/04	RAB
TOTAL ZINC	EPA-6010	0.01	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.18	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	ND(<0.01)	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	59	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	57	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	6	MG/L	11/4/04	RAB
SODIUM	EPA-6010	3.2	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<1.9)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	190	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	ND(<3.4)	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	380	MG CaCO3/L	11/4/04	RAB
TOTAL SOLIDS	EPA-160.3	510	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	480	MG/L	11/2/04	HJK

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ra

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/20/04
CCIL JOB #: 410137
CCIL SAMPLE #: 25
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: TPSD-1 10/27/04 10:02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
BARIUM	EPA-6010	450	MG/KG	12/15/04	RAB
CADMIUM	EPA-6010	6.1	MG/KG	12/15/04	RAB
COPPER	EPA-6010	77	MG/KG	12/15/04	RAB
LEAD	EPA-6010	680	MG/KG	12/15/04	RAB
SELENIUM	EPA-6010	ND(<16)	MG/KG	12/15/04	RAB
ZINC	EPA-6010	2100	MG/KG	12/15/04	RAB

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Rat

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410137
CCIL SAMPLE #: 26
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET-3 10/27/04 11:45-11:55

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-DIESEL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TPH-LUBE OIL RANGE	NWTPH-DX W/CLEANUP	ND	UG/L	11/1/04	DLC
TOTAL BARIUM	EPA-6010	0.18	MG/L	11/4/04	RAB
TOTAL CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
TOTAL COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
TOTAL LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
TOTAL SELENIUM	EPA-6010	0.07	MG/L	11/4/04	RAB
TOTAL ZINC	EPA-6010	0.10	MG/L	11/4/04	RAB
DISSOLVED BARIUM	EPA-6010	0.17	MG/L	11/4/04	RAB
DISSOLVED CADMIUM	EPA-6010	ND(<0.002)	MG/L	11/4/04	RAB
DISSOLVED COPPER	EPA-6010	ND(<0.005)	MG/L	11/4/04	RAB
DISSOLVED LEAD	EPA-7421	ND(<0.003)	MG/L	11/5/04	RAB
DISSOLVED SELENIUM	EPA-6020	ND(<0.002)	MG/L	11/17/04	STL
DISSOLVED ZINC	EPA-6010	0.09	MG/L	11/4/04	RAB
CALCIUM	EPA-6010	150	MG/L	11/4/04	RAB
MAGNESIUM	EPA-6010	42	MG/L	11/4/04	RAB
POTASSIUM	EPA-6010	2.5	MG/L	11/4/04	RAB
SODIUM	EPA-6010	5.6	MG/L	11/4/04	RAB
NITRATE/NITRITE AS N	EPA-300.0	ND(<0.62)	MG/L	11/3/04	RAB
SULFATE	EPA-300.0	110	MG/L	11/3/04	RAB
CHLORIDE	EPA-300.0	2.0	MG/L	11/3/04	RAB
HARDNESS	SM-2340B	550	MG CaCO3/L	11/4/04	RAB
PCB-1016	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	UG/L	11/5/04	LAH

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/22/04
CCIL JOB #: 410137
CCIL SAMPLE #: 26
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: SW WET-3 10/27/04 11:45-11:55

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TOTAL SOLIDS	EPA-160.3	670	MG/L	11/2/04	HJK
TOTAL DISSOLVED SOLIDS	EPA-160.1	640	MG/L	11/2/04	HJK

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES OR AS FOLLOWS:
DIESEL RANGE REPORTING LIMIT IS 130 UG/L
LUBE OIL RANGE REPORTING LIMIT IS 250 UG/L

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/22/04
CCIL JOB #: 410137
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

REPORT AMENDED TO INCLUDE ADDITIONAL PARAMETERS

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
410137-19	EPA-8260	1,2-DCE-d4	101
410137-19	EPA-8260	TOLUENE-d8	99
410137-19	EPA-8260	4-BFB	107
410137-19	EPA-8270	2-FLUOROPHENOL	61
410137-19	EPA-8270	PHENOL-d5	64
410137-19	EPA-8270	NITROBENZENE-d5	67
410137-19	EPA-8270	2-FLUOROBIPHENYL	63
410137-19	EPA-8270	2,4,6-TRIBROMOPHENOL	65
410137-19	EPA-8270	TERPHENYL-d14	64
410137-20	EPA-8260	1,2-DCE-d4	105
410137-20	EPA-8260	TOLUENE-d8	97
410137-20	EPA-8260	4-BFB	100
410137-20	EPA-8270	2-FLUOROPHENOL	56
410137-20	EPA-8270	PHENOL-d5	55
410137-20	EPA-8270	NITROBENZENE-d5	75
410137-20	EPA-8270	2-FLUOROBIPHENYL	65
410137-20	EPA-8270	2,4,6-TRIBROMOPHENOL	71
410137-20	EPA-8270	TERPHENYL-d14	68
410137-21	EPA-8260	1,2-DCE-d4	111
410137-21	EPA-8260	TOLUENE-d8	106
410137-21	EPA-8260	4-BFB	114
410137-21	EPA-8270	2-FLUOROPHENOL	80
410137-21	EPA-8270	PHENOL-d5	75
410137-21	EPA-8270	NITROBENZENE-d5	103
410137-21	EPA-8270	2-FLUOROBIPHENYL	89

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12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/22/04
CCIL JOB #: 410137
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

REPORT AMENDED TO INCLUDE ADDITIONAL PARAMETERS

QUALITY CONTROL RESULTS

410137-21	EPA-8270	2,4,6-TRIBROMOPHENOL	98
410137-21	EPA-8270	TERPHENYL-d14	94
410137-23	NWTPH-GX	TFT	42*
410137-23	NWTPH-DX	C25	80
410137-23	EPA-8082 MOD	TCMX	52
410137-23	EPA-8082 MOD	DBC	58
410137-26	NWTPH-DX W/CLEANUP	C25	93
410137-26	EPA-8082 MOD	TCMX	59
410137-26	EPA-8082 MOD	DBC	49

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLS	DUP RESULT	ORIG RESULT	%RPD	ASSOC SMPLS
NWTPH-GX (GAS)	ND(<3)	410137-23				
NWTPH-DX (DSL)	ND(<25)	410137-23				
NWTPH-DX (OIL)	ND(<50)	410137-23				
NWTPH-DX (DSL)	ND(<130)	410137-26				
NWTPH-DX (OIL)	ND(<250)	410137-26				
EPA-6010 (BA)	ND(<0.35)	410137-02 TO 11, 22, 23				
EPA-6010 (CD)	ND(<0.10)	410137-02 TO 11, 22, 23				
EPA-6010 (CU)	ND(<0.11)	410137-02 TO 11, 22, 23				
EPA-6010 (PB)	ND(<0.72)	410137-02 TO 11, 22, 23				
EPA-6010 (SE)	ND(<0.78)	410137-02 TO 11, 22, 23				
EPA-6010 (ZN)	ND(<0.23)	410137-02 TO 11, 22, 23				
EPA-6010 (BA)	ND(<0.35)	410137-13, 15				
EPA-6010 (CD)	ND(<0.10)	410137-13, 15				
EPA-6010 (CU)	ND(<0.11)	410137-13, 15				
EPA-6010 (PB)	ND(<0.72)	410137-13, 15				
EPA-6010 (SE)	ND(<0.78)	410137-13, 15				
EPA-6010 (ZN)	ND(<0.23)	410137-13, 15				

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/22/04
CCIL JOB #: 410137
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

REPORT AMENDED TO INCLUDE ADDITIONAL PARAMETERS

QUALITY CONTROL RESULTS

EPA-6010 (BA)	ND(<0.35)	410137-25				
EPA-6010 (CD)	ND(<0.10)	410137-25				
EPA-6010 (CU)	ND(<0.11)	410137-25				
EPA-6010 (PB)	ND(<0.72)	410137-25				
EPA-6010 (SE)	ND(<0.78)	410137-25				
EPA-6010 (ZN)	ND(<0.23)	410137-25				
EPA-6010 (TOTAL BA)	ND(<0.02)	410137-24, 26				
EPA-6010 (TOTAL CD)	ND(<0.002)	410137-24, 26				
EPA-6010 (TOTAL CU)	ND(<0.005)	410137-24, 26				
EPA-7421 (TOTAL PB)	ND(<0.003)	410137-24, 26				
EPA-6010 (TOTAL SE)	ND(<0.04)	410137-24, 26				
EPA-6010 (TOTAL ZN)	ND(<0.01)	410137-24, 26				
EPA-6010 (DISS. BA)	ND(<0.02)	410137-24, 26				
EPA-6010 (DISS. CD)	ND(<0.002)	410137-24, 26				
EPA-6010 (DISS. CU)	ND(<0.005)	410137-24, 26				
EPA-7421 (DISS. PB)	ND(<0.003)	410137-24, 26				
EPA-6020 (DISS. SE)	ND(<0.002)	410137-24, 26	ND(<0.002)	ND(<0.002)	****	SAME
EPA-6010 (DISS. ZN)	ND(<0.01)	410137-24, 26				
EPA-6010 (CA)	ND(<0.05)	410137-24, 26				
EPA-6010 (MG)	ND(<0.1)	410137-24, 26				
EPA-6010 (K)	ND(<1)	410137-24, 26				
EPA-6010 (NA)	ND(<0.08)	410137-24, 26				
EPA-300.0 (NO3/NO2)	ND(<0.08)	410137-24, 26				
EPA-300.0 (SULFATE)	ND(<0.08)	410137-24, 26				
EPA-300.0 (CHLORIDE)	ND(<0.14)	410137-24, 26				
EPA-8082 MOD	ND(<0.1)	410137-23				
EPA-8082 MOD	ND(<0.1)	410137-26				
EPA-160.3 (TS)	ND(<5)	410137-24, 26	730	730	0	SAME
EPA-160.1 (TDS)	ND(<5)	410137-24, 26	310	330	6	SAME
EPA-6010 (CA)	ND(<100)	410137-16, 17, 18	3100	2800	10	SAME
EPA-6010 (MG)	ND(<100)	410137-16, 17, 18	4500	4300	5	SAME
EPA-6010 (K)	ND(<100)	410137-16, 17, 18	850	810	5	SAME
EPA-6010 (NA)	ND(<100)	410137-16, 17, 18	290	280	4	SAME
EPA-300A (CHLORIDE)	ND(<3.0)	410137-16, 17, 18	4.0	3.8	****	SAME
EPA-300A (SULFATE)	ND(<3.0)	410137-16, 17, 18	77	71	8	SAME
EPA-300A (NO3/NO2)	ND(<0.61)	410137-16, 17, 18	ND(<0.61)	ND(<0.61)	****	SAME

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/22/04
CCIL JOB #: 410137
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

REPORT AMENDED TO INCLUDE ADDITIONAL PARAMETERS

QUALITY CONTROL RESULTS

EPA-8260 SEE BLANK REPORT
EPA-8270 SEE BLANK REPORT

SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED SAMPLES	% SPIKE RECOVERY	% SPIKE DUP RECOVERY	REL % DIFF
NWTPH-GX	GASOLINE	410137-23	68	69	2
NWTPH-DX	DIESEL	410137-23	97	101	4
NWTPH-DX	DIESEL	410137-26	96	92	4
EPA-6010 (BA)	BARIUM	410137-02 TO 11, 22, 23	98	99	1
EPA-6010 (CD)	CADMIUM	410137-02 TO 11, 22, 23	86	87	1
EPA-6010 (CU)	COPPER	410137-02 TO 11, 22, 23	93	94	1
EPA-6010 (PB)	LEAD	410137-02 TO 11, 22, 23	91	89	2
EPA-6010 (SE)	SELENIUM	410137-02 TO 11, 22, 23	94	97	3
EPA-6010 (ZN)	ZINC	410137-02 TO 11, 22, 23	93	94	1
EPA-6010 (BA)	BARIUM	410137-13, 15	100	102	2
EPA-6010 (CD)	CADMIUM	410137-13, 15	92	94	2
EPA-6010 (CU)	COPPER	410137-13, 15	108	107	1
EPA-6010 (PB)	LEAD	410137-13, 15	98	96	2
EPA-6010 (SE)	SELENIUM	410137-13, 15	102	109	7
EPA-6010 (ZN)	ZINC	410137-13, 15	109	108	1
EPA-6010 (BA)	BARIUM	410137-25	102	104	2
EPA-6010 (CD)	CADMIUM	410137-25	95	97	2
EPA-6010 (CU)	COPPER	410137-25	99	102	3
EPA-6010 (PB)	LEAD	410137-25	101	104	3
EPA-6010 (SE)	SELENIUM	410137-25	104	107	3
EPA-6010 (ZN)	ZINC	410137-25	103	104	1
EPA-6010 (TOTAL BA)	BARIUM	410137-24, 26	93	93	0
EPA-6010 (TOTAL CD)	CADMIUM	410137-24, 26	86	85	1
EPA-6010 (TOTAL CU)	COPPER	410137-24, 26	92	92	0
EPA-7421 (TOTAL PB)	LEAD	410137-24, 26	99	101	2
EPA-6010 (TOTAL SE)	SELENIUM	410137-24, 26	89	91	2

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CERTIFICATE OF ANALYSIS

CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 12/22/04
CCIL JOB #: 410137
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

REPORT AMENDED TO INCLUDE ADDITIONAL PARAMETERS

QUALITY CONTROL RESULTS

EPA-6010 (TOTAL ZN)	ZINC	410137-24, 26	93	92	1
EPA-6010 (DISS. BA)	BARIUM	410137-24, 26	106	105	1
EPA-6010 (DISS. CD)	CADMIUM	410137-24, 26	95	97	2
EPA-6010 (DISS. CU)	COPPER	410137-24, 26	107	107	0
EPA-7421 (DISS. PB)	LEAD	410137-24, 26	99	101	2
EPA-6020 (DISS. SE)	SELENIUM	410137-24, 26	105	N/A	N/A
EPA-6010 (DISS. ZN)	ZINC	410137-24, 26	104	107	3
EPA-6010 (CA)	CALCIUM	410137-24, 26	90	90	0
EPA-6010 (MG)	MAGNESIUM	410137-24, 26	112	111	1
EPA-6010 (K)	POTASSIUM	410137-24, 26	97	92	5
EPA-6010 (NA)	SODIUM	410137-24, 26	86	88	2
EPA-300.0 (NO3/NO2)	NITRATE	410137-24, 26	99	103	4
EPA-300.0 (SULFATE)	SULFATE	410137-24, 26	98	102	4
EPA-300.0 (CHLORIDE)	CHLORIDE	410137-24, 26	95	95	0
EPA-8082 MOD	1016/1260	410137-23	104	114	9
EPA-8082 MOD	1016/1260	410137-26	104	110	6
EPA-160.1 (TDS)	SODIUM CHLORIDE	410137-24, 26	97	N/A	N/A
EPA-8260	1,1 DICHLOROETHENE	410137-19, 20, 21	109	101	8
EPA-8260	BENZENE	410137-19, 20, 21	105	98	7
EPA-8260	TRICHLOROETHENE	410137-19, 20, 21	99	95	4
EPA-8260	TOLUENE	410137-19, 20, 21	96	89	7
EPA-8260	CHLOROBENZENE	410137-19, 20, 21	88	85	3
EPA-8270	PHENOL	410137-19, 20, 21	71	77	9
EPA-8270	2-CHLOROPHENOL	410137-19, 20, 21	78	84	7
EPA-8270	1,4 DICHLOROBENZENE	410137-19, 20, 21	90	96	7
EPA-8270	N-NITROSO-DI-N-PROPYLAMINE	410137-19, 20, 21	51	54	6
EPA-8270	1,2,4-TRICHLOROBENZENE	410137-19, 20, 21	92	95	4
EPA-8270	4-CHLORO-3-METHYLPHENOL	410137-19, 20, 21	82	87	7
EPA-8270	ACENAPHTHENE	410137-19, 20, 21	95	101	6
EPA-8270	4-NITROPHENOL	410137-19, 20, 21	66	67	2
EPA-8270	2,4-DINITROTOLUENE	410137-19, 20, 21	82	89	9
EPA-8270	PENTACHLOROPHENOL	410137-19, 20, 21	57	57	0
EPA-8270	PYRENE	410137-19, 20, 21	101	111	9
EPA-6010 (CA)	CALCIUM	410137-16, 17, 18	102	N/A	N/A
EPA-6010 (MG)	MAGNESIUM	410137-16, 17, 18	100	N/A	N/A
EPA-6010 (K)	POTASSIUM	410137-16, 17, 18	95	N/A	N/A

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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA

REPORT AMENDED TO INCLUDE ADDITIONAL PARAMETERS

QUALITY CONTROL RESULTS

EPA-6010 (NA)	SODIUM	410137-16, 17, 18	103	N/A	N/A
EPA-300.0 (NO3/NO2)	NO3/N02	410137-16, 17, 18	99	N/A	N/A
EPA-300.0 (SULFATE)	SULFATE	410137-16, 17, 18	99	N/A	N/A
EPA-300.0 (CHLORIDE)	CHLORIDE	410137-16, 17, 18	98	N/A	N/A

* SURROGATE OUTSIDE OF CONTROL LIMITS OF 59-121% DUE TO MATRIX INTERFERENCE
**** %RPD NOT REPORTED FOR VALUES <X5 THE REPORTING LIMIT

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CLIENT: SECOR
12034 134TH COURT NORTHEAST SUITE 102
REDMOND, WA 98052

DATE: 11/12/04
CCIL JOB #: 410137
CCIL SAMPLE #: BLK 1
DATE RECEIVED: 10/29/04
WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: METHOD BLANK FOR EPA-8260

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DICHLORODIFLUOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
VINYL CHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRICHLOROFLUOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ACETONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,1-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
METHYLENE CHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ACRYLONITRILE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
METHYL T-BUTYL ETHER	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRANS-1,2-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1-DICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-BUTANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
CIS-1,2-DICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2,2-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOCHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CHLOROFORM	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,1-TRICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CARBON TETRACHLORIDE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRICHLOROETHENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
DIBROMOMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMODICHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TRANS-1,3-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
4-METHYL-2-PENTANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
TOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
CIS-1,3-DICHLOROPROPENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,2-TRICHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-HEXANONE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,3-DICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
TETRACHLOROETHYLENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN

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WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: METHOD BLANK FOR EPA-8260

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
DIBROMOCHLOROMETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DIBROMOETHANE	EPA-8260	ND(<5)	UG/KG	11/11/04	CCN
CHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,1,2-TETRACHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
M+P XYLENE	EPA-8260	ND(<20)	UG/KG	11/11/04	CCN
STYRENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
O-XYLENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOFORM	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
ISOPROPYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,1,2,2-TETRACHLOROETHANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,3-TRICHLOROPROPANE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
BROMOBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
N-PROPYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
2-CHLOROTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,3,5-TRIMETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
4-CHLOROTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
T-BUTYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,4-TRIMETHYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
S-BUTYL BENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
P-ISOPROPYLTOLUENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,3 DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,4-DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
N-BUTYLBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2-DIBROMO 3-CHLOROPROPANE	EPA-8260	ND(<50)	UG/KG	11/11/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
HEXACHLOROBUTADIENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
NAPHTHALENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN
1,2,3-TRICHLOROBENZENE	EPA-8260	ND(<10)	UG/KG	11/11/04	CCN

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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: METHOD BLANK FOR EPA-8260

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

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12034 134TH COURT NORTHEAST SUITE 102
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DATE: 11/12/04
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CCIL SAMPLE #: BLK 2
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WDOE ACCREDITATION #: C142

CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: METHOD BLANK FOR EPA-8270

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
PYRIDINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
N-NITROSODIMETHYLAMINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
PHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
ANILINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BIS(2-CHLOROETHYL)ETHER	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-CHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1,3-DICHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1,4-DICHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZYL ALCOHOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1,2-DICHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-METHYLPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BIS(2-CHLOROISOPROPYL)ETHER	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
3,4-METHYLPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
N-NITROSO-DI-N-PROPYLAMINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
HEXACHLOROETHANE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
NITROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
ISOPHORONE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-NITROPHENOL	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
2,4-DIMETHYLPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZOIC ACID	EPA-8270	ND(<1000)	UG/KG	11/10/04	CCN
BIS(2-CHLOROETHOXY)METHANE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,4-DICHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1,2,4-TRICHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
NAPHTHALENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-CHLOROANILINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,6-DICHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
HEXACHLOROBUTADIENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-CHLORO-3-METHYLPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-METHYLNAPHTHALENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
1-METHYLNAPHTHALENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
HEXACHLOROCYCLOPENTADIENE	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
2,4,6-TRICHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,4,5-TRICHLOROPHENOL	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-CHLORONAPHTHANLENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2-NITROANILINE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN

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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: METHOD BLANK FOR EPA-8270

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
ACENAPHTHYLENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
DIMETHYLPHTHALATE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,6-DINITROTOLUENE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
ACENAPHTHENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
3-NITROANILINE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
2,4-DINITROPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
4-NITROPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
DIBENZOFURAN	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
2,4-DINITROTOLUENE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
2,3,4,6-TETRACHLOROPHENOL	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
DIETHYLPHTHALATE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
FLUORENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-CHLOROPHENYL-PHENYLETHER	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-NITROANILINE	EPA-8270	ND(<250)	UG/KG	11/10/04	CCN
4,6-DINITRO-2-METHYLPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
N-NITROSODIPHENYLAMINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
AZOBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
4-BROMOPHENYL-PHENYLETHER	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
HEXACHLOROBENZENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
PENTACHLOROPHENOL	EPA-8270	ND(<500)	UG/KG	11/10/04	CCN
PHENANTHRENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
ANTHRACENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
CARBAZOLE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
DI-N-BUTYLPHTHALATE	EPA-8270	ND(<130)	UG/KG	11/10/04	CCN
FLUORANTHENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
PYRENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BUTYLBENZYLPHTHALATE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
3,3'-DICHLOROBENZIDINE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[A]ANTHRACENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
CHRYSENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BIS(2-ETHYLHEXYL)PHTHALATE	EPA-8270	ND(<130)	UG/KG	11/10/04	CCN
DI-N-OCTYLPHTHALATE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[B]FLUORANTHENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[K]FLUORANTHENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[A]PYRENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN

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CLIENT CONTACT: DON CLABAUGH

CLIENT PROJECT ID: 010T.16101.01 ACM EE/CA
CLIENT SAMPLE ID: METHOD BLANK FOR EPA-8270

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
INDENO[1,2,3-CD]PYRENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
DIBENZ[A,H]ANTHRACENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN
BENZO[G,H,I]PERYLENE	EPA-8270	ND(<100)	UG/KG	11/10/04	CCN

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY: C Ruf

8620 Holly Drive • Everett, WA 98208 • 425 356-2600 • FAX 425 356-2626 • Seattle 206 292-9059

CCI
ANALYTICAL
LABORATORIES, INC.

March 8, 2006

Douglas Morell
Golder Associates, Inc.
18300 NE Union Hill Rd.
Suite 200
Redmond, WA 98052

RE: SECOR Project 010T.16101.01 ACM EE-CA

Dear Douglas:

In the fall of 2004, CCI Analytical Laboratories received samples from Secor International Inc. The samples were received in seven batches over approximately twelve days. Mr. Steven Anderson of Secor International, Inc. has agreed to release the following additional information to you in an effort to supplement the usability of the previously reported data.

You requested that, for soil samples, we review the Selenium data that was reported as non detect and ascertain whether we could lower the reporting limit for these samples. We have completed reviewing instrument files for these samples and feel comfortable using a reporting limit equal to our method detection limit. Please be aware, however, that this does introduce increased uncertainty to the data, in the form of both false positive and false negative and also greater uncertainty to the accuracy of reported results.

The review indicates that approximately two thirds of the samples showed non detect at the MDL. The attached table lists the sample numbers with non detects reported at the MDL or at the level detected if above the MDL.

I hope this information is useful in your statistical analysis. If you should have any questions, please call me at 425-356-2600.

Sincerely,

Rick Bagan
Business Development

8620 Holly Drive • Everett, WA 98208 • 425 356-2600 • FAX 425 356-2626 • Seattle 206 292-9059

CCI
ANALYTICAL
LABORATORIES, INC.

CCI Job Number	Sample Number	Selenium by 6010
410071	1	ND (<1.9) mg/kg
	3	ND (<3.2) mg/kg
410073	1	ND (<2.1) mg/kg
	2	ND (<2.6) mg/kg
	10	ND (<1.3) mg/kg
	11	ND (<2.3) mg/kg
	12	ND (<2.2) mg/kg
	16	ND (<3.3) mg/kg
	17	7.9 mg/kg
	19	ND (<2.2) mg/kg
	21	7.0 mg/kg
	24	ND (<1.2) mg/kg
	26	ND (<6.3) mg/kg
410085	1	ND (<3.1) mg/kg
	3	ND (<2.1) mg/kg
410136	19	4.4 mg/kg
	20	13 mg/kg
	21	3.1 mg/kg
410137	3	ND (<2.6) mg/kg
	4	ND (<3.7) mg/kg
	5	ND (<2.5) mg/kg
	6	ND (<3.7) mg/kg
	7	ND (<2.8) mg/kg
	8	2.4 mg/kg
	9	ND (<2.7) mg/kg
	10	2.5 mg/kg
	11	3.6 mg/kg
	13	4.1 mg/kg
	15	ND (<2.8) mg/kg
	25	ND (<5.3) mg/kg

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ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

January 17, 2005

Report to:
Amanda S. Magee
SECOR, International, Inc. (WA)
12034 134th Court NE Suite 102
Redmond, WA 98052

Bill to:
Amanda S. Magee
SECOR, International, Inc. (WA)
12034 134th Court NE Suite 102
Redmond, WA 98052

Project ID: ACM EE/CA
ACZ Project ID: L48666

Amanda S. Magee:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 04, 2004. This project has been assigned to ACZ's project number, L48666. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L48666. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

All samples and sub-samples associated with this project will be disposed of after February 17, 2005. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

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

17/Jan/05

Tony Antalek, Project Manager, has reviewed and approved this report in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac

ACIL

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Case Narrative

SECOR, International, Inc. (WA) January 17, 2005

Project ID: ACM EE/CA
ACZ Project ID: L48666

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 4 animal tissue samples from SECOR, International, Inc. (WA) on November 4, 2004. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L48666. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

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

1. The Total Copper analyses were qualified with the ACZ 'N1' flag as the target analyte was found in the method preparation blank sample. Insufficient sample remains to reanalyze.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487(800) 334-5493

Inorganic Analytical Results

SECOR, International, Inc. (WA)
Project ID: ACM EE/CA
Sample ID: BM-US

ACZ Sample ID: ***L48666-01***
Date Sampled: *10/27/04 13:15*
Date Received: *11/04/04*
Sample Matrix: *Animal Tissue*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Barium, total (3050)	M6020 ICP-MS	569		*	mg/Kg	0.5	3	01/06/05 18:25	jag
Cadmium, total (3050)	M6020 ICP-MS	2.4	B	*	mg/Kg	0.5	3	01/06/05 18:25	jag
Copper, total (3050)	M6020 ICP-MS	46		*	mg/Kg	3	10	01/06/05 18:25	jag
Lead, total (3050)	M6020 ICP-MS	13.8		*	mg/Kg	0.5	3	01/06/05 18:25	jag
Selenium, total (3050)	M6020 ICP-MS		U	*	mg/Kg	5	30	01/06/05 18:25	jag
Zinc, total (3050)	M6020 ICP-MS	290		*	mg/Kg	10	50	01/06/05 18:25	jag

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP-MS							11/23/04 19:34	as

** Please refer to Extended Qualifier Report for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487(800) 334-5493

Inorganic Analytical Results

SECOR, International, Inc. (WA)
Project ID: ACM EE/CA
Sample ID: BM-DS

ACZ Sample ID: ***L48666-02***
Date Sampled: *10/27/04 11:30*
Date Received: *11/04/04*
Sample Matrix: *Animal Tissue*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Barium, total (3050)	M6020 ICP-MS	210		*	mg/Kg	0.2	1	01/06/05 18:36	jag
Cadmium, total (3050)	M6020 ICP-MS	0.4	B	*	mg/Kg	0.2	1	01/06/05 18:36	jag
Copper, total (3050)	M6020 ICP-MS	17		*	mg/Kg	1	5	01/06/05 18:36	jag
Lead, total (3050)	M6020 ICP-MS	4.4		*	mg/Kg	0.2	1	01/06/05 18:36	jag
Selenium, total (3050)	M6020 ICP-MS	6	B	*	mg/Kg	2	10	01/06/05 18:36	jag
Zinc, total (3050)	M6020 ICP-MS	195		*	mg/Kg	4	20	01/06/05 18:36	jag

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP-MS							11/23/04 21:25	as

** Please refer to Extended Qualifier Report for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487(800) 334-5493

Inorganic Analytical Results

SECOR, International, Inc. (WA)
Project ID: ACM EE/CA
Sample ID: BM-WET-5

ACZ Sample ID: ***L48666-03***
Date Sampled: *10/27/04 15:30*
Date Received: *11/04/04*
Sample Matrix: *Animal Tissue*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Barium, total (3050)	M6020 ICP-MS	107		*	mg/Kg	0.09	0.4	01/06/05 18:41	jag
Cadmium, total (3050)	M6020 ICP-MS	0.82		*	mg/Kg	0.09	0.4	01/06/05 18:41	jag
Copper, total (3050)	M6020 ICP-MS	6.2		*	mg/Kg	0.4	2	01/06/05 18:41	jag
Lead, total (3050)	M6020 ICP-MS	7.54		*	mg/Kg	0.09	0.4	01/06/05 18:41	jag
Selenium, total (3050)	M6020 ICP-MS	2.4	B	*	mg/Kg	0.9	4	01/06/05 18:41	jag
Zinc, total (3050)	M6020 ICP-MS	138		*	mg/Kg	2	9	01/06/05 18:41	jag

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP-MS							11/23/04 23:17	as

** Please refer to Extended Qualifier Report for detail.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487(800) 334-5493

Inorganic Analytical Results

SECOR, International, Inc. (WA)
Project ID: ACM EE/CA
Sample ID: BM-TP-1

ACZ Sample ID: ***L48666-04***
Date Sampled: *10/27/04 09:35*
Date Received: *11/04/04*
Sample Matrix: *Animal Tissue*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Barium, total (3050)	M6020 ICP-MS	90.7		*	mg/Kg	0.2	1	01/06/05 18:57	jag
Cadmium, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	01/06/05 18:57	jag
Copper, total (3050)	M6020 ICP-MS	16		*	mg/Kg	1	5	01/06/05 18:57	jag
Lead, total (3050)	M6020 ICP-MS	1.2		*	mg/Kg	0.2	1	01/06/05 18:57	jag
Selenium, total (3050)	M6020 ICP-MS	5	B	*	mg/Kg	2	10	01/06/05 18:57	jag
Zinc, total (3050)	M6020 ICP-MS	17	B	*	mg/Kg	4	20	01/06/05 18:57	jag

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Digestion - Hot Plate	M3050B ICP-MS							11/24/04 1:08	as

** Please refer to Extended Qualifier Report for detail.*

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Extended Qualifier Report

SECOR, International, Inc. (WA)

ACZ Project ID: ***L48666***

ACZ ID	WORK NUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L48666-01	WG183665	Barium, total (3050)	M6020 ICP-MS	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Cadmium, total (3050)	M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Copper, total (3050)	M6020 ICP-MS	N1	See Case Narrative.
			M6020 ICP-MS	ZB	The ICP-MS Serial Dilution was not evaluated because the sample concentration was less than 100 times the MDL.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Lead, total (3050)	M6020 ICP-MS	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Selenium, total (3050)	M6020 ICP-MS	MA	One spike recovery was outside of the acceptance limits; the duplicate spike recovery and the RPD were within the acceptance limits.
			M6020 ICP-MS	RD	For a solid matrix, the spike/spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Zinc, total (3050)	M6020 ICP-MS	M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
L48666-02	WG183665	Barium, total (3050)	M6020 ICP-MS	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Cadmium, total (3050)	M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Copper, total (3050)	M6020 ICP-MS	N1	See Case Narrative.
			M6020 ICP-MS	ZB	The ICP-MS Serial Dilution was not evaluated because the sample concentration was less than 100 times the MDL.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Lead, total (3050)	M6020 ICP-MS	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Selenium, total (3050)	M6020 ICP-MS	MA	One spike recovery was outside of the acceptance limits; the duplicate spike recovery and the RPD were within the acceptance limits.
			M6020 ICP-MS	RD	For a solid matrix, the spike/spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Zinc, total (3050)	M6020 ICP-MS	M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Extended Qualifier Report

SECOR, International, Inc. (WA) ACZ Project ID: ***L48666***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L48666-03	WG183665	Barium, total (3050)	M6020 ICP-MS	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Cadmium, total (3050)	M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Copper, total (3050)	M6020 ICP-MS	N1	See Case Narrative.
			M6020 ICP-MS	ZB	The ICP-MS Serial Dilution was not evaluated because the sample concentration was less than 100 times the MDL.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Lead, total (3050)	M6020 ICP-MS	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Selenium, total (3050)	M6020 ICP-MS	MA	One spike recovery was outside of the acceptance limits; the duplicate spike recovery and the RPD were within the acceptance limits.
			M6020 ICP-MS	RD	For a solid matrix, the spike/spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Zinc, total (3050)	M6020 ICP-MS	M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
L48666-04	WG183665	Barium, total (3050)	M6020 ICP-MS	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Cadmium, total (3050)	M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Copper, total (3050)	M6020 ICP-MS	N1	See Case Narrative.
			M6020 ICP-MS	ZB	The ICP-MS Serial Dilution was not evaluated because the sample concentration was less than 100 times the MDL.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Lead, total (3050)	M6020 ICP-MS	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M6020 ICP-MS	ZI	One LCS was outside the recovery method limits while another LCS was within the recovery limits, RPD is within limits.
		Selenium, total (3050)	M6020 ICP-MS	MA	One spike recovery was outside of the acceptance limits; the duplicate spike recovery and the RPD were within the acceptance limits.
			M6020 ICP-MS	RD	For a solid matrix, the spike/spike duplicate RPD exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Zinc, total (3050)	M6020 ICP-MS	M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.

ACZ Laboratories, Inc.

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

Sample Receipt

SECOR, International, Inc. (WA)
ACM EE/CA

ACZ Project ID: L48666
Date Received: 11/4/2004
Received By:

Receipt Verification

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

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

N/A

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

N/A

Cooler Condition

Cooler Id		Temp (°C)	Rad (µR/hr)
CLIENT		2.0	14

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

Notes

ACZ Laboratories, Inc.

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

Sample Receipt

SECOR, International, Inc. (WA)
ACM EE/CA

ACZ Project ID: L48666
Date Received: 11/4/2004
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	Y < 2	YG< 2	B < 2	BG< 2	O < 2	T >12	P >12	N/A	RAD
L48666-01	BM-US										Ô	
L48666-02	BM-DS										Ô	
L48666-03	BM-WET-5										Ô	
L48666-04	BM-TP-1										Ô	

Sample Container Preservation Legend

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

L48666

SECOR

SECOR CHAIN-OF-CUSTODY RECORD

COC # 05975
Page ____ of ____

FIELD OFFICE INFORMATION	PROJECT INFORMATION
OFFICE: Redmond	Project No.: 01GT.16101.01 Task: 0005
Send Report To: Amanda Magee, 12034 134th Ct NE Ste 102, Redmond, WA 98052	Project Name: ACM EE/CA
	Project Manager: Don Chabaugh
Telephone: 425-372-1600	Laboratory: ACZ Labs
Fax / E-Mail: 425-372-1650	

ANALYSES / METHOD REQUEST

REMARKS / PRECAUTIONS

TAT: [X] Normal [ ] Rush [ ] Other ____

REPORTING REQUIREMENTS: [ ] MB & SURGS [ ] Dup/MS/MSD [ ] Raw Data [ ] CLP Rpt [ ] EDD [ ] Other ____

Sample No. / Identification	Date	Time	Matrix*	Container & Size **	Preservative	Number of Containers	Metals*								Remarks
BM-US	10/27/04	1315	OT	C-4oz	ice	1	X								
BM-DS	10-27-04	1130					X								
BM-WET-5	10-27-04	1530					X								
BM-TP-1	10-27-04	0935					X								
F-1	10-13-04	—													hold
F-2	10-13-04	—													hold
F-3	10-13-04	—													hold
															*metals: lead, zinc, selenium, barium, cadmium, copper

Possible Hazard Identification: [X] Non Hazardous [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return to Client [ ] Disposal by Lab [ ] Archive for ____ Months

Sampled by: Shipment Method: Airbill Number:

	Signature	Print Name	Company	Date	Time
1a Relinquished by:	[signature]	Amanda Magee	SECOR International	10/27/04	1445
1b Received by:	[signature]	George Clark	ACZ	11/4/04	1000
2a Relinquished by:					
2b Received by:					
3a Relinquished by:					
3b Received by:					

*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other **Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

APPENDIX G

COST ESTIMATES FOR REMEDIATION ALTERNATIVES

TABLE G-1

ESTIMATED COST FOR ALTERNATIVE 2: Institutional Controls and Monitoring

Item	Quantity	Units	Unit Cost	Cost	Notes
CAPITAL COSTS					
Fence installation	1,750	lf	$25.00	$43,750	
Gates	1	each	$900.00	$900	
Signage	1	ls	$1,000.00	$1,000	
Construction Subtotal				**$45,650**	
ENGINEERING COSTS					
Construction surveillance			10%	$5,000	
Engineering Design Report and Bid Package				$10,000	
Engineering Permit, Wetland and F&W Issues				$5,000	
Legal and Deed Restrictions				$15,000	
Engineering Subtotal				**$35,000**	
Contingency			25%	**$11,000**	
TOTAL ESTIMATED CAPITAL COSTS				**$91,650**	
INSPECTION AND MAINTENANCE					
Inspection				$30,576	Net Present Value
Maintenance				$29,755	Net Present Value
Subtotal				**$60,000**	Rounded
Contingency			25%	**$15,000**	
TOTAL I&M COST				**$75,000**	

Table G-2a
ESTIMATED COST FOR ALTERNATIVE 5

Item	Quantity	Units	Unit Cost	Cost	Notes
QUANTITIES					
Total regrade area for Cap	60,000	sf			
Cap: General Soil thickness	0.5	ft			
Cap: Armor Rock thickness	0.5	ft			
Area of South Wetland	1.6	acre			
Area of West Ditch	1.1	acre			
Area of South Ditch	0.6	acre			
Wetlands Replacement Factor	1.0				
Area of New Wetlands	3.3	acre			
New Wetlands Topsoil Thickness	0.25	ft			
Ditch / Wetland Fill Depth	4.0	ft			
Wetlands and Perim Cover Soil Area	463,100	sf			
Wetlands and Perim Cover Soil Thickness	1.0	ft			
Drainage Sill Area	6,000	sf			
Drainage Sill Thickness	1.0	ft			
Filter Berm Length	1,265	ft			
Filter Berm Width	10.0	ft			
Filter Berm Thickness	1.5	ft			
Total Impoundment Area	1,876,985	sf			
Total Impoundment Perimeter Length	5,284	lf			
CONSTRUCTION COSTS					
Contractor Mobilization					
Mob/Demob	1	lump sum	$25,000	$25,000	
Temporary Facilities	3	monthly	$2,200	$6,600	
Tailings and Ore Piles Cap Construction					
Grading	6,667	sy	$2.00	$13,333	
Excavate, Haul, and Spread General Soil	1,111	cy	$4.00	$4,444	
Armor Rock to Site	1,111	cy	$22.00	$24,444	
Place and Grade Armor Rock	6,667	sy	$2.00	$13,333	
Hydroseed	1.4	acre	$1,982	$2,730	
Wetlands and Perimeter Soil Cover					
Grading	52,122	sy	$2.00	$104,244	
Excavate, Haul, and Spread General Soil	17,152	cy	$4.00	$68,607	
Sill: Armor Rock to Site	222	cy	$22.00	$4,889	
Place and Grade Sill Rock	667	sy	$2.00	$1,333	
Impoundment Revegetation					
Seed Wetlands and Perimeter Cover	10.6	acre	$3,000	$31,894	
Place Large Woody Debris	5,284	lf	$26.50	$140,026	
Fill Ditches and South Wetland					
South Wetland	10,096	cy	$15.00	$151,447	
West Ditch	7,333	cy	$15.00	$109,998	
South Ditch	3,982	cy	$15.00	$59,727	
Construct Filter Berm					
Place Filter Rock	703	cy	$15.00	$10,542	
Wetlands Replacement					
Grading	16,059	sy	$2.00	$32,117	
Topsoil	1,338	cy	$25.00	$33,455	
Seeding	3.3	acre	$3,000	$9,954	
Access Controls					
Access control gate	1	ea	$1,000	$1,000	
Signage	8	ea	$83	$664	
Erosion Controls					
Silt fence	3,000	lf	$3.50	$10,500	
Surface Water Control Ditches					
V-ditch	1,500	lf	$1.78	$2,667	
Construction Subtotal				**$863,000**	Rounded
ENGINEERING COSTS					
Engineering Design Report			$40,000	$40,000	
Engineering Permits, Wetland and F&W Issues			$35,000	$35,000	
Bid Package & Process			$10,000	$10,000	
Pre-design Investigation & Survey			$15,000	$15,000	
Remediation & As-built Report			$10,000	$10,000	
HASP			$2,000	$2,000	
QAPP			$3,000	$3,000	
Field QA/QC	1.5	month	$30,000	$45,000	
Compliance Monitoring Report			$15,000	$15,000	
Engineering Subtotal				**$175,000**	Rounded
Contingency			25%	**$260,000**	
TOTAL ESTIMATED CAPITAL COSTS				**$1,298,000**	Sum of constructn, engineering, contingency
INSPECTION AND MAINTENANCE					
Inspection				$79,743	Net Present Value
Maintenance				$51,881	Net Present Value
Subtotal				**$132,000**	Rounded
Contingency			25%	**$33,000**	
TOTAL I&M COST				**$165,000**	

Table G-2b

PV CALCULATIONS - ALT 3: CONSOLIDATE AND CAP TAILINGS AND ORE PILES AND WETLANDS

Inspection

Assume:

Labor rate:	$80	hr	
Number of personnel:	2		
Field hours per person:	16		8 hrs travel, 8 hrs on site
Report hours:	20		
No. of samples:	6		
Analytical cost:	$100		per sample
Other expenses:	$600		
Total inspection cost:	$5,360		

Year	Cost		
1	$5,360	pv=	$5,204
2	$5,360	pv=	$5,052
3	$5,360	pv=	$4,905
4	$5,360	pv=	$4,762
5	$5,360	pv=	$4,624
6	$5,360	pv=	$4,489
7	$5,360	pv=	$4,358
8	$5,360	pv=	$4,231
9	$5,360	pv=	$4,108
10	$5,360	pv=	$3,988
11	$5,360	pv=	$3,872
12	$5,360	pv=	$3,759
13	$5,360	pv=	$3,650
14	$5,360	pv=	$3,544
15	$5,360	pv=	$3,440
16	$5,360	pv=	$3,340
17	$5,360	pv=	$3,243
18	$5,360	pv=	$3,148
19	$5,360	pv=	$3,057
20	$5,360	pv=	$2,968
	SUM	pv=	$79,743

Maintenance

Year	Cost		
1	$20,000	pv=	$19,417
2	$15,000	pv=	$14,139
5	$10,000	pv=	$8,626
10	$5,000	pv=	$3,720
15	$5,000	pv=	$3,209
20	$5,000	pv=	$2,768
	SUM	pv=	$51,881

Table G-3a
ESTIMATED COST FOR ALTERNATIVE 4

Item	Quantity	Units	Unit Cost	Cost	Notes
QUANTITIES					
Thickness of tailings and ore piles	4.0	ft			
Area of Tailings and Ore Pile	60,000	sf			
Total impoundment area	1,876,985	sf			
Area of South Wetland	1.6	acre			
Area of West Ditch	1.1	acre			
Area of South Ditch	0.6	acre			
Area of existing impoundment wetlands	5.7	acre			
Wetlands Replacement Factor	1.0				
Area of New Wetlands	9.0	acre			
New Wetlands Topsoil Thickness	0.25	ft			
Ditch / Wetland Fill Depth	4.0	ft			
Tailings excavation cross section area	12,072	sf			
Tailings excavation length	1,300	ft			
Consolidated pile total plan area	618,902	sf			
Consolidated pile 5% slope area	268,508	sf			
Cap: General Soil thickness	1.0	ft			
Cap: Armor Rock thickness on sideslopes	0.5	ft			
Consolidated Pile Perimeter	3,436	lf			
CONSTRUCTION COSTS					
Contractor Mobilization					
Mob/Demob	1	lump sum	$50,000	$50,000	
Temporary Facilities	6	monthly	$2,200	$13,200	
Tailings and Ore Piles Removal					
Excavate, Haul, and Spread on Consol SP	8,889	cy	$4.00	$35,556	
Grading	6,667	sy	$2.00	$13,333	
Hydroseed	1.4	acre	$1,982	$2,730	
Tailings Impoundment Consolidation					
Excavate, haul, spread, and compact	581,244	cy	$4.00	$2,324,978	
Geotextile marker layer	649,847	sf	$0.25	$162,462	
Soil cover	16,434	cy	$5.00	$82,168	
Armor rock on 2.5H:1V slopes	6,489	cy	$22.00	$142,753	
Hydroseed	14.9	acre	$1,982	$29,568	
Regrade removal area	139,787	sy	$0.63	$88,066	
Fill Ditches and South Wetland					
South Wetland	10,096	cy	$15.00	$151,447	
West Ditch	7,333	cy	$15.00	$109,998	
South Ditch	3,982	cy	$15.00	$59,727	
Revegetation					
Seed Tailings Removal Area	28.9	acre	$3,000	$86,645	
Place Large Woody Debris	3,436	lf	$26.50	$91,054	
Wetlands Replacement					
Grading	43,741	sy	$2.00	$87,483	
Topsoil	3,645	cy	$25.00	$91,128	
Seeding	9.0	acre	$3,000	$27,112	
Access Controls					
Access control gate	1	ea	$1,000	$1,000	
Signage	8	ea	$83	$664	
Erosion Controls					
Silt fence	8,000	lf	$3.50	$28,000	
Surface Water Control Ditches					
V-ditch	3,000	lf	$1.78	$5,333	
Construction Subtotal				**$3,684,000**	Rounded
ENGINEERING COSTS					
Engineering Design Report			$60,000	$60,000	
Engineering Permits, Wetland and F&W Issues			$45,000	$45,000	
Bid Package & Process			$15,000	$15,000	
Pre-design Investigation & Survey			$25,000	$25,000	
Remediation & As-built Report			$20,000	$20,000	
HASP			$5,000	$5,000	
QAPP			$3,000	$3,000	
Field QA/QC	5	month	$30,000	$150,000	
Compliance Monitoring Report			$20,000	$20,000	
Engineering Subtotal				**$343,000**	Rounded
Contingency			25%	**$1,007,000**	
TOTAL ESTIMATED CAPITAL COSTS				**$5,034,000**	Sum of constructn, engineering, contingency
INSPECTION AND MAINTENANCE					
Inspection				$37,491	Net Present Value
Maintenance				$51,881	Net Present Value
Subtotal				**$89,000**	Rounded
Contingency			25%	**$22,000**	
TOTAL I&M COST				**$111,000**	

Table G-3b

PV CALCULATIONS - ALT 4: CONSOLIDATE AND CAP TAILINGS AND ORE PILES ON TAILINGS IMPOUNDMENT WITH REDUCTION IN TAILINGS IMPOUNDMENT FOOTPRINT AND FILL ADJACENT WETLANDS

Inspection

Assume:

Labor rate:	$80	hr	
Number of personnel:	1		
Field hours per person:	16		8 hrs travel, 8 hrs on site
Report hours:	8		
Other expenses:	$600		
Total inspection cost:	$2,520		

Year	Cost		
1	$2,520	pv=	$2,447
2	$2,520	pv=	$2,375
3	$2,520	pv=	$2,306
4	$2,520	pv=	$2,239
5	$2,520	pv=	$2,174
6	$2,520	pv=	$2,110
7	$2,520	pv=	$2,049
8	$2,520	pv=	$1,989
9	$2,520	pv=	$1,931
10	$2,520	pv=	$1,875
11	$2,520	pv=	$1,821
12	$2,520	pv=	$1,767
13	$2,520	pv=	$1,716
14	$2,520	pv=	$1,666
15	$2,520	pv=	$1,617
16	$2,520	pv=	$1,570
17	$2,520	pv=	$1,525
18	$2,520	pv=	$1,480
19	$2,520	pv=	$1,437
20	$2,520	pv=	$1,395
	SUM	pv=	$37,491

Maintenance

Year	Cost		
1	$20,000	pv=	$19,417
2	$15,000	pv=	$14,139
5	$10,000	pv=	$8,626
10	$5,000	pv=	$3,720
15	$5,000	pv=	$3,209
20	$5,000	pv=	$2,768
	SUM	pv=	$51,881

UNIT COSTS

Item	Unit Cost	Units	Source/Comments
EQUIPMENT AND MATERIALS (in place):			
Clearing	$335	acre	RS Means 02230.1020, assumes no stumps
Off pile removal	$7	cy	Spot removals White King avg.
Excavation	$4	cy	White King avg.
Gravel	$17.50	cy	Quote from Colville Valley Concrete. Delivered to site 3/4" minus
Clean cover soil	$5.00	cy	Site source, White King avg.
Geotextile Marker Layer	$0.25	sf	Estimate
Silt fence	$3.50	lf	White King avg.
Mass Grading	$0.63	sy	RS Means 02310.0100
V-Ditch	$1.78	lf	2-ft-deep, 3H:1V sideslopes
Compaction	$0.32	cy	RS means 02315.310.5000
Armor rock	$22.00	cy	Quote from Colville Valley Concrete, delivered to site 1"-2" screened. Add $2/ cy for blending
Rock fill for ditches	$15.00	cy	Estimate; excavate, screen, load, haul, place
Grading small areas	$2.00	sy	RS means 02310.1050
Fencing	$25.00	lf	RS Means 02820.130.0500
Control gates	$900	ea	White King avg.
Signage	$83.00	ea	RS Means 02890.100.1200
Revegetation	$1,982	acre	RS Means 02920.320.0200 rounded
Large Woody Debris	$26.50	lf	Based on White King Bid
Temporary facilities	$2,200	monthly	White King avg.
Topsoil / Composted Organic Material	$25.00	cy	Estimate
Wetlands Seeding	$3,000	acre	White King bid

R.S. Means. 2005 *Heavy Construction Cost Data*, 19th Annual Edition. R.S. Means Company, Inc., Kingston, MA.