Supplemental Remedial Investigation Work Plan

Abitibi Consolidated Sales Corp
Facility Site ID 57759125
Cleanup Site ID 2884
VCP SW1848
4302 Chambers Creek Road
Steilacoom, Washington 98388

Prepared for:

HDG, LP

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Prepared by:

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MAUL FOSTER ALONGI

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The material and data in this report were prepared under the supervision and direction of the undersigned.

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Abbreviations

Abitibi	Abitibi Consolidated Sales Corp.
AOI	area of interest
bgs	below ground surface
COC	chain-of-custody
COPC	contaminant of potential concern
Covenant	environmental covenant AFN201003310170
CUL	cleanup level
dioxins/furans	polychlorinated dibenzo-p-dioxins and dibenzofurans
DU	decision unit
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
Forested Area	forested area surrounding former mill operational area
FSDS	field sampling data sheet
ID	identification
ISM	incremental sampling methodology
LCS	laboratory control sample
MFA	Maul Foster & Alongi, Inc.
mg/kg	milligrams per kilogram
Mill Area	former mill operational area
MTCA	Model Toxics Control Act
MS/MSD	matrix spike/matrix spike duplicate
NFA	No Further Action
NTU	nephelometric turbidity units
PID	photoionization detector
the Property	4302 Chambers Creek Road, Steilacoom, Washington
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
RI/FS	remedial investigation and feasibility study
SOP	standard operating procedure
SSAP	site-specific sampling and analysis plan
TPH	total petroleum hydrocarbons
TSP	Tacoma Smelter Plume
TSP metals	arsenic and lead

VOC	volatile organic compound
WAC	Washington Administrative Code

1 Introduction

On behalf of HDG, LP, Maul Foster & Alongi, Inc. (MFA) has prepared this supplemental remedial investigation work plan to described proposed investigation activities on the former mill operational area (Mill Area) and surrounding forested area (Forested Area) of the Abitibi Consolidated Sales Corp. (Abitibi) property, located at 4302 Chambers Creek Road in Steilacoom, Washington (the Property) (see Figure 1-1). Historical Mill Area operations potentially generated and released contaminants of potential concern (COPCs). Further, the Property is situated within a 1,000 square mile area known as the Tacoma Smelter Plume (TSP), and surface soils may be impacted by aerially deposited arsenic and lead (TSP metals). This supplemental remedial investigation is designed to further evaluate these potential sources.

1.1 Regulatory Framework

The Property is listed in the Washington State Department of Ecology (Ecology) cleanup site database as Facility Site ID 57759125 and Cleanup Site ID 2884. On November 29, 2006, Ecology and Abitibi entered Agreed Order No. DE 3154 (Ecology 2006). Following an interim removal action and remedial investigation and feasibility study (RI/FS), an environmental covenant AFN201003310170 (Covenant) was recorded on a portion of the Property restricting surficial aquifer groundwater use and stating that residual soil contamination beneath railroad lines on the Mill Area must be addressed upon demolition of the railroad lines (Ecology 2010a). Ecology issued a No Further Action (NFA) determination following recording of the Covenant.

In 2021, an application was filed to rezone the Property for future redevelopment and Ecology requested additional soil investigation for polychlorinated dibenzo-p-dioxins and dibenzofurans (dioxins/furans) (Balaraju 2021). Following consultation with Ecology, the Property was enrolled in the Voluntary Cleanup Program in November 2024. MFA prepared a *Soil Management Plan* designed to address the residual soil contamination beneath the railroad lines and requested Ecology's opinion. Ecology subsequently issued opinion letters dated February 7 and May 13, 2025, determining that further investigation action is required. Comments from Ecology were incorporated into an updated version of the *Soil Management Plan* (MFA 2025).

1.2 Investigation Objectives

The objectives of the supplemental remedial investigation work plan are to establish procedures for characterizing TSP metals in Mill Area surface soils, dioxins/furans in Mill Area and Forested Area surface soils, and COPCs in soil and groundwater such that the data collected:

- Is high quality, representative, and verifiable
- Further defines the nature and extent of contamination at the Property
- Adequately evaluates potential sources, release mechanisms, impacted media, and exposure pathways for the Property

- Provides sufficient information to evaluate remedial actions and support redevelopment activities at the Property

This work plan describes methods for soil sample collection, equipment decontamination, field quality assurance (QA) activities, sample analysis and analytical methods, sampling QA and quality control (QC) procedures, data validation, and reporting.

2 Background

2.1 Property Location

The approximately 58-acre Property borders the northwest boundary of the City of Steilacoom and comprises two parcels (see Figures 1-1 and 2-1). Industrial operations occurred for decades on the Mill Area, encompassing approximately 16 acres on portions of Pierce County Parcels Nos. 0220294007 and 0220294025.

2.2 Property Features and Mill History

The Property is characterized by two physiographic areas separated by roughly 200 feet of topographic relief: a relatively flat, low-lying area (the Mill Area) and a steep slope area ranging from 150 to 225 feet in elevation with slopes ranging from 45 to 70% (the Forested Area). Ecology's Coastal Zone Atlas has identified portions of these steep slopes as unstable (Ecology 2026), and visual evidence of slope instability and failure have been observed during previous site visits.

The Mill Area operated as a pulp and paper mill from approximately 1919 until December 2000. Over decades of operation, the Mill Area was progressively developed and expanded (MFA 2025) (see Figure 2-2). Mill products were historically produced from thermo-mechanical pulp, purchased pulp, or pulp produced from deinked recycled paper. Auxiliary manufacturing operations included unloading and repulping of purchased kraft pulp, water filtration, wastewater treatment, and steam generation using hog fuel and natural gas-fired boilers. The mill did not, however, use bleach kraft processes. In 2000, all mill operations ceased and in May 2001, the wastewater treatment plant was drained and permanently shut down.

Historical features used in support of former mill process and manufacturing operations include fuel and chemical storage areas, fueling areas, and several buildings and warehouses that supported paper production (see Figure 2-1). The Shipping Warehouse, North Warehouse, and several tanks and clarifiers are still present on the Mill Area. Currently, most of the Mill Area is covered with impervious surfaces constructed during mill operations, including asphalt, concrete, construction rubble, and railroad lines. During the wet season, flooding is common in the central and southwest portions of the Mill Area near the Shipping Warehouse and former Paper Machine #3.

Further, the Property is located within the 1,000-square-mile TSP. For over 100 years, the former Asarco copper smelter, located in Tacoma, Washington, emitted TSP metals that settled on surface soils across the Puget Sound basin.

2.3 Geology and Hydrogeology

Geologic and hydrogeologic conditions at the Property have been documented in previous reports, including the *Remedial Investigation/Feasibility Study Report* (RI/FS) (CH2M Hill 2007) and *First Periodic Review Report* (Ecology 2017). Geologic units underlying the Property include:

- Fill material, generally 5 to 10 feet thick and consisting of silty sand and gravel with some concrete and woody debris in the Mill Area
- Quaternary alluvium, consisting of a layer of silt, sand, and gravel deposited by Chambers Creek beneath the fill in the Mill Area, and
- Glacial deposits, generally sand and gravel, which make up the surface material in higher elevation areas (e.g., the Forested Area) and underlie the alluvium layer in lower elevation areas (e.g., the Mill Area)

The water-bearing zones at the Property include the shallow fill/alluvial aquifer (adjacent to Chambers Creek) and the deep, glacially derived Chambers-Clover Creek aquifer. In its First Periodic Review Report, Ecology notes that the shallow aquifer may be separated from the deep aquifer beneath the Mill Area by zones of low permeability (Ecology 2017). Shallow groundwater is generally encountered between 5 and 8 feet below ground surface (bgs) and flows north and northwest towards Chambers Creek and Chambers Bay.

2.4 Previous Investigations

Historical investigations at the Property are described in previous reports (MFA 2022, 2024) and are summarized below. Previous sampling locations are shown in Figures 2-3 and 2-4. Historical soil, sediment, and forest duff data are provided in Tables 2-1a, 2-1b, 2-2, and 2-3, respectively, while historical groundwater and surface/seep water data are provided in Tables 2-4 and 2-5, respectively.

Phase I and Phase II Environmental Site Assessments

Between 2001 and 2005, Phase I and Phase II environmental site assessments were performed at the Property (CH2M Hill 2001, 2005), which identified contamination above Model Toxics Control Act (MTCA) cleanup levels (CULs). In April and May 2006, an interim removal action was performed where soil with total petroleum hydrocarbon (TPH) concentrations above MTCA CULs were excavated and transported offsite for disposal. In November 2006 agreed order required Abitibi to prepare an RI/FS and draft cleanup action plan (Ecology 2006).

Remedial Investigation/Feasibility Study

In 2007, the RI/FS was prepared, which outlined areas where arsenic, TPH, and polycyclic aromatic hydrocarbons (PAHs) in soil and groundwater exceeded MTCA CULs (CH2M Hill 2007). In soil, arsenic is well below the MTCA Method A CUL for unrestricted land use (20 milligrams per kilogram [mg/kg]). In groundwater, arsenic CUL exceedances are the result of naturally occurring reducing conditions at the Property. Contaminated soil was largely addressed through the 2006 interim removal action, though residual contamination was left in place beneath the railroad lines and near the loading dock of the Shipping Warehouse.

Groundwater Monitoring

Between August 2006 and March 2008, groundwater monitoring indicated contaminant concentrations were below laboratory detection limits or below established MTCA Method A or Method B CULs. Groundwater monitoring was discontinued in November 2008. On March 31, 2010, the Covenant was recorded, prohibiting use of surficial aquifer groundwater, and requiring removal of residual contamination beneath the railroad lines upon demolition (Ecology 2010a). On April 10, 2013, Ecology issued a satisfaction letter to Abitibi for completing the requirements of the agreed order following the final cleanup action and recording of the Covenant (Ecology 2013).

Supplemental Investigations

In August 2022, MFA performed sampling in the undisturbed forested area surrounding the Mill Area to investigate potential dioxin/furan and TSP metals contamination. The forested area was divided into two areas of interest (AOIs) on the northeastern and southwestern portions of the Property in the predominant wind directions, respectively. Though dioxins/furans exceeded MTCA Method B CULs in three discrete soil samples, samples collected using incremental sampling methodology from both AOIs demonstrated that dioxin/furan concentrations are below CULs. Further, analytical results from all investigations (including historical investigations from the Mill Area) showed TSP metals concentrations below elevated criteria (Ecology 2019) in all samples.

In 2024, MFA prepared the *Soil Management Plan* to guide the cleanup of known or suspected contamination, including areas beneath the railroad lines and near the Shipping Warehouse, and any unexpected contamination that may be discovered during Mill Area redevelopment activities (MFA 2025). The Property was enrolled in the Voluntary Cleanup Program, and Ecology's opinion was requested. On February 7 and May 13, 2025, Ecology issued opinion letters indicating that additional investigation is required to better understand the nature and extent of COPCs throughout the Property (Ecology 2025a,b).

3 Sample Program Design

3.1 Contaminants of Potential Concern

For this proposed supplemental remedial investigation, the COPCs (and accompanying rationale) include:

- Resource Conservation and Recovery Act (RCRA) 8 metals,[1] TPH, and PAHs (as identified in the RI/FS)
- Dioxins/furans (owing to the historical presence of a hog fuel burner), and
- Full-suite volatile organic compounds (VOCs) (as requested by Ecology)

[1] TSP metals (i.e., arsenic and lead) are included in the list of RCRA 8 metals.

3.2 Sampling Rationale

The sampling rationale of each area and feature of interest on the Property is provided in Table 3-1. For the purposes of this proposed investigation, the sampling program is divided into the following areas and environmental media:

- Mill Area
  - TSP metals and dioxins/furans in surface soils
  - COPCs in soils and groundwater
  - Known or suspected contamination beneath railroad lines and near the Shipping Warehouse
- Forested Area
  - Dioxins/furans in surface soils

3.2.1 Mill Area

The proposed investigation locations in the 16-acre developable Mill Area are shown in Figures 3-1a and 3-1b, respectively.

3.2.1.1 TSP Metals

To assess potential impacts from the aerial deposition of TSP metals, Mill Area surface soils will be collected from two depth intervals: 0 to 6 inches bgs and 6 to 12 inches bgs. These samples will be collected, stored, analyzed, and evaluated according to the TSP guidance (Ecology 2019). Based on the acreage of Mill Area, the predicted arsenic concentration in surface soils at the Property, and the potential future uses of the developable Mill Area, the TSP guidance recommends 72 sample locations (see Figure 3-1a). Of these, samples from the 0-to-6-inch depth interval will be collected at 72 locations (100%), while samples from the 6-to-12-inch depth interval will be collected at 18 locations (25%), consistent with the TSP guidance.

3.2.1.2 Dioxins/Furans

Mill Area surface soils will be sampled for dioxins/furans using incremental sampling methodology (ISM) and industry standard methods (ADEC 2009, HDOH 2009, ITRC 2020). ISM is a structured composite sampling and processing protocol that reduces data variability and increases the probability of identifying areas of elevated concentrations, thereby increasing data representativeness. ISM obtains data that are more representative of average concentrations than data from discrete or composite samples and is particularly appropriate when the receptors of concern are expected to be exposed to larger areas rather than discrete locations. ISM provides a single sample for analysis with a concentration representative of the mean concentration in a predefined area termed a “decision unit [DU]” (ADEC 2009, HDOH 2009, ITRC 2020). For the purposes of this investigation, the Mill Area comprises one DU (DU-01).

In the Mill Area, samples (called increments) will be collected from 0 to 6 inches bgs from a subset of the TSP metals investigation locations described previously (see Figure 3-1a). The increments will be combined into one ISM sample, processed by the laboratory, and analyzed to obtain a representative average contaminant concentration for the Mill Area. For this investigation, 50 increments will be collected from DU-01.

3.2.1.3 Contamination Beneath Railroad Lines and Near Shipping Warehouse

Known or suspected Mill Area contamination beneath the railroad lines and near the Shipping Warehouse will be assessed with a separate *Soil Management Plan* (MFA 2025). The purpose of the *Soil Management Plan* is to describe the proposed actions that will be performed concurrent with, or prior to, redevelopment activities at the Mill Area to address the known or suspected residual contamination outlined in the Covenant, consistent with MTCA.

3.2.1.4 Additional Soil and Groundwater Investigation

To further assess potential impacts from legacy Mill Area operations and address the data gaps noted by Ecology (2025a,b), up to eight soil borings and 16 test pits will be advanced in accessible areas and near or downgradient of former Mill Area features (see Figure 3-1b). If groundwater is encountered during drilling, four soil borings will be completed as temporary monitoring wells and reconnaissance groundwater samples will be collected for analysis.

Groundwater samples will also be collected from three existing monitoring wells on the Mill Area (MW02, MW03, and MW04), provided these wells are present, accessible, and can be redeveloped for sample collection.

3.2.2 Forested Area

Forested Area surface soils within DU-02, DU-03, and DU-04, will be investigated for dioxins/furans using the ISM approach described previously in Section 3.2.1.2. The DUs were identified in areas that had not been sampled previously and in areas that were accessible to avoid unstable steep slopes (Ecology 2026). Proposed increments are shown in Figure 3-2. 30 increments will be collected from each Forested Area DU.

4 Field Methodology

Field investigations will be conducted in general accordance with the methods and protocols described in MFA's standard operating procedures (see Appendix A), project-specific health and safety plan (see Appendix B), and inadvertent discovery plan (see Appendix C).

4.1 Access

HDG, LP has granted access for MFA and its subcontractors to conduct environmental investigation activities on the Property.

4.2 Utility Locates

Underground utilities present a unique hazard for subsurface sampling. Public and private utility-locating services will be used to check for subsurface utilities and other anomalies (e.g., pipelines or tanks) near the proposed sample locations, in accordance with standard operating procedure (SOP) 18 (see Appendix A), before any subsurface investigation activities commence.

4.3 Soil and Groundwater Sampling

Sample collection will meet the requirements for each environmental media and investigation COPC. Samples will be collected in containers supplied by the analyzing laboratory to ensure clean containers are used and sufficient material is collected. Sample container, preservation, and holding time requirements are listed in Table 4-1; preferred soil and groundwater analytical methods and performance criteria are listed in Tables 4-2 and 4-3, respectively; and sampling will follow a site-specific sampling and analysis plan (SSAP) (see Appendix D).

4.3.1 Surface Soil Sampling (Mill Area and Forested Area)

4.3.1.1 TSP Metals Sampling

Discrete soil samples will be collected from the Mill Area and analyzed for TSP metals. Samples will be collected from 72 discrete locations in the Mill Area (see Figure 3-1a). Overlying debris and vegetation, if any, will be cleared prior to sample collection. Impervious, completed surfaces (e.g., asphalt) will be penetrated with a drilling rig or stand-mounted core drill to access underlying soils for sampling. In these areas, the surface (i.e., 0 inches bgs) is defined as the soil immediately underlying the completed asphalt/concrete and subgrade material.

- Soil samples from the 0 to 6 inches bgs depth interval will be collected from all 72 sampling locations.
- Soil samples from 6 to 12 inches bgs depth interval will be collected from 18 of the 72 sampling locations.

A stainless-steel hand auger will be used to collect the soil samples described above. The hand auger will be used to collect soil samples from each depth interval. Sample collection tools will be decontaminated between each sample collection (see Section 4.6) and samples will be transferred directly to individually labeled, clean, glass containers (see Section 4.4). The sample locations shown in Figure 3-1a are approximate and may be adjusted in the field based on accessibility and in consideration for the health and safety risks present at the Property.

4.3.1.2 ISM Sampling

ISM sampling will be performed in the Mill Area and Forested Area for dioxin/furan analysis. Given the size of the Mill Area and number of locations required for the TSP metals investigation described above, Mill Area (DU1) increments will be collected from 0 to 6 inches bgs from 50 of the 72 TSP metals investigation locations. Forested Area (DU2 through DU4) increments will be collected from 0 to 6 inches bgs from 30 investigation locations in each DU.

Using a stainless-steel core sampler or trowel, approximately 50 grams of soil per increment (± approximately 20 percent) will be collected, for a target total of approximately 1.5 kilograms (DU2 through DU4) to 2.5 kilograms (DU1). Increments will be collected directly into a laboratory-supplied, wide mouth glass jar, typically around 0.5 gallon in volume. Organic debris (including surface vegetation) and inorganic debris will be removed during sample collection. This effort will ensure that excessive organic matter is not included in soil collected and will maintain substrate consistency between sample increments. Each sample increment will be measured and placed in a dedicated jar with the other increments from that DU. The sampling approach will focus on collection of finer substrate material of approximately 2 millimeters and less (i.e., sand size and finer). Purposefully

excluding larger substrates will improve the probability that a consistent, uniform sample from each increment location will be incorporated, resulting in a representative average concentration.

An ISM triplicate (three sets of 50 increment samples) will be collected from one DU. Triplicate sampling will provide a conservative measure of ISM variability.

Proposed increment locations were selected based on a stratified random approach using a triangular grid (using ArcGIS 10 and Visual Sample Plan 6) as presented on Figure 3-2. Using a systematic random grid, as opposed to a simple random sampling approach, reduces the probability of missing areas with significantly elevated concentrations. Increment locations are approximate and may be adjusted in the field based on accessibility and in consideration for the health and safety risks present at the Property.

4.3.2 Borings/Temporary Wells (Mill Area)

To determine potential COPC impacts in Mill Area soil and groundwater, up to 8 borings will be advanced using sonic or hollow stem auger drill rig operated by a licensed driller in the State of Washington using industry-standard techniques (see SOP 08 in Appendix A). The borings will be advanced to a maximum exploration depth of 20 feet bgs and may be field adjusted based on access limitations, depth of groundwater, or if refusal is met.

Soil samples will be collected for lithologic description, field screening, and chemical analyses in the field under the direct supervision of a geologist licensed in the State of Washington (see SOPs 02, 03, 04, and 05 in Appendix A). Soil sample material will be collected throughout the soil column and observed for visual and/or olfactory indications of contamination and field screened with a photoionization detector (PID).

Given the nature of historical Mill Area operations, the release mechanism for COPCs to reach and impact environmental media is anticipated to be predominantly surface or near-surface releases. Therefore, the proposed sampling approach to evaluate potential COPC impacts to soil and groundwater reflects a “top down” approach. At each boring location, soil samples will be collected approximately every 2.5 feet until groundwater is encountered or refusal is met. Where field indications of contamination exist, additional soil samples will be collected from above, within, and below the impacted area (as practicable).

Soil samples will be analyzed on a tiered approach at the laboratory, starting with the shallowest sample at each location and all samples collected from locations and depth intervals with field indications of contamination. Where samples contain COPC concentrations above MTCA CULs, deeper soil samples will be analyzed to further support extent of contamination delineation. Samples will be prepared, handled, and documented as described in Section 4.4, and the analysis schema will follow the SSAP (see Appendix D).

All borings will be decommissioned with hydrated bentonite chips or with bentonite grout in accordance with the Washington Administrative Code (WAC) for Minimum Standards for Construction and Maintenance of Wells (WAC 173-160). Given the existing conditions and anticipated future redevelopment, no asphalt or concrete patching is proposed.

4.3.2.1 Reconnaissance Groundwater Sampling

If groundwater is encountered during boring advancement, MFA will direct the driller to install pre-packed temporary wells at up to five of the proposed locations. Before collecting reconnaissance

groundwater samples, MFA field staff will measure the water level in the temporary well (see SOP 13 in Appendix A) and purge a minimum of one well volume to reduce turbidity. If the well goes dry during purging, the well will be allowed to recharge prior to sample collection. During purging, flow rates, water levels, and water quality parameters will be recorded on the groundwater field sampling data sheet (see Appendix E).

Reconnaissance groundwater samples will be collected consistently with industry-standard techniques (see SOPs 07[2] and 09 in Appendix A). Samples will be collected using a peristaltic pump and dedicated tubing directly to individually labeled, clean, laboratory-supplied containers.

4.3.3 Soil Sampling from Test Pits (Mill Area)

Owing to known access limitations, particularly in the central and southern portions of the Mill Area, up to 20 test pits will be advanced to assess potential COPC soil impacts. An excavator will clear any overlying construction rubble, debris, and/or vegetation before advancing each test pit for visual material characterization (see SOP 06 in Appendix A). The target exploration depth for each test pit location is the water table, though the maximum depth of test-pitting may be limited by soil stability (i.e., sidewall sloughing) or refusal. Changes in the lithology of the soil will be noted, and observations of material from each test pit will be prepared in the field under the direct supervision of a geologist licensed by the State of Washington (see SOP 02 in Appendix A).

Like the borings/temporary wells described above, a "top down" sampling approach is proposed for each test pit location. A soil sample will be collected from each excavator bucket lift, taking care to collect each sample from material that has not contacted the bucket walls. Where field indications of contamination exist, additional soil samples will be collected from the impacted material (as practicable). Soil samples will be analyzed on a tiered approach at the laboratory, starting with the shallowest bucket lift from each location and all samples collected from locations and depth intervals with field indications of contamination. Where samples contain COPC concentrations above MTCA CULs, deeper soil samples will be analyzed to further support extent of contamination delineation. Samples will be prepared, handled, and documented as described in Section 4.4, and the analysis schema will follow the SSAP (see Appendix D). Each test pit will be backfilled with the excavated material and compacted with the excavator bucket.

4.3.4 Groundwater Sampling at Existing Monitoring Wells (Mill Area)

Three monitoring wells (MW02 through MW04)[3] installed by CH2M Hill in 2006 are present on the Mill Area (see Figure 2-3). All three wells are positioned north and northwest of the Shipping Warehouse within approximately 100 feet of one another. MFA has not confirmed the accessibility or current conditions of the wells. However, if it is possible to sample the wells, MFA will redevelop one of these wells to remove accumulated sediment and improve connection with the aquifer prior to sampling.

MFA will collect up to two groundwater samples (including one field duplicate sample) from one of the Mill Area monitoring wells (i.e., MW02, MW03, or MW04) using low-flow sampling procedures.

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[2] MFA SOP 07 describes direct push drilling methods, which are not proposed in this supplemental remedial investigation. However, SOP 07 also provides useful general guidance and procedures, which are applicable across drilling methods.
[3] Two off-Property monitoring wells (MW01 and MW05) was installed by CH2M Hill in 2007. No sampling is proposed at these two wells.

Monitoring well development and groundwater sampling will be conducted using the following methods and protocol.

4.3.4.1 Water Level Measurements

Before well development or sampling, the well caps of each monitoring well will be removed, and the static water level will be measured from the north side of the well casing after the well has been allowed to equilibrate with the atmosphere for a minimum of 15 minutes (see SOP 13 in Appendix A). The depth to water level within the well will be measured and recorded on the corresponding field sampling data sheet (FSDS) (see Appendix E).

4.3.4.2 Monitoring Well Development

If accessible, the existing Mill Area monitoring wells will be redeveloped by surging, bailing, or pumping to remove sediment that may have accumulated since previous sampling events and to improve the hydraulic connection with the water-bearing zone, consistent with U.S. Environmental Protection Agency (EPA) standard operating procedures (EPA 2001) (see SOP 12 in Appendix A). Water quality field parameters such as specific conductance, pH, temperature, and turbidity will be measured during well development. The wells will be developed until final field parameters are within the following criteria, to the extent practical:

- Turbidity measurements are 10 nephelometric turbidity units (NTUs) or less, or until there is no noticeable decrease
- Specific conductance is within 3 percent of the previous reading
- pH is within 0.1 standard unit of the previous reading
- Temperature is within 0.1 degree Celsius of the previous reading

Field parameters, water level, and volume of water extracted from the well will be recorded on a field form (see Appendix E).

4.3.4.3 Monitoring Well Sampling

Monitoring well sampling methods are designed to ensure that samples are representative of in situ groundwater (see SOP 09 in Appendix A). Monitoring wells will be sampled no sooner than 24 hours following well development. Before sampling, each well will be purged to minimize solids and to ensure that a representative sample is collected. Generally, the well will be purged using a peristaltic pump with new polyethylene tubing (EPA 2002).

Tubing is lowered to the middle of well screen or water column, whichever is deeper, avoiding disturbing the sediments at the bottom of the well. Low-flow purging will be conducted at a rate between 0.1 and 0.5 liters per minute. The water level will be monitored before and during purging. Once the purge rate is stabilized, drawdown of more than 0.3 foot should be avoided. Field parameters will be measured using the following procedures:

Prior to sampling, groundwater parameters and water level will be measured and recorded periodically (every three to five minutes, depending on flow rate and flow-through cell size) during purging to evaluate conditions. The following water quality parameters will be measured in situ with a multiparameter, handheld meter: temperature, pH, specific conductance, dissolved oxygen, oxygen-reduction potential, and turbidity. Groundwater samples will be collected directly into laboratory-

supplied bottles after at least three consecutive readings indicate that the system is stable and are within the following criteria (EPA 2002):

- Turbidity measurements are below 5 NTUs or 10 percent for values greater than 5 NTUs
- Specific conductance is within 3 percent
- pH is within 0.1 standard units
- Temperature is within 0.1 degrees Celsius
- Dissolved oxygen is within 0.3 milligrams per liter
- Oxygen-reduction potential is within 10 millivolts

4.4 Sample Handling and Custody

Field sampling personnel will be responsible for the collection, labeling, description, documentation, handling, packaging, storage, and shipping of investigative samples obtained in the field. Proper sample handling and custody procedures are required to retain integrity from sample collection in the field through laboratory analysis and data reporting. Sample container, preservation, and holding time requirements for the analytes of interest are listed in Table 4-1.

4.4.1 General Sampling

General sampling procedures are as follows. Samples to be submitted for laboratory analysis will be collected in laboratory-supplied containers. Sample containers will be labeled, packed in iced shipping containers with chain-of-custody (COC) documentation (see Section 4.4.3), and hand-delivered or shipped to the laboratory. Sampling information will be recorded in a field notebook or FSDS (see Appendix E), and on the COC form.

4.4.1.1 Positioning

A differential global positioning system will be used to locate the sampling position for each sample location. Sample locations will be located to an accuracy of ±1 meter. Horizontal coordinates will be referenced to the Washington South State Plane HARN (NAD83).

4.4.1.2 Soil Sampling

Soil field screening will include measuring soil headspace vapor using a PID, conducting a static sheen test, and documenting visual and olfactory observations in general accordance with SOP 03 (see Appendix A). Results will be documented in a field notebook, FSDS, or corresponding boring log form.

Soil samples will be prepared and handled as follows.

- Soil samples will be collected in general accordance with SOP 04 (see Appendix A)
- Soil to be analyzed for VOCs will be transferred directly from freshly exposed soil into laboratory-supplied containers using the appropriate EPA 5035A sampling procedures, preservatives, and containers in general accordance with SOP 05 (see Appendix A)
- Soil to be analyzed for nonvolatile constituents will be transferred directly from the sampling device into the appropriate laboratory-supplied container, using either new disposable sampling

equipment, or a decontaminated stainless-steel spoon, trowel, or knife in general accordance with SOP 04 (see Appendix A)

- All soil samples will be containerized and submitted for laboratory analyses in accordance with the methods and protocols described in Table 4-1
- Particles larger than 0.25-inch may be removed before the sample is placed in a laboratory-supplied container

4.4.1.3 Groundwater Sampling

Groundwater samples will be prepared and handled consistent with SOP 09 in Appendix A and as follows.

- One set of bottles per well will be collected for laboratory analysis, except for field duplicate locations where two sets of bottles will be collected
- Groundwater samples submitted for analysis of dissolved constituents will be field-filtered using a new 0.45-micron in-line filter
  - The first 100 to 300 milliliters of a groundwater sample (depending on sample turbidity) taken through the in-line filter will not be collected for a sample to ensure that the filter media have equilibrated to the sample (the manufacturer's recommendations also should be considered)

4.4.2 Sample Identification

Field personnel will be responsible for labeling samples and establishing identification. All data will be keyed to the sample's unique sample identification code, which will be used on sample containers, associated field forms, and in the project database.

Field personnel will clearly label each sample container using permanent ink on a waterproof label as soon as possible following sample collection. At a minimum, the following information will be written on the sample label:

- Unique sample identification (ID) code
- Time and date of collection
- Project number
- Preservative, if appropriate

4.4.2.1 Sample Nomenclature

To maintain sample identification consistency in the project database, the unique sample ID will be assigned according to the following conventions. For all location types, field duplicate samples will include "DUP" at the end of the ID.

- Borings, test pits, and surface soil sample locations will have the following nomenclature: task—location code—unique location number—matrix—depth. IDs will include:
  - Task is "SRI" for Supplemental Remedial Investigation
  - Location codes:
    - "B" for temporary boring

    - "TP" for test pit
    - "SS" for surface soil sample locations for TSP metals
  - Matrices:
    - "S" for soil
    - "GW" for groundwater
  - Depth: the sample collection point (in feet bgs)
  - Examples:
    - A reconnaissance groundwater sample collected from temporary boring B-05 at 15 feet bgs will have a sample ID of SRI-B-05-GW-15.0
    - A soil sample collected from test pit TP-02 at 1-foot bgs will have a sample ID of SRI-TP-02-S-1.0
    - A soil sample collected from discrete surface soil location SS-72 at 6 inches bgs will have a sample ID of SRI-SS-72-S-0.5
- Dioxin/furan ISM locations will have the following nomenclature: **task— decision unit code**
  - ISM triplicate samples will include "DUP" or "TRIP" at the end of the ID
  - For example, the ISM triplicate sample at DU2 will have a sample ID of SRI-DU2-TRIP
- Groundwater samples collected from existing monitoring wells will be assigned identification codes according to the following convention: **monitoring well code—matrix—sample date** (in MMDDYY format)
  - For example, a groundwater sample collected from MW04 on March 1, 2026, will have a sample identification code of MW04-GW-030126

4.4.3 Sample Custody

Sample custody will be tracked from point of origin through analysis and disposal using a COC form filled out with the appropriate sample and analytical information after samples are collected.

Each COC form will include:

- Project name
- Project number
- MFA project manager
- Sampler name(s)
- Sample number, date and time collected, media, and number of bottles submitted
- Requested analyses for each sample
- Type of data package required
- Turnaround requirements
- Signature, printed name, and organization name of persons having custody of samples, and date and time of transfer

- Additional instructions or considerations affecting analysis (nonaqueous layers, archiving, etc.)

People in possession of the samples will be required to sign and date the COC form whenever samples are transferred between individuals or organizations (except for freight carriers). The COC will be included in the shipping containers. The laboratory will implement its in-house custody procedures, which begin when sample custody is transferred to laboratory personnel.

If samples are shipped via air or ground transportation (by a third party), the following custody procedures will be followed. The COC will be signed and custody will be relinquished to the carrier. The signed COC(s) will be packed in shipping containers with the samples, and a custody seal will be placed on the container. The shipping documentation will be used by the carrier to document custody of the package while it is in transit to the laboratory.

At the analytical laboratory, a designated sample custodian will accept custody of the samples and verify the COC form matches the samples received. The shipping container or set of containers is given a laboratory identification number, and each sample is assigned a unique sequential identification number.

4.4.4 Sample Documentation and Records

4.4.4.1 Field Notebooks and Forms

Field personnel will be responsible for maintaining a daily record of significant events, observations, and measurements during field investigations. Field records may be recorded in a bound notebook and/or on field sampling data sheets. A separate entry will be made for each sample collected. Field notebooks and forms will be included in the project files at the end of field activities to provide a record of sampling.

4.4.4.2 Equipment Calibration Log

Field personnel will be responsible for maintaining an equipment calibration log to record the calibration measurements and frequencies of equipment calibration. This log may be incorporated into the field notebook or on field sampling data sheets.

4.5 Analytical Methods

All analytical methods used will comply with relevant requirements of applicable state or federal programs or with other EPA-approved methods. Tables 4-2 and 4-3 identify the specific analytical methods, performance criteria, and method reporting limits for soil and groundwater samples, respectively. The requested method reporting limits/method detection limits will be consistent with MTCA CULs (where practicable).

In accordance with the QA/QC requirements set forth in this work plan, an accredited laboratory may perform the following analyses on soil and groundwater samples:

- RCRA 8 metals (total and dissolved) by EPA Method 6020B
- Diesel- and oil-range TPH by Northwest Total Petroleum Hydrocarbons-Dx
- PAHs by EPA Method 8270E selected ion monitoring
- Dioxins and furans by EPA Method 1613B

- Full suite VOCs by EPA Method 8260D

Samples submitted for chemical ISM analysis will be processed consistent with the laboratory SOP provided in the Appendix F.

4.6 Equipment Decontamination

4.6.1 Drilling Equipment

The working area of the drill rig and downhole drilling equipment will be steam-cleaned or pressure-washed prior to use at each boring or monitoring well location. Decontamination fluids will be transferred to 55-gallon drums approved by the Washington State Department of Transportation and managed according to the procedures outlined in Section 4.7.

4.6.2 Sampling Equipment

Nondisposable sampling equipment and reusable materials that contact sample media will be decontaminated between uses. Decontamination procedures are described in SOP 01 (see Appendix A) and will generally involve the following:

- Tap water or distilled water rinse (may consist of an equivalent high-pressure or hot-water rinse) with visible soil to be removed by scrubbing
- Nonphosphate detergent wash, consisting of a dilute mixture of Liqui-Nox® (or equivalent) and tap water or distilled water
- A third and final distilled water rinse

Decontamination fluids will be captured and transferred to drums for management according to the procedures outlined in Section 4.7.

4.7 Management of Investigation-Derived Waste

Investigation-derived waste may include unsaturated and saturated soil cuttings, purged groundwater, and decontamination fluids. The investigation-derived waste will be segregated (i.e., soil and water will be managed separately) and containerized in Washington State Department of Transportation-approved 55-gallon drums. Drums (tops and sides) will be labeled with their contents, the approximate volume of material, the date of initial collection, and the origin of the material. At the end of each workday, the drums will be sealed and transferred to a designated secured area on the Property, where they will be stored pending waste profiling, transport, and off-Property disposal at a permitted facility.

5 Quality Assurance/Quality Control

5.1.1 Field Quality Control/Quality Assurance Samples

The field QC samples will be used to assess the accuracy and precision of the field sample collection and handling activities. Table 5-1 summarizes the field QA/QC sampling requirements and frequency.

5.1.1.1 Field Duplicates

Field duplicates are collected to measure sampling and laboratory precision. One field duplicate sample will be collected per 20 samples per matrix; however, a minimum of one field duplicate will be collected if fewer than 20 samples are collected. Field duplicate results will be evaluated during data validation.

5.1.1.2 ISM Field Triplicates

ISM field triplicates are collected to measure sampling and laboratory precision and to provide a conservative measure of ISM variability. One ISM DU will be collected in triplicate. ISM triplicate results will be evaluated during data validation.

5.1.1.3 Equipment Rinsate Blanks

Equipment blanks will be used to assess whether decontamination procedures are sufficient. At least one equipment rinsate blank will be collected for each sampling event or for every 20 samples collected when samples are collected using nondedicated equipment. If more than 20 samples are collected with the same equipment, or if high concentrations of contaminants are encountered, additional equipment rinsate blanks will be collected, as warranted. Collection of equipment rinsate blanks consists of passing deionized/distilled water through or over sampling equipment.

5.1.1.4 Trip Blanks

A trip blank monitors the potential for sample VOC contamination during sample collection and transport. A trip blank consists of reagent-grade water in a new sample container prepared by the laboratory and provided with the sample containers. The trip blank will accompany the samples throughout collection, shipment, and storage. At least one trip blank should be included with each cooler containing samples for VOC analyses.

5.1.1.5 Temperature Blanks

Temperature blanks are prepared by the laboratory using analyte-free water. The laboratory uses temperature blanks to obtain the temperature of each cooler used to transport samples from the field to the laboratory. Each cooler containing samples requiring temperature preservation will contain a temperature blank. The laboratory will verify temperature blank measurement(s) are within the acceptable range specific to the analytical method.

5.1.2 Laboratory Quality Control Samples

The laboratory QC samples will be used to assess the accuracy and precision of the laboratory analysis. Each category of laboratory QA/QC will be performed by the laboratory at the required frequency, as applicable, based on analytical method guidelines and sample matrix. Table 5-1 summarizes the laboratory QA/QC sampling requirements and frequency.

5.1.2.1 Calibration Verification

Instruments will initially be calibrated at the start of the project or sample run, as required, and when any ongoing calibration does not meet control criteria. The number of points used in the initial calibration is defined in the analytical method. Calibration will be continued as specified in the analytical method to track instrument performance. If a continuing calibration does not meet control limits, analysis of project samples will be suspended until the source of the control failure is either eliminated or reduced to within control specifications. Any project samples analyzed while the instrument is outside control limits will be reanalyzed.

5.1.2.2 Method Blanks

Method blanks are prepared using analyte-free (reagent) water and are processed with the same methodology (e.g., extraction, digestion) as the associated investigative samples. Method blanks are used to document contamination resulting from the laboratory's analytical process. A method blank will be prepared and analyzed per 20 samples (or fewer) for every analytical batch.

The method blank results are used to verify reagents and preparation do not impart unacceptable bias to the investigative sample results. The presence of analytes in the method blank sample will be evaluated against method-specific thresholds. If analytes are present in the method blank above the method-specific threshold, corrective action will be taken to eliminate the source of contamination before proceeding with analysis. Investigative samples from an analytical batch associated with method blank detections will be evaluated and qualified as appropriate by the data validator.

5.1.2.3 Laboratory Control Samples

Laboratory control samples (LCSs) are prepared by spiking laboratory-certified, reagent-grade water with the analytes of interest or a certified reference material that has been prepared and analyzed. The result for percent recovery of the LCS is a data quality indicator of the accuracy of the analytical method and laboratory performance.

An LCS will be prepared and analyzed per 20 samples (or fewer) for every analytical batch. Investigative samples from an analytical batch associated with LCS results outside laboratory acceptance limits will be evaluated and qualified as appropriate by the data validator.

5.1.2.4 Laboratory Duplicate Samples

Laboratory duplicate samples are prepared by the laboratory by splitting an investigative sample into two separate aliquots and performing separate sample preparation and analysis on each aliquot. The results for relative percent difference of the primary investigative sample and the respective laboratory duplicate sample are used to measure precision in the analytical method and laboratory performance. For nonaqueous matrices, sample heterogeneity may affect the measured precision for the laboratory duplicate sample.

When required by the analytical method, a laboratory duplicate will be prepared and analyzed per 20 samples (or fewer) for every analytical batch. Investigative samples associated with laboratory duplicate results outside laboratory acceptance limits will be evaluated and qualified as appropriate by the data validator.

5.1.2.5 Matrix Spike Samples

Matrix spike (MS) and matrix spike duplicate (MSD) samples are prepared by spiking investigative samples with known amounts of analytes before extraction and preparation and analysis. The recoveries for the MS/MSD samples will be used to assess matrix effects and the accuracy and precision in the analytical method by measuring how well the analytical method recovers the target compounds in the investigative matrices.

When required by the analytical method, an MS/MSD set will be prepared and analyzed per 20 samples (or fewer) for every analytical batch. Project samples may be designated for MS/MSD analysis on the COC form. Investigative samples associated with MS/MSD results outside laboratory acceptance limits will be evaluated and qualified as appropriate by the data validator.

5.1.2.6 Surrogate Spikes and Labeled Analogs

Surrogate spiking consists of adding reference compounds to samples before preparation of the samples for organic analysis. Surrogate compound spiking is used to assess method accuracy on a sample-specific basis. Surrogate compounds will be added to samples in accordance with the analytical method requirements, i.e., carbon-13 labeled analog standards for dioxins and furans. Surrogate spike percent recovery acceptance limits are determined by the analytical method. The surrogate spike percent recovery results will be reported by the laboratory and samples with surrogate results outside laboratory acceptance limits will be evaluated and qualified as appropriate by the data validator.

5.2 Data Management and Data Validation

5.2.1 Data Management

5.2.1.1 Field Data

Field data may be recorded in a bound notebook or on field sampling data sheets. Hard copies of all field data will be scanned and saved electronically. Field data collected on paper or electronically may be imported into the EQuIS database. If field data are entered by hand into an electronic format before they are imported into EQuIS, the data will be entered and reviewed for data entry errors by separate qualified individuals (i.e., individuals not involved in the original manual entry).

5.2.1.2 Laboratory Data

Laboratory analytical data will be provided to MFA as electronic data deliverables, which will be imported directly into the EQuIS database used for data storage. The laboratory will provide tier II laboratory reports. Validated laboratory results will be exported and provided as part of the final report.

5.2.2 Data Validation

Validation of the analytical data produced under this work plan will be performed by an MFA chemist, independent of the analytical laboratory generating the data reports. The validator will evaluate the laboratory data for precision, completeness, accuracy, and compliance with the analytical method. The validator will review data according to applicable sections of EPA guidelines for data review (EPA 2020a, 2020b) and appropriate laboratory- and method-specific guidelines (EPA 1986).

Data qualifiers, as defined by EPA, are used to classify sample data according to their conformance to QC requirements. Common qualifiers are listed below:

- J—Estimated, qualitatively correct but quantitatively suspect
- R—Rejected, data not suitable for any purpose. The analyte may or may not be present in the sample
- U—Not detected at a specified reporting or detection limit

The following information will be reviewed during data evaluation, as applicable:

- Sampling locations and sample numbers
- Sampling dates
- Requested analyses
- COC documentation
- Sample preservation
- Holding times
- Method blanks
- LCSs
- Laboratory duplicates
- MS/MSD results
- Surrogate recoveries
- Field QC samples
- Method reporting limits
- Additional comments or difficulties reported by the laboratory
- Overall assessment

Poor surrogate recovery, blank contamination, or calibration problems, among other reasons, may require qualification of the sample data. The reasons for sample qualification should be stated in the data validation memorandum. QC criteria not defined in the guidelines for evaluating analytical data are adopted, where appropriate, from the analytical method. The results of the data evaluation review will be summarized for each data package in a data validation memorandum. Data qualifiers will be assigned to sample results based on EPA guidelines, as applicable.

5.2.3 Data Reduction

MFA uses a database (i.e., EQuIS) to manage laboratory data. The laboratory will provide analytical results in electronic, EQuIS-compatible format. Following data evaluation, data qualifiers will be entered into the database. Validated laboratory data will also be uploaded to the Washington State Department of Ecology's Environmental Information Management database within 30 days of validation.

Data may be reduced to summarize particular data sets and to aid interpretation of the results. Statistical analyses may also be applied to results. Data reduction QC checks will be performed on hand-entered data, calculations, and data graphically displayed. Data may be further reduced and managed using one or more of the following computer software applications:

- Microsoft® Excel® (spreadsheet)
- EQuIS (database)
- Microsoft Access® (database)
- AutoCad and/or Arc GIS (graphics)
- EPA ProUCL (statistical software)

6 Reporting

After data collection, validation, evaluation, and reduction have been completed, the data will be incorporated into reports and uploaded to EIM. Copies of the reports will be submitted to Ecology. Dioxin/furan results will be summed to calculate toxicity equivalent (TEQ) concentrations using World Health Organization TEQ factors. TEQs will be calculated with non-detects as zero and as one-half the detection limit. The dioxin/furan congener concentrations and TEQs will be compared to MTCA CULs and natural background concentrations (Ecology 2010b). Consistent with the TSP guidance (Ecology 2019), arsenic and lead concentrations in Mill Area surface soils will be compared to the MTCA Method A CULs of 20 mg/kg and 250 mg/kg, respectively. All other COPC concentrations will be compared to MTCA Method A CULs for unrestricted land use (or MTCA Method B cancer and noncancer CULs when Method A is unavailable).

The data is intended to further delineate nature and extent of contamination and inform next steps, if any, in consultation with Ecology.

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Limitations

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

Figures

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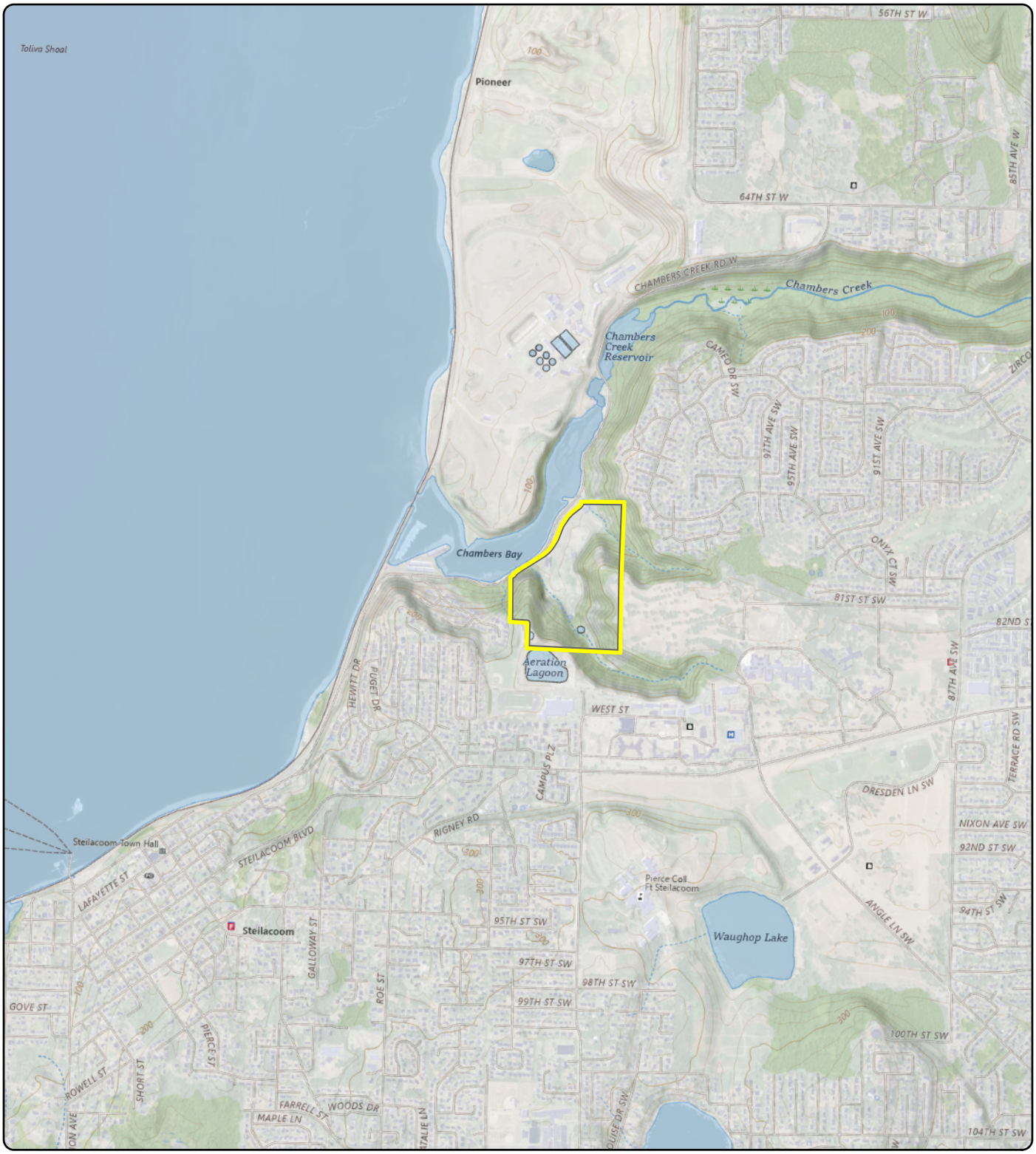

Notes
U.S. Geological Survey 7.5-minute topographic quadrangle: Steilacoom.
Township 20 north, range 2 east, section 43.

Data Source
Property boundary obtained from Pierce County.

Legend

Property Boundary

Figure 1-1
Property Location

Supplemental Remedial Investigation Work Plan
Abitibi Consolidated Sales Corp
Steilacoom, WA

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Path: X:\1882_01\09\Pro\M1882_01_009_002_00B.aprx\Fig 1-1 Property Location
Print Date: 1/16/2026
Reviewed By: jhansen
Produced By: sturner
Project: M1882.01.009

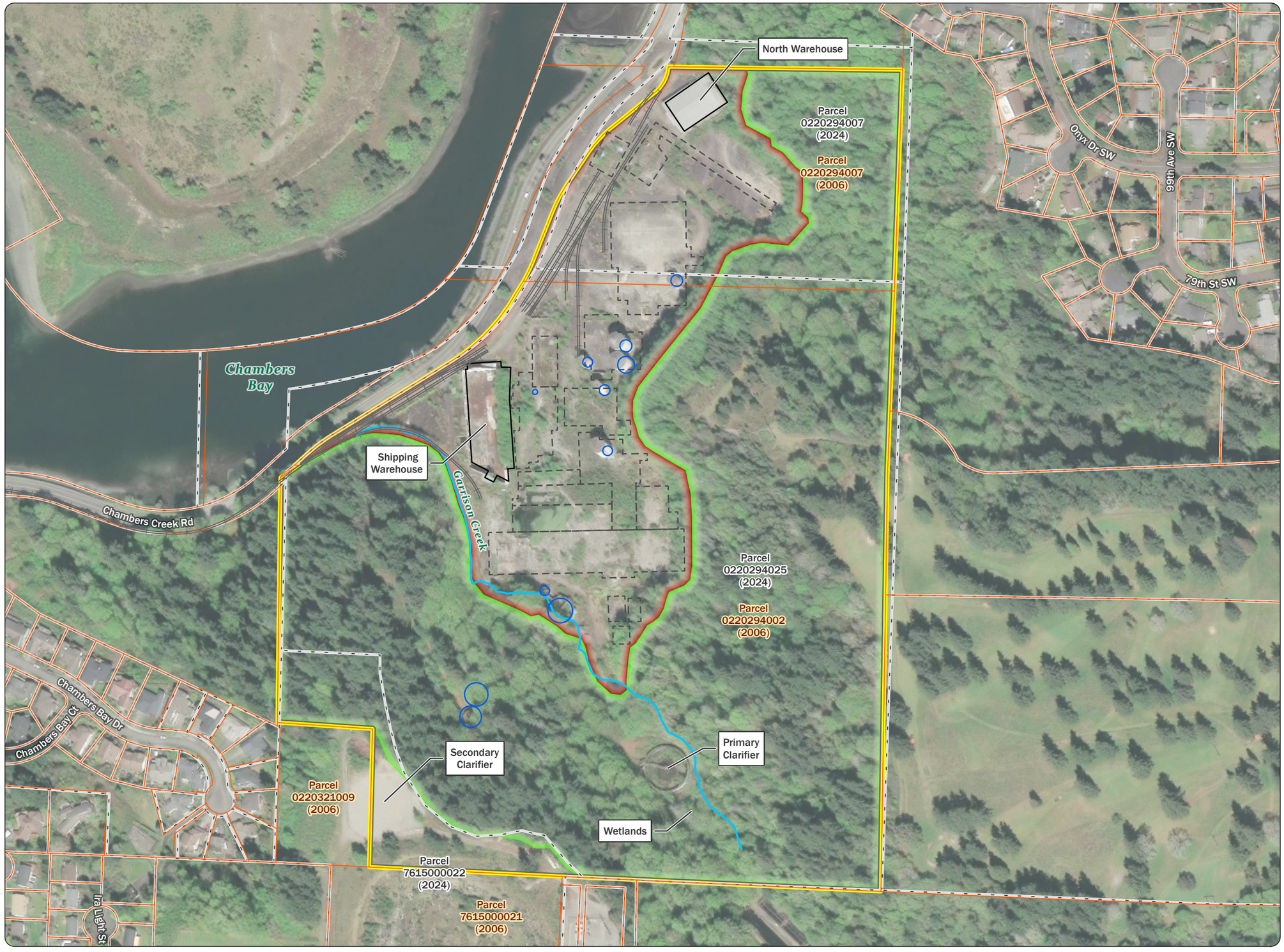

Figure 2-1
Property Features

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Abitibi Consolidated Sales Corp
Steilacoom, WA

Legend

- Mill Area
- Forested Area
- Aboveground Storage Tank
- Former Structure
- Remaining Structure
- Stream (approximate)
- Railroad Track
- Parcel (2006)
- Parcel (2024)
- Property Boundary (2006)

Notes

Parcels from 2006 are shown on this figure, consistent with the parcels reflected in the environmental covenant recorded for the Site in 2010 and reflected in Ecology's periodic review for the site in 2017.

On March 17, 2011, parcels 0220294002, 0220321009, and 7615000021 were merged and split to create two new parcels: 0220294025 and 7615000022.

Unnamed Creek is diverted through a 24-inch pipe and manholes beneath the Property before discharging to Chambers Bay.

Ecology = Washington State Department of Ecology.

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Data Sources

Aerial photograph obtained from Esri; parcel data obtained from Pierce County.

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Figure 2-2
Mill Area Development History

Supplemental Remedial Investigation Work Plan
Abitibi Consolidated Sales Corp
Steilacoom, WA

Legend

Structures (Approximate Construction Year)

- At least 1929
- At least 1961
- 1965-1970
- 1974-1985
- 1985-1989
- At least 1990
- 1990-1998

- Stream (approximate)
- Mill Area
- Forested Area
- Parcel (2006)
- Property Boundary (2006)

Notes

Parcels from 2006 are shown on this figure, consistent with the parcels reflected in the environmental covenant recorded for the Site in 2010 and reflected in Ecology's periodic review for the site in 2017.
Ecology = Washington State Department of Ecology.
TMP = thermo-mechanical pulping.
TPU = Tacoma Public Utilities.

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Data Sources

Aerial photograph (2002) obtained from Google Earth; parcel data obtained from Pierce County Assessor; structures and boundary expansion estimated based on aerial photographs (see Appendix A of plan).

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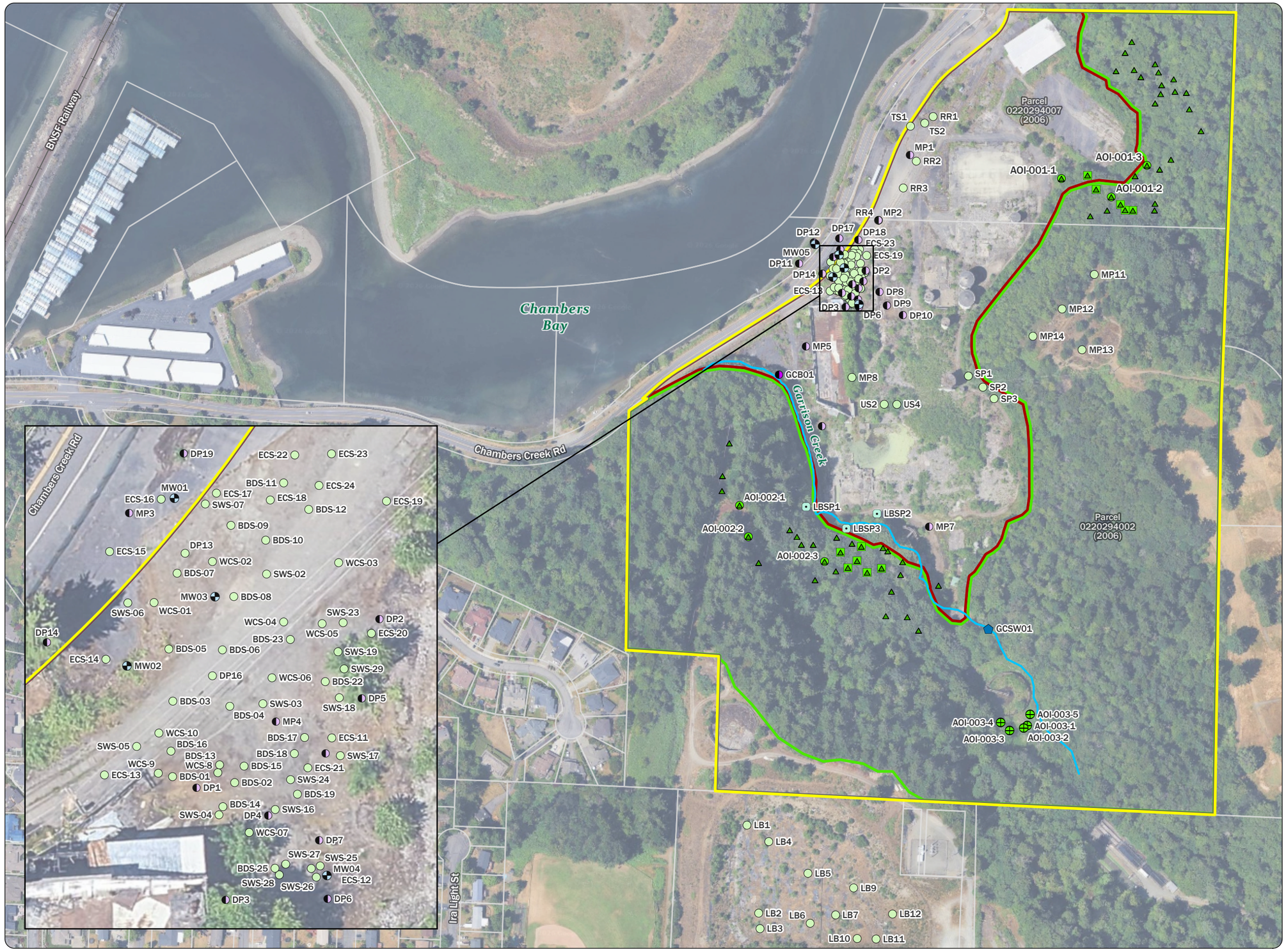

Figure 2-3
Previous Sampling Locations (All)

Supplemental Remedial Investigation Work Plan
Abitibi Consolidated Sales Corp
Steilacoom, WA

Legend

- Soil (2005-2006)
- Soil/Groundwater (Temporary Well) (2022)
- Seep Water (2005)
- Monitoring Well (2006)
- TSP Discrete Soil (2022)
- Dioxin/Furan ISM Increment (2022)
- Soil/Groundwater (Temporary Well) (2005-2006)
- TSP Forest Duff Increment (2022)
- Sediment (2022)
- Surface Water (2022)
- Stream (approximate)
- Mill Area
- Forested Area
- Property Boundary (2006)
- Parcel (2006)

Notes

2022 locations were recorded in the field using a differential global positioning device by Maul Foster & Alongi, Inc.
2005/2006 locations are estimated from CH2MHILL 2007 RIFS.
Parcels from 2006 are shown on this figure, consistent with the parcels reflected in the environmental covenant recorded for the Site in 2010 and reflected in Ecology's periodic review for the site in 2017.
ISM = incremental sampling methodology.
TSP = Tacoma Smelter Plume.

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Data Sources

Aerial photograph obtained from Google; parcel data obtained from Pierce County Assessor.

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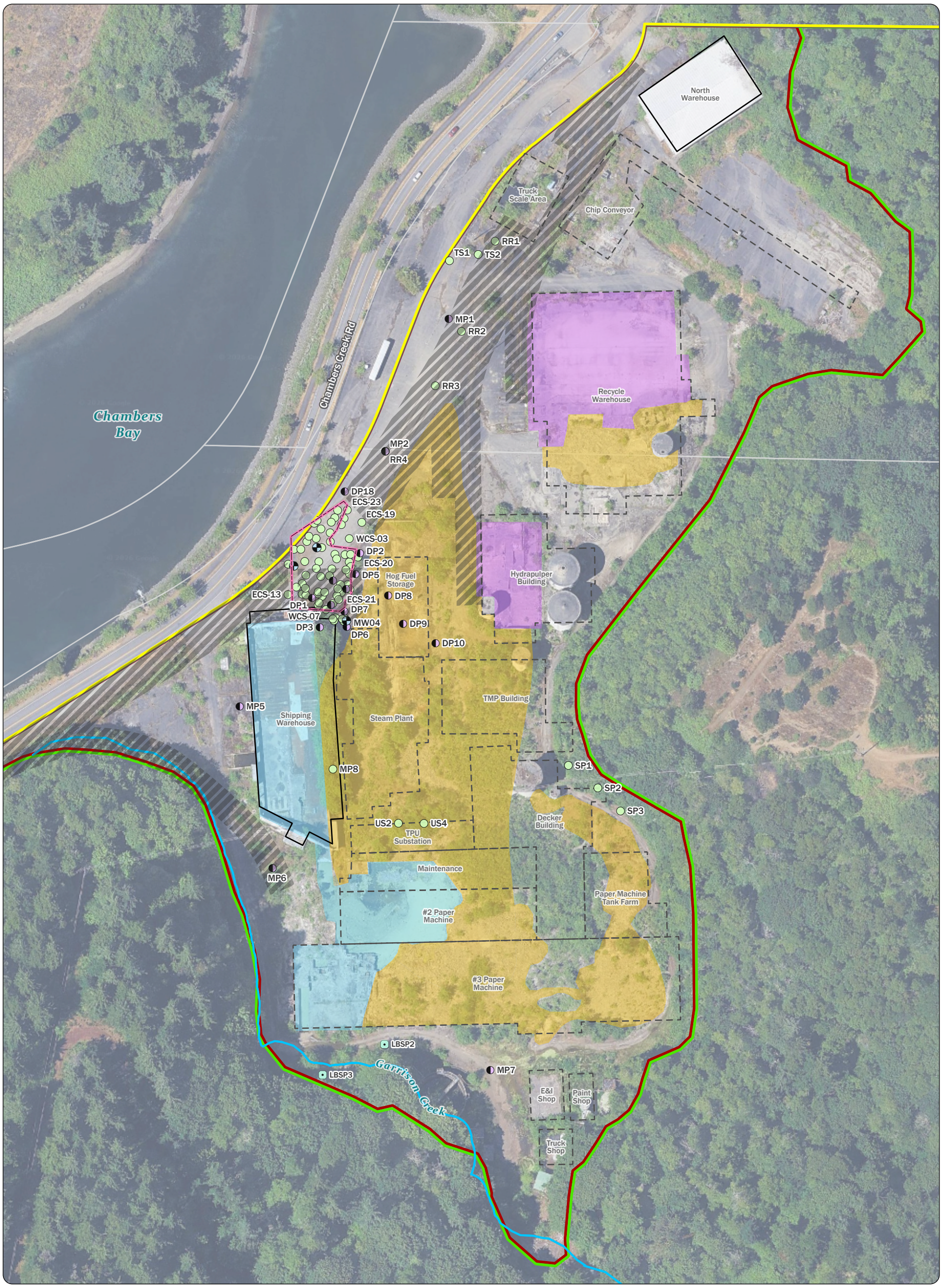
Path: X:\1882_01\09\Pro\M1882_01_009_002_008.aprx\Fig 2-3 Previous Sampling Locations (All)
Print Date: 1/22/2026
Reviewed By: jhansen
Produced By: sturner
Project: M1882.01.009



Data Sources
Aerial photograph obtained from Google; parcels obtained from environmental covenant recorded for the Site in 2010 and reflected in Washington State Department of Ecology's periodic review for the site in 2017; access limitations data compiled from PanGEO 2022 Site and Exploration Plan figure and Maul Foster & Alongi 2025 site walk.

Soil (2005-2006)
Soil/Groundwater (Temporary Well) (2005-2006)
Monitoring Well (2006)
Seep Water (2005)
Former Structure
Remaining Structure
Mill Area
Forested Area

Legend

Concrete Foundation
Construction Rubble
Standing Water
Known/Suspected Contamination
2006 Interim Removal Action Excavation Area
Property Boundary (2006)
Parcel (2006)
Stream (approximate)

Figure 2-4
Previous Sampling Locations (Mill Area Only)

Supplemental Remedial Investigation Work Plan
Abitibi Consolidated Sales Corp
Steilacoom, WA

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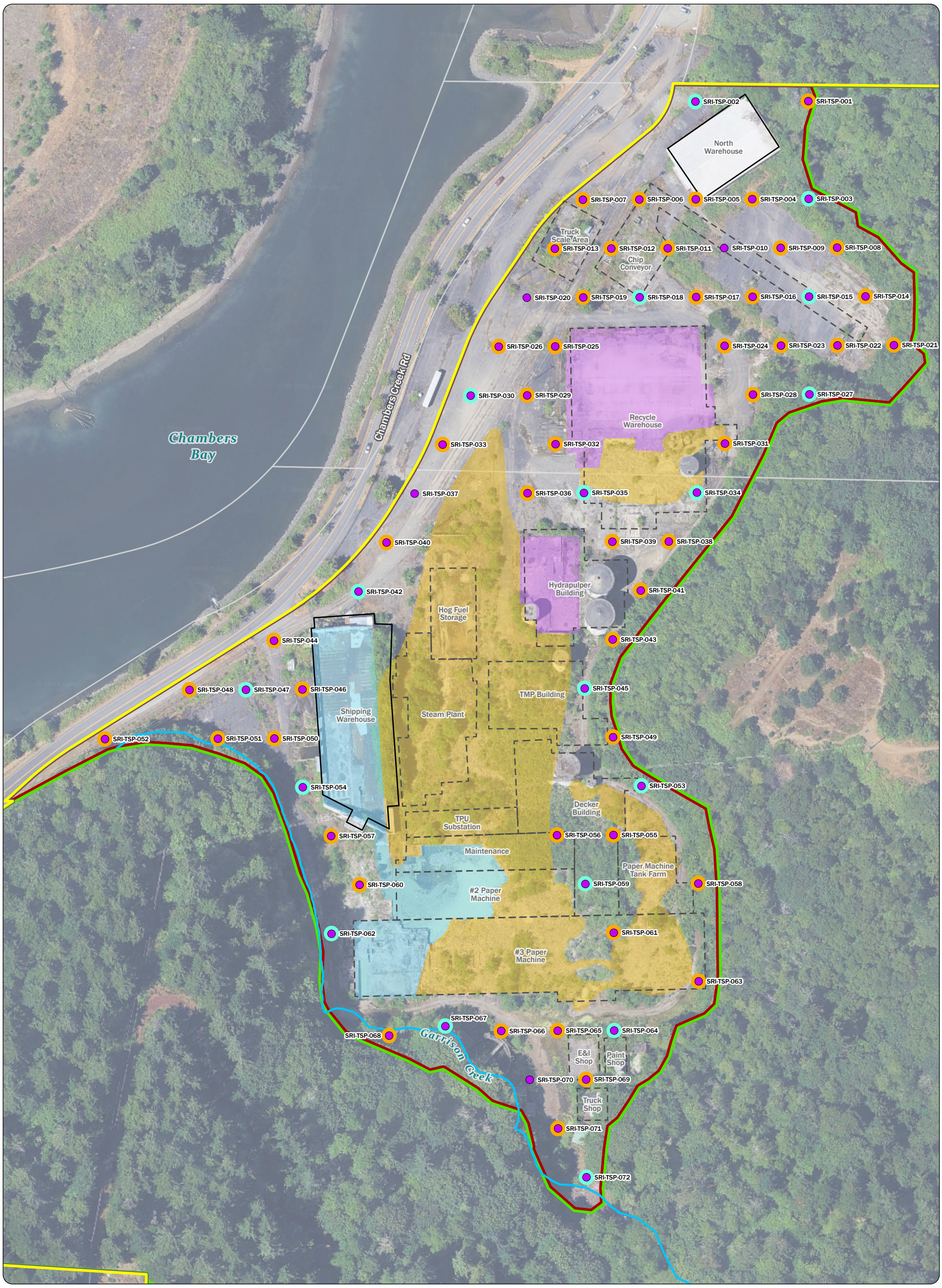
Project: M1882.01.009



Notes
Dioxin/furan = polychlorinated dibenzo-p-dioxin and dibenzofuran.
ISM = incremental sampling methodology.
TSP = Tacoma Smelter Plume.

Legend

- TSP Discrete Sample (0 to 6 inches)
- Dioxin/Furan ISM Increment (0 to 2 inches)
- TSP Discrete Sample (6 to 12 inches)
- Former Structure
- Remaining Structure
- Concrete Foundation
- Construction Rubble
- Standing Water
- Mill Area
- Forested Area
- Property Boundary (2006)
- Parcel (2006)
- Stream (approximate)

Figure 3-1a
Proposed Surface Soil Sampling Locations (Mill Area)

Supplemental Remedial Investigation Work Plan
Abitibi Consolidated Sales Corp
Steilacoom, WA

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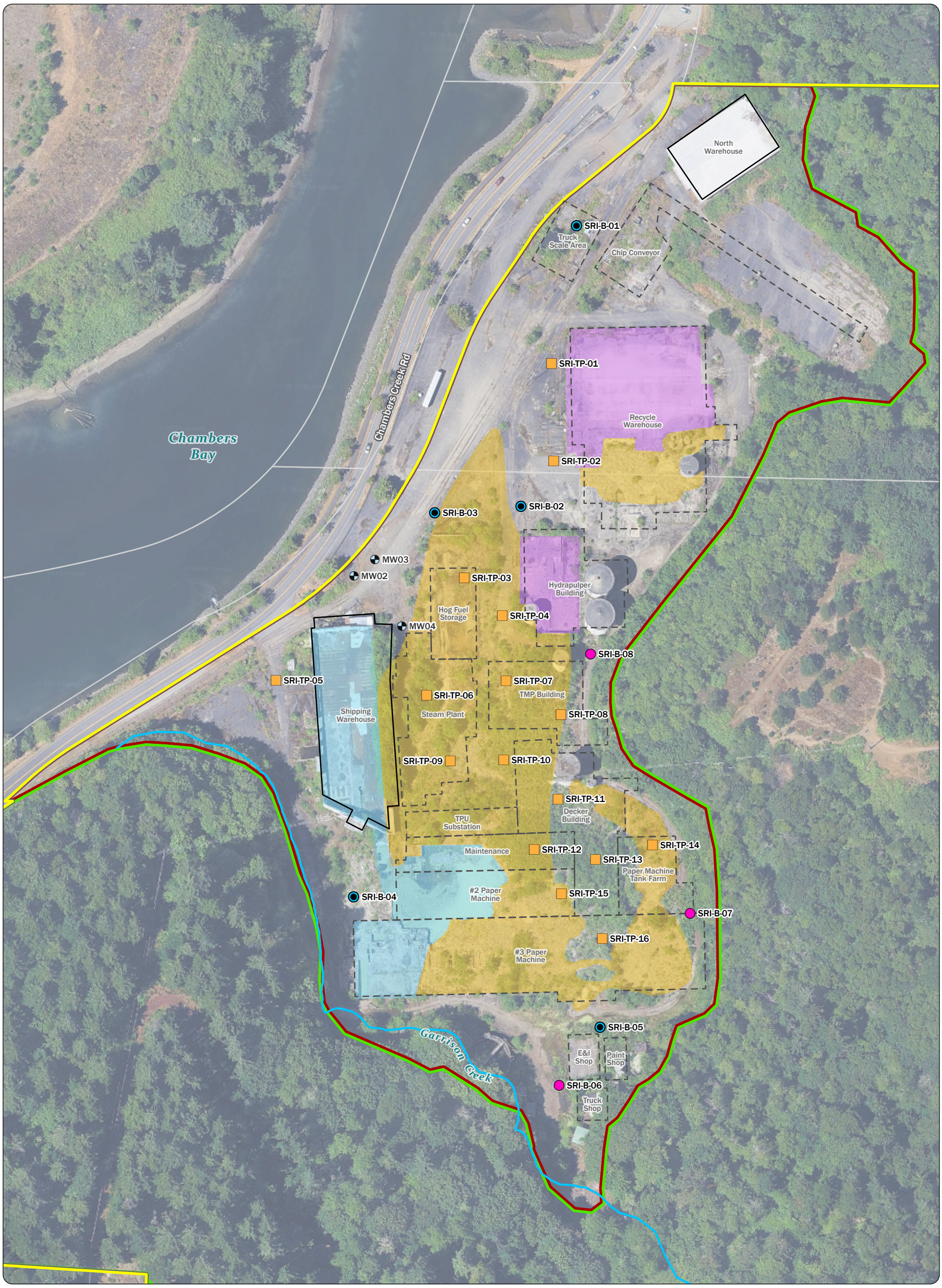
Data Sources
Aerial photograph obtained from Google; parcels obtained from environmental covenant recorded for the Site in 2010 and reflected in Washington State Department of Ecology's periodic review for the site in 2017; access limitations data compiled from PanGEO 2022 Site and Exploration Plan figure and Maul Foster & Alongi 2025 site walk.

0 100
Feet



Legend

- Boring (Soil)
- Boring/Temp Well (Soil and Groundwater)
- Test Pit
- Existing Monitoring Well
- Former Structure
- Remaining Structure
- Concrete Foundation
- Construction Rubble
- Standing Water
- Mill Area
- Forested Area
- Property Boundary (2006)
- Parcel (2006)
- Stream (approximate)

Figure 3-1b
Proposed Soil and Groundwater Sample Locations (Mill Area)

Supplemental Remedial Investigation Work Plan
Abitibi Consolidated Sales Corp
Steilacoom, WA

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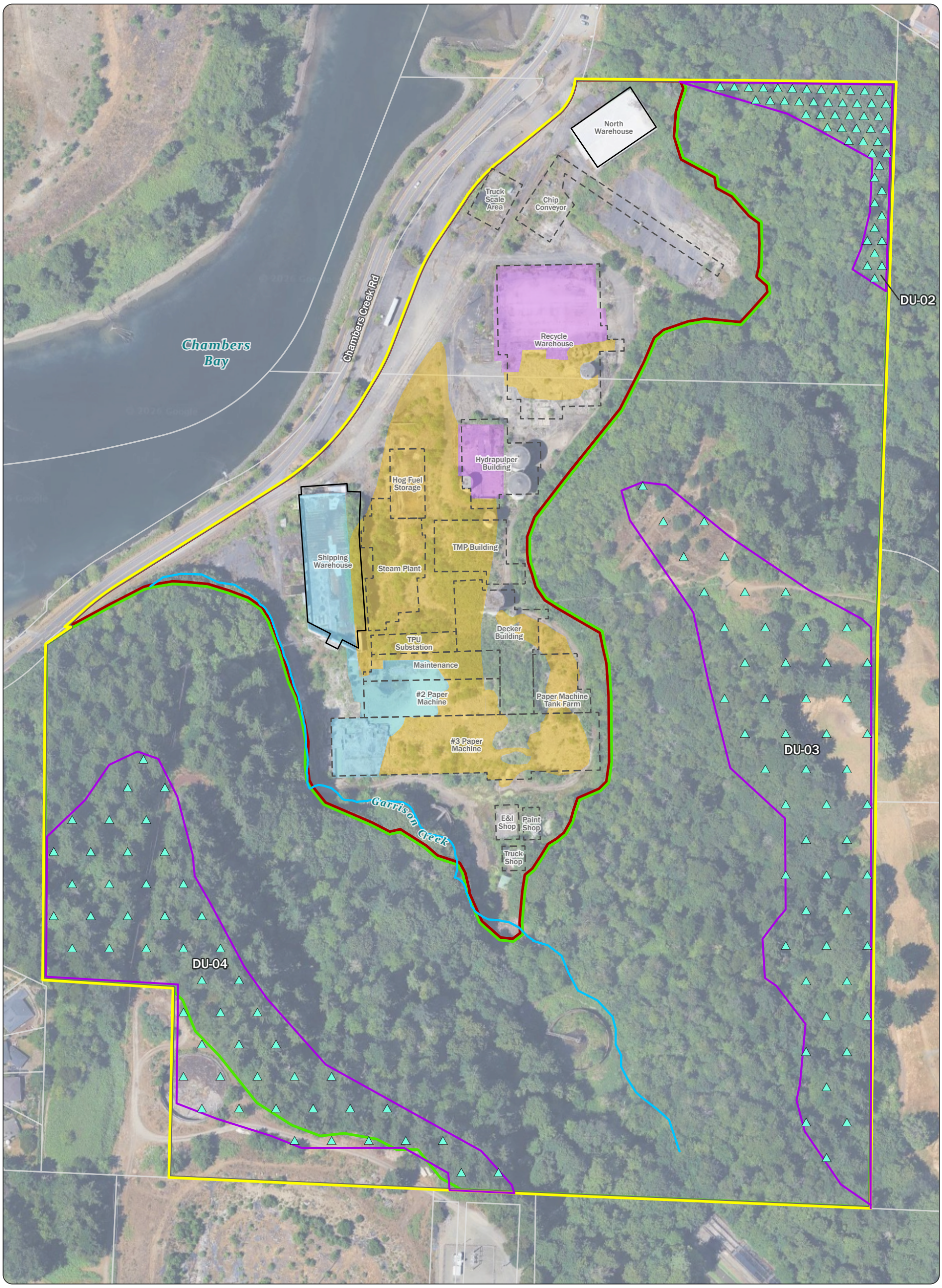
Data Sources
Aerial photograph obtained from Google; parcels obtained from environmental covenant recorded for the Site in 2010 and reflected in Washington State Department of Ecology's periodic review for the site in 2017; access limitations data compiled from PanGEO 2022 Site and Exploration Plan figure and Maul Foster & Alongi 2025 site walk.

0 100
Feet

Path: X:\1882_01\09\Pro\M1882_01_009_002_008.aprx\Fig 3-1b Proposed Soil and Groundwater Sample Locations (Mill Area)
Print Date: 1/29/2026
Reviewed By: jhansen
Produced By: sturner
Project: M1882.01.009



Legend

- Surface Soil
- Decision Unit
- Former Structure
- Remaining Structure
- Concrete Foundation
- Construction Rubble
- Standing Water
- Mill Area
- Forested Area
- Property Boundary (2006)
- Parcel (2006)
- Stream (approximate)

Figure 3-2
Proposed Surface Soil Sampling Locations (Forested Area)

Supplemental Remedial Investigation Work Plan
Abitibi Consolidated Sales Corp
Steilacoom, WA

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Data Sources
Aerial photograph obtained from Google; parcels obtained from environmental covenant recorded for the Site in 2010 and reflected in Washington State Department of Ecology's periodic review for the site in 2017; access limitations data compiled from PanGEO 2022 Site and Exploration Plan figure and Maul Foster & Alongi 2025 site walk.

0 125
Feet

Print Date: 1/29/2026
Reviewed By: lhansen
Produced By: sturner
Project: M1882.01.009

Tables

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Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Aeration Stabilization Basin													Main Plant
Location:	LB1		LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Name:	LB1	LB12DUP	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Date:	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	03/01/2005	03/01/2005
Sample Depth (feet bgs):	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Surface
Sample Type:	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
HCID (detect/non-detect)														
Gasoline	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND
Diesel	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND
Lube oil	--	--	--	--	--	--	--	--	--	--	--	--	DETECT	DETECT
TPH (mg/kg)														
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oil-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydraulic fluid	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals (mg/kg)														
Arsenic	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--
Barium	42	38	43	33	42	50	42	40	39	33	29	27	--	--
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Chromium	26	23	21	19	28	22	24	21	24	18	20	18	--	--
Copper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2	2 U	2 U	2 U	--	--
Mercury	0.04 U	0.05 U	0.04 U	0.05 U	0.04 U	0.05 U	0.04 U	0.05 U	0.04 U	0.05 U	0.04 U	0.05 U	--	--
Selenium	5 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--
Silver	0.3 U	0.3 U	0.3 U	0.4 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--
PCB Aroclors (mg/kg)														
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	--	--	0.076 U	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	--	--	0.076 U	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	--	--	0.076 U	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	--	--	0.076 U	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	--	--	0.076 U	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	--	--	0.076 U	--
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	--	--	0.076 U	--
Dioxins and Furans (pg/g)														
1,2,3,4,6,7,8-HpCDD	1.6 U	0.5 U	1.2 U	0.35 U	1.2 U	0.39 U	0.35 U	0.89 U	3.8 J	1 U	1 U	0.46 U	--	--
1,2,3,4,6,7,8-HpCDF	0.82 U	0.17 U	0.71 U	0.18 U	0.73 U	0.14 U	0.18 U	0.5 U	0.5 U	0.52 U	0.41 U	0.37 U	--	--
1,2,3,4,7,8,9-HpCDF	1 U	0.13 U	0.86 U	0.22 U	0.9 U	0.19 U	0.21 U	0.61 U	0.22 U	0.64 U	0.28 U	0.17 U	--	--
1,2,3,4,7,8-HxCDD	1.3 U	0.22 U	1.4 U	0.27 U	1.1 U	0.29 U	0.25 U	0.75 U	0.24 U	0.78 U	0.3 U	0.22 U	--	--
1,2,3,4,7,8-HxCDF	0.97 U	0.15 U	0.96 U	0.2 U	0.83 U	0.2 U	0.18 U	0.54 U	0.25 U	0.62 U	0.24 U	0.22 U	--	--
1,2,3,6,7,8-HxCDD	1.2 U	0.2 U	1.2 U	0.25 U	0.97 U	0.26 U	0.22 U	0.67 U	0.37 U	0.69 U	0.55 U	0.25 U	--	--
1,2,3,6,7,8-HxCDF	0.92 U	0.14 U	0.9 U	0.19 U	0.79 U	0.19 U	0.17 U	0.51 U	0.2 U	0.59 U	0.34 U	0.25 U	--	--
1,2,3,7,8,9-HxCDD	1.2 U	0.19 U	1.3 U	0.25 U	1 U	0.26 U	0.24 U	0.69 U	0.27 U	0.72 U	0.29 U	0.25 U	--	--
1,2,3,7,8,9-HxCDF	1.1 U	0.16 U	1.1 U	0.23 U	0.98 U	0.23 U	0.21 U	0.64 U	0.25 U	0.74 U	0.44 U	0.33 U	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Aeration Stabilization Basin													Main Plant
Location:	LB1		LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Name:	LB1	LB12DUP	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Date:	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	03/01/2005	03/01/2005
Sample Depth (feet bgs):	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Surface
Sample Type:	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
Dioxins and Furans cont. (pg/g)														
1,2,3,7,8-PeCDD	1.9 U	0.4 U	1.7 U	0.35 U	1.5 U	0.32 U	0.34 U	1.1 U	0.37 U	1.3 U	0.36 U	0.28 U	--	--
1,2,3,7,8-PeCDF	1.4 U	0.19 U	1.3 U	0.23 U	1.1 U	0.24 U	0.24 U	0.76 U	0.26 U	0.91 U	0.25 U	0.26 U	--	--
2,3,4,6,7,8-HxCDF	1 U	0.15 U	0.99 U	0.21 U	0.87 U	0.2 U	0.18 U	0.56 U	0.24 U	0.65 U	0.38 U	0.35 U	--	--
2,3,4,7,8-PeCDF	1.3 U	0.19 U	1.2 U	0.22 U	1.1 U	0.23 U	0.22 U	0.74 U	0.26 U	0.88 U	0.24 U	0.24 U	--	--
2,3,7,8-TCDD	1 U	0.14 U	0.88 U	0.18 U	0.82 U	0.18 U	0.19 U	0.54 U	0.22 U	0.69 U	0.19 U	0.19 U	--	--
2,3,7,8-TCDF	0.81 U	0.33 U	0.71 U	0.15 U	0.63 U	0.14 U	0.15 U	0.43 U	0.32 U	0.63 U	0.45 U	0.13 U	--	--
OCDD	9.3 J	2.3 U	5.1 U	4.8 U	3.7 U	1.9 U	2 U	2.4 U	25	2.1 U	6 J	2.2 U	--	--
OCDF	1.7 U	0.33 U	1.4 U	0.33 U	1.4 U	0.33 U	0.34 U	0.86 U	0.78 U	0.83 U	0.34 U	0.33 U	--	--
Total HpCDDs	1.6 U	0.5 U	1.2 U	0.58 U	1.2 U	0.45 U	0.4 U	0.89 U	11	1 U	1 U	0.46 U	--	--
Total HpCDFs	1 U	0.17 U	0.86 U	0.22 U	0.9 U	0.19 U	0.21 U	0.61 U	0.5 U	0.64 U	0.41 U	0.37 U	--	--
Total HxCDDs	1.3 U	0.23 U	1.4 U	0.27 U	1.1 U	0.29 U	0.25 U	0.75 U	1.2 U	0.78 U	0.55 U	0.25 U	--	--
Total HxCDFs	1.1 U	0.16 U	1.1 U	0.23 U	0.98 U	0.23 U	0.21 U	0.64 U	0.25 U	0.94 U	0.44 U	0.35 U	--	--
Total PeCDDs	1.9 U	0.4 U	1.7 U	0.35 U	1.5 U	0.46 U	1 U	1.1 U	0.37 U	1.3 U	0.36 U	0.28 U	--	--
Total PeCDFs	1.4 U	0.25 U	1.3 U	0.28 U	1.1 U	0.25 U	0.34 U	0.76 U	0.26 U	0.91 U	0.25 U	0.26 U	--	--
Total TCDDs	1 U	0.67	0.86	0.5 U	0.82 U	0.44 U	0.67	0.75	0.81	0.72 U	0.51 U	0.61	--	--
Total TCDF	0.81 U	0.33 U	0.71 U	0.15 U	0.63 U	0.14 U	0.15 U	0.43 U	0.32 U	0.63 U	0.45 U	0.13 U	--	--
VOCs (mg/kg)														
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Aeration Stabilization Basin													Main Plant
Location:	LB1		LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Name:	LB1	LB12DUP	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Date:	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	03/01/2005	03/01/2005
Sample Depth (feet bgs):	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Surface
Sample Type:	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
VOCs cont. (mg/kg)														
1,4-Dichlorobenzene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 113	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl iodide	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Aeration Stabilization Basin													Main Plant
Location:	LB1		LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Name:	LB1	LB12DUP	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Date:	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	03/01/2005	03/01/2005
Sample Depth (feet bgs):	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Surface
Sample Type:	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
VOCs cont. (mg/kg)														
n-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs (mg/kg)														
2,4,5-Trichlorophenol	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
2,4,6-Trichlorophenol	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
2,4-Dichlorophenol	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
2,4-Dimethylphenol	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U		
2,4-Dinitrophenol	0.65 U	0.63 U	0.64 U	0.65 U	0.66 U	0.64 U	0.63 U	0.65 U	0.66 U	0.63 U	0.64 U	0.65 U	--	--
2,4-Dinitrotoluene	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
2,6-Dinitrotoluene	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
2-Chloronaphthalene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
2-Chlorophenol	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
2-Methylnaphthalene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U		
2-Methylphenol	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U		
2-Nitroaniline	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
2-Nitrophenol	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
3,3'-Dichlorobenzidine	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
3-Nitroaniline	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
4,6-Dinitro-2-methylphenol	0.65 U	0.63 U	0.64 U	0.65 U	0.66 U	0.64 U	0.63 U	0.65 U	0.66 U	0.63 U	0.64 U	0.65 U	--	--
4-Bromophenyl phenyl ether	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
4-Chloro-3-methylphenol	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
4-Chloroaniline	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Aeration Stabilization Basin													Main Plant
Location:	LB1		LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Name:	LB1	LB12DUP	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Date:	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	03/01/2005	03/01/2005
Sample Depth (feet bgs):	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Surface
Sample Type:	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
SVOCs cont. (mg/kg)														
4-Chlorophenyl phenyl ether	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
4-Methylphenol	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
4-Nitroaniline	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
4-Nitrophenol	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
Acenaphthene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Acenaphthylene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Anthracene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Benzo(a)anthracene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Benzo(a)pyrene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Benzo(b)fluoranthene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Benzo(ghi)perylene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Benzo(k)fluoranthene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Benzoic acid	0.65 U	0.63 U	0.64 U	0.65 U	0.66 U	0.64 U	0.63 U	0.65 U	0.66 U	0.63 U	0.64 U	0.65 U	--	--
Benzyl alcohol	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
Bis(2-chloro-1-methylethyl) ether	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Bis(2-chloroethoxy)methane	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Bis(2-chloroethyl) ether	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Bis(2-ethylhexyl) phthalate	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Butylbenzyl phthalate	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Carbazole	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Chrysene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Dibenzo(a,h)anthracene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Dibenzofuran	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Diethyl phthalate	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Dimethyl phthalate	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Di-n-butyl phthalate	0.065 U	1.1 U	0.12 U	0.065 U	0.11 U	0.064 U	0.12 U	0.086 U	0.16 U	0.063 U	0.14 U	0.065 U	--	--
Di-n-octyl phthalate	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Fluoranthene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Fluorene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Hexachlorobenzene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Hexachlorobutadiene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Hexachlorocyclopentadiene	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
Hexachloroethane	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Indeno(1,2,3-cd)pyrene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Isophorone	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Naphthalene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Aeration Stabilization Basin													Main Plant
Location:	LB1		LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Name:	LB1	LB12DUP	LB2	LB3	LB4	LB5	LB6	LB7	LB9	LB10	LB11	LB12	LBCOMP	MP8
Sample Date:	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	02/28/2005	03/01/2005	03/01/2005
Sample Depth (feet bgs):	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Near-surface	Surface
Sample Type:	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
SVOCs cont. (mg/kg)														
Nitrobenzene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
N-Nitrosodiphenylamine	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
N-Nitrosodipropylamine	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
Pentachlorophenol	0.32 U	0.32 U	0.32 U	0.33 U	0.33 U	0.32 U	0.31 U	0.33 U	0.33 U	0.31 U	0.32 U	0.32 U	--	--
Phenanthrene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Phenol	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
Pyrene	0.065 U	0.063 U	0.064 U	0.065 U	0.066 U	0.064 U	0.063 U	0.065 U	0.066 U	0.063 U	0.064 U	0.065 U	--	--
EPH (mg/kg)														
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	4.6 U	2.1 U
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	4.6 U	2.1 U
C12-C16 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	4.6 U	2.1 U
C16-C21 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	12	5.9
C21-C34 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	77	81
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	4.6 U	2.1 U
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	4.6 U	2.1 U
C12-C16 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	4.6 U	2.1 U
C16-C21 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	6.2	2.1 U
C21-C34 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	38	17
VPH (mg/kg)														
C5-C6 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Potential Mining Process				Railroad Track				Solids Prep Area				Truck Scales Area	
Location:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3		TS1	TS2
Sample Name:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3	SP3DUP	TS1	TS2
Sample Date:	03/01/2005	03/01/2005	03/01/2005	03/01/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005
Sample Depth (feet bgs):	Surface	Surface	Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	FD	N	N
HCID (detect/non-detect)														
Gasoline	--	--	--	--	ND	ND	ND	ND	ND	DETECT	DETECT	DETECT	--	--
Diesel	--	--	--	--	ND	DETECT	DETECT	ND	DETECT	DETECT	DETECT	DETECT	--	--
Lube oil	--	--	--	--	ND	DETECT	DETECT	DETECT	DETECT	DETECT	DETECT	DETECT	--	--
TPH (mg/kg)														
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	6 U	39
Oil-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	12 U	240
Hydraulic fluid	--	--	--	--	--	--	--	--	--	--	--	--	12 U	220
Metals (mg/kg)														
Arsenic	5 U	5 U	5 U	5 U	9	5 U	5 U	6 U	8	5 U	5 U	5 U	--	--
Barium	--	--	--	--	53	40	44	66	67	56	61	67	--	--
Cadmium	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2	0.2 U	0.2 U	0.2 U	--	--
Chromium	--	--	--	--	16	21	20	29	45	25	26	26	--	--
Copper	9.8	12	15	12	--	--	--	--	--	--	--	--	--	--
Lead	2 U	2	5	2	10	3	6	15	13	5	5	5	--	--
Mercury	--	--	--	--	0.04 U	0.05 U	0.04 U	0.04	0.05 U	0.05 U	0.05 U	0.05 U	--	--
Selenium	--	--	--	--	6 U	5 U	5 U	6 U	5 U	5 U	5 U	5 U	--	--
Silver	--	--	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--
PCB Aroclors (mg/kg)														
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans (pg/g)														
1,2,3,4,6,7,8-HpCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Potential Mining Process				Railroad Track				Solids Prep Area				Truck Scales Area	
Location:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3		TS1	TS2
Sample Name:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3	SP3DUP	TS1	TS2
Sample Date:	03/01/2005	03/01/2005	03/01/2005	03/01/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005
Sample Depth (feet bgs):	Surface	Surface	Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	FD	N	N
Dioxins and Furans cont. (pg/g)														
1,2,3,7,8-PeCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (mg/kg)														
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U		
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U		
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Potential Mining Process				Railroad Track				Solids Prep Area				Truck Scales Area	
Location:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3		TS1	TS2
Sample Name:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3	SP3DUP	TS1	TS2
Sample Date:	03/01/2005	03/01/2005	03/01/2005	03/01/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005
Sample Depth (feet bgs):	Surface	Surface	Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	FD	N	N
VOCs cont. (mg/kg)														
1,4-Dichlorobenzene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	2.1 U	1.9 U	2.1 U	--	--
Bromobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	2.1 U	1.9 U	2.1 U	--	--
Freon 113	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--	4.2 U	3.8 U	4.2 U	--	--
Methyl iodide	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	2.1 U	1.9 U	2.1 U	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Potential Mining Process				Railroad Track				Solids Prep Area				Truck Scales Area	
Location:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3		TS1	TS2
Sample Name:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3	SP3DUP	TS1	TS2
Sample Date:	03/01/2005	03/01/2005	03/01/2005	03/01/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005
Sample Depth (feet bgs):	Surface	Surface	Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	FD	N	N
VOCs cont. (mg/kg)														
n-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	2.1 U	1.9 U	2.1 U	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	2.1 U	1.9 U	2.1 U	--	--
trans-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs (mg/kg)														
2,4,5-Trichlorophenol	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
2,4,6-Trichlorophenol	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
2,4-Dichlorophenol	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
2,4-Dimethylphenol					0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
2,4-Dinitrophenol	--	--	--	--	0.74 U	0.69 U	0.71 U	0.72 U	0.72 U	3.5 U	3.5 U	3.5 U	--	--
2,4-Dinitrotoluene	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
2,6-Dinitrotoluene	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
2-Chloronaphthalene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
2-Chlorophenol	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
2-Methylnaphthalene					0.66	2.3	0.071 U	0.13	0.072 U	16	8.3	9.6	--	--
2-Methylphenol					0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
2-Nitroaniline	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
2-Nitrophenol	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
3,3'-Dichlorobenzidine	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
3-Nitroaniline	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
4,6-Dinitro-2-methylphenol	--	--	--	--	0.74 U	0.69 U	0.71 U	0.72 U	0.72 U	3.5 U	3.5 U	3.5 U	--	--
4-Bromophenyl phenyl ether	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
4-Chloro-3-methylphenol	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
4-Chloroaniline	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Potential Mining Process				Railroad Track				Solids Prep Area				Truck Scales Area	
Location:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3		TS1	TS2
Sample Name:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3	SP3DUP	TS1	TS2
Sample Date:	03/01/2005	03/01/2005	03/01/2005	03/01/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005
Sample Depth (feet bgs):	Surface	Surface	Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	FD	N	N
SVOCs cont. (mg/kg)														
4-Chlorophenyl phenyl ether	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
4-Methylphenol	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
4-Nitroaniline	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
4-Nitrophenol	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
Acenaphthene	--	--	--	--	0.84	3.9	0.071 U	0.17	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Acenaphthylene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Anthracene	--	--	--	--	0.52	1.2	0.071 U	0.096	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Benzo(a)anthracene	--	--	--	--	0.22	0.56	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Benzo(a)pyrene	--	--	--	--	0.074 U	0.18	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Benzo(b)fluoranthene	--	--	--	--	0.091	0.26	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Benzo(ghi)perylene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Benzo(k)fluoranthene	--	--	--	--	0.074 U	0.15	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Benzoic acid	--	--	--	--	0.74 U	0.69 U	0.71 U	0.72 U	0.72 U	3.5 U	3.5 U	3.5 U	--	--
Benzyl alcohol	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
Bis(2-chloro-1-methylethyl) ether	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Bis(2-chloroethoxy)methane	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Bis(2-chloroethyl) ether	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Bis(2-ethylhexyl) phthalate	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.29	0.35 U	0.35 U	0.35 U	--	--
Butylbenzyl phthalate	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Carbazole	--	--	--	--	0.16	0.38	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Chrysene	--	--	--	--	0.24	0.58	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Dibenzo(a,h)anthracene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Dibenzofuran	--	--	--	--	0.42	2	0.071 U	0.1	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Diethyl phthalate	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Dimethyl phthalate	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Di-n-butyl phthalate	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Di-n-octyl phthalate	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Fluoranthene	--	--	--	--	1.5	3.9	0.088	0.41	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Fluorene	--	--	--	--	0.73	2.2	0.071 U	0.17	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Hexachlorobenzene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Hexachlorobutadiene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Hexachlorocyclopentadiene	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
Hexachloroethane	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Indeno(1,2,3-cd)pyrene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Isophorone	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Naphthalene	--	--	--	--	0.99	6.2	0.071 U	0.2	0.072 U	8	2.4	2.8	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA													
Area/Feature:	Potential Mining Process				Railroad Track				Solids Prep Area				Truck Scales Area	
Location:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3		TS1	TS2
Sample Name:	MP11	MP12	MP13	MP14	RR1	RR2	RR3	RR4	SP1	SP2	SP3	SP3DUP	TS1	TS2
Sample Date:	03/01/2005	03/01/2005	03/01/2005	03/01/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005
Sample Depth (feet bgs):	Surface	Surface	Surface	Surface	Subsurface	Subsurface	Subsurface	Subsurface	Surface	Surface	Surface	Surface	Subsurface	Subsurface
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	FD	N	N
SVOCs cont. (mg/kg)														
Nitrobenzene	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
N-Nitrosodiphenylamine	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
N-Nitrosodipropylamine	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
Pentachlorophenol	--	--	--	--	0.37 U	0.35 U	0.35 U	0.36 U	0.36 U	1.7 U	1.7 U	1.7 U	--	--
Phenanthrene	--	--	--	--	2.8	8	0.071 U	0.59	0.072 U	0.5	0.44	0.47	--	--
Phenol	--	--	--	--	0.074 U	0.069 U	0.071 U	0.072 U	0.072 U	0.35 U	0.35 U	0.35 U	--	--
Pyrene	--	--	--	--	0.92	1.9	0.071 U	0.21	0.072 U	0.35 U	0.35 U	0.35 U	--	--
EPH (mg/kg)														
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	2.1 U	2.1 U	2.2 U	2.2 U	49 J	23 J	24 J	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	2.1 U	4.1	2.2 U	2.2 U	--	--	--	--	--
C12-C16 Aliphatic hydrocarbons	--	--	--	--	--	6.6	13	2.2 U	3.4	190 J	120 J	110 J	--	--
C16-C21 Aliphatic hydrocarbons	--	--	--	--	--	13	21	4.3	21	76 J	110 J	100 J	--	--
C21-C34 Aliphatic hydrocarbons	--	--	--	--	--	180	210	26	180	330 J	490 J	480 J	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	2.1 U	2.1 U	2.2 U	2.2 U	--	4.2 J	4.2 UJ	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	10 U	2.1 U	2.2 U	2.2 U	--	--	--	--	--
C12-C16 Aromatic hydrocarbons	--	--	--	--	--	23	4.8	2.2 U	2.2 U	93 J	49 J	42 J	--	--
C16-C21 Aromatic hydrocarbons	--	--	--	--	--	70	28	6.4	15	95 J	160 J	130 J	--	--
C21-C34 Aromatic hydrocarbons	--	--	--	--	--	150	420	30	250	750 J	1,200 J	950 J	--	--
VPH (mg/kg)														
C5-C6 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	21 U	19 U	21 U	--	--
C6-C8 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	21 U	19 U	21 U	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	120	31	37	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	100	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	270	69	92	--	--
C12-C13 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	140	44	56	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA			2006 In-Place Characterization Sampling										
Area/Feature:	Substation			Shipping Area										
Location:	US2		US4	ECS-12			ECS-13		ECS-14		ECS-15		ECS-16	
Sample Name:	US2	US2DUP	US4	ACSI-ECS-12-2-3	ACSI-ECS-30-2-3	ACSI-ECS-12-3.5-4.5	ACSI-ECS-13-2-3	ACSI-ECS-13-3-4	ACSI-ECS-14-2-3	ACSI-ECS-14-3-4	ACSI-ECS-15-2-3	ACSI-ECS-15-3.5-4.5	ACSI-ECS-16-2-3	ACSI-ECS-16-4-5
Sample Date:	03/02/2005	03/02/2005	03/02/2005	02/23/2006	02/23/2006	02/23/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006
Sample Depth (feet bgs):	Surface	Surface	Surface	2-3	2-3	3.5-4.5	2-3	3-4	2-3	3-4	2-3	3.5-4.5	2-3	4-5
Sample Type:	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N
HCID (detect/non-detect)														
Gasoline	--	--	--	--	--	--	--	--	--	ND	--	--	--	--
Diesel	--	--	--	--	--	--	--	--	--	DETECT	--	--	--	--
Lube oil	--	--	--	--	--	--	--	--	DETECT	DETECT	--	--	--	--
TPH (mg/kg)														
Gasoline-range hydrocarbons	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	--	20 U	20 U	20 U	20 U
Diesel-range hydrocarbons	--	--	--	50 U	50 U	50 U	50 U	50 U	140	--	50 U	50 U	50 U	50 U
Oil-range hydrocarbons	--	--	--	100 U	100 U	100 U	100 U	100 U	1,800	--	100 U	100 U	100 U	100 U
Hydraulic fluid	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals (mg/kg)														
Arsenic	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg)														
Aroclor 1016	0.036 U	0.035 U	0.036 U	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	0.036 U	0.035 U	0.036 U	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	0.036 U	0.035 U	0.036 U	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	0.036 U	0.035 U	0.036 U	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	0.036 U	0.035 U	0.036 U	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	0.036 U	0.035 U	0.036 U	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	0.036 U	0.035 U	0.036 U	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans (pg/g)														
1,2,3,4,6,7,8-HpCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA			2006 In-Place Characterization Sampling										
Area/Feature:	Substation			Shipping Area										
Location:	US2		US4	ECS-12			ECS-13		ECS-14		ECS-15		ECS-16	
Sample Name:	US2	US2DUP	US4	ACSI-ECS-12-2-3	ACSI-ECS-30-2-3	ACSI-ECS-12-3.5-4.5	ACSI-ECS-13-2-3	ACSI-ECS-13-3-4	ACSI-ECS-14-2-3	ACSI-ECS-14-3-4	ACSI-ECS-15-2-3	ACSI-ECS-15-3.5-4.5	ACSI-ECS-16-2-3	ACSI-ECS-16-4-5
Sample Date:	03/02/2005	03/02/2005	03/02/2005	02/23/2006	02/23/2006	02/23/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006
Sample Depth (feet bgs):	Surface	Surface	Surface	2-3	2-3	3.5-4.5	2-3	3-4	2-3	3-4	2-3	3.5-4.5	2-3	4-5
Sample Type:	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N
Dioxins and Furans cont. (pg/g)														
1,2,3,7,8-PeCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (mg/kg)														
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene										--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene										--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA			2006 In-Place Characterization Sampling										
Area/Feature:	Substation			Shipping Area										
Location:	US2		US4	ECS-12			ECS-13		ECS-14		ECS-15		ECS-16	
Sample Name:	US2	US2DUP	US4	ACSI-ECS-12-2-3	ACSI-ECS-30-2-3	ACSI-ECS-12-3.5-4.5	ACSI-ECS-13-2-3	ACSI-ECS-13-3-4	ACSI-ECS-14-2-3	ACSI-ECS-14-3-4	ACSI-ECS-15-2-3	ACSI-ECS-15-3.5-4.5	ACSI-ECS-16-2-3	ACSI-ECS-16-4-5
Sample Date:	03/02/2005	03/02/2005	03/02/2005	02/23/2006	02/23/2006	02/23/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006
Sample Depth (feet bgs):	Surface	Surface	Surface	2-3	2-3	3.5-4.5	2-3	3-4	2-3	3-4	2-3	3.5-4.5	2-3	4-5
Sample Type:	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N
VOCs cont. (mg/kg)														
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Freon 113	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl iodide	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA			2006 In-Place Characterization Sampling										
Area/Feature:	Substation			Shipping Area										
Location:	US2		US4	ECS-12			ECS-13		ECS-14		ECS-15		ECS-16	
Sample Name:	US2	US2DUP	US4	ACSI-ECS-12-2-3	ACSI-ECS-30-2-3	ACSI-ECS-12-3.5-4.5	ACSI-ECS-13-2-3	ACSI-ECS-13-3-4	ACSI-ECS-14-2-3	ACSI-ECS-14-3-4	ACSI-ECS-15-2-3	ACSI-ECS-15-3.5-4.5	ACSI-ECS-16-2-3	ACSI-ECS-16-4-5
Sample Date:	03/02/2005	03/02/2005	03/02/2005	02/23/2006	02/23/2006	02/23/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006
Sample Depth (feet bgs):	Surface	Surface	Surface	2-3	2-3	3.5-4.5	2-3	3-4	2-3	3-4	2-3	3.5-4.5	2-3	4-5
Sample Type:	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N
VOCs cont. (mg/kg)														
n-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs (mg/kg)														
2,4,5-Trichlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA			2006 In-Place Characterization Sampling										
Area/Feature:	Substation			Shipping Area										
Location:	US2		US4	ECS-12			ECS-13		ECS-14		ECS-15		ECS-16	
Sample Name:	US2	US2DUP	US4	ACSI-ECS-12-2-3	ACSI-ECS-30-2-3	ACSI-ECS-12-3.5-4.5	ACSI-ECS-13-2-3	ACSI-ECS-13-3-4	ACSI-ECS-14-2-3	ACSI-ECS-14-3-4	ACSI-ECS-15-2-3	ACSI-ECS-15-3.5-4.5	ACSI-ECS-16-2-3	ACSI-ECS-16-4-5
Sample Date:	03/02/2005	03/02/2005	03/02/2005	02/23/2006	02/23/2006	02/23/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006
Sample Depth (feet bgs):	Surface	Surface	Surface	2-3	2-3	3.5-4.5	2-3	3-4	2-3	3-4	2-3	3.5-4.5	2-3	4-5
Sample Type:	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N
SVOCs cont. (mg/kg)														
4-Chlorophenyl phenyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(ghi)perylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl alcohol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2005 Phase II ESA			2006 In-Place Characterization Sampling										
Area/Feature:	Substation			Shipping Area										
Location:	US2		US4	ECS-12			ECS-13		ECS-14		ECS-15		ECS-16	
Sample Name:	US2	US2DUP	US4	ACSI-ECS-12-2-3	ACSI-ECS-30-2-3	ACSI-ECS-12-3.5-4.5	ACSI-ECS-13-2-3	ACSI-ECS-13-3-4	ACSI-ECS-14-2-3	ACSI-ECS-14-3-4	ACSI-ECS-15-2-3	ACSI-ECS-15-3.5-4.5	ACSI-ECS-16-2-3	ACSI-ECS-16-4-5
Sample Date:	03/02/2005	03/02/2005	03/02/2005	02/23/2006	02/23/2006	02/23/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006	02/22/2006
Sample Depth (feet bgs):	Surface	Surface	Surface	2-3	2-3	3.5-4.5	2-3	3-4	2-3	3-4	2-3	3.5-4.5	2-3	4-5
Sample Type:	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N
SVOCs cont. (mg/kg)														
Nitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodipropylamine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EPH (mg/kg)														
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	2.6	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	32	--	--	--	--
C12-C16 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	150	--	--	--	--
C16-C21 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	160	--	--	--	--
C21-C34 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	580	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	2.3 U	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	6.8	--	--	--	--
C12-C16 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	64	--	--	--	--
C16-C21 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	230	--	--	--	--
C21-C34 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	580	--	--	--	--
VPH (mg/kg)														
C5-C6 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 In-Place Characterization Sampling					2006 Removal Action									
Area/Feature:	Shipping Area					Shipping Area									
Location:	ECS-19			ECS-20		BDS-01	BDS-03	BDS-04	BDS-05		BDS-06	BDS-07	BDS-08	BDS-09	BDS-10
Sample Name:	ACSI-ECS-19-2-3	ACSI-ECS-31-2-3	ACSI-ECS-19-3.5-4.5	ACSI-ECS-20-2-3	ACSI-ECS-20-3.5-4.5	ACSI-BDS-01	ACSI-BDS-03	ACSI-BDS-04	ACSI-BDS-05	ACSI-BDS-205	ACSI-BDS-06	ACSI-BDS-07	ACSI-BDS-08	ACSI-BDS-09	ACSI-BDS-10
Sample Date:	02/23/2006	02/23/2006	02/23/2006	02/23/2006	02/23/2006	04/25/2006	04/28/2006	04/27/2006	04/28/2006	04/28/2006	04/28/2006	05/01/2006	05/01/2006	05/01/2006	05/01/2006
Sample Depth (feet bgs):	2-3	2-3	3.5-4.5	2-3	3.5-4.5	4	4.5-4.5	10	8-9	8-9	8-9	4	4	4.5-4.5	5
Sample Type:	N	FD	N	N	N	N	N	N	N	FD	N	N	N	N	N
HCID (detect/non-detect)															
Gasoline	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel	DETECT	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil	DETECT	--	--	DETECT	DETECT	--	--	--	--	--	--	--	--	--	--
TPH (mg/kg)															
Gasoline-range hydrocarbons	--	20 U	20 U	20 U	20 U	5.7 U	41	10 U	5.2 U	5.3	7.5 U	18	6.6 U	7.5 U	6.7 U
Diesel-range hydrocarbons	--	50 U	50 U	8.5	16	7	13	26	11	11	45	170	17	6.5 U	6.2 U
Oil-range hydrocarbons	--	100 U	100 U	41	81	24	27	64	26	27	100	310	46	13 U	13
Hydraulic fluid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals (mg/kg)															
Arsenic	--	--	--	--	--	--	--	10	--	--	--	--	--	--	--
Barium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg)															
Aroclor 1016	--	--	--	--	--	--	--	0.029 U	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	0.029 U	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	0.029 U	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	0.029 U	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	0.029 U	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	0.029 U	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	0.029 U	--	--	--	--	--	--	--
Dioxins and Furans (pg/g)															
1,2,3,4,6,7,8-HpCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 In-Place Characterization Sampling					2006 Removal Action									
Area/Feature:	Shipping Area					Shipping Area									
Location:	ECS-19			ECS-20		BDS-01	BDS-03	BDS-04	BDS-05		BDS-06	BDS-07	BDS-08	BDS-09	BDS-10
Sample Name:	ACSI-ECS-19-2-3	ACSI-ECS-31-2-3	ACSI-ECS-19-3.5-4.5	ACSI-ECS-20-2-3	ACSI-ECS-20-3.5-4.5	ACSI-BDS-01	ACSI-BDS-03	ACSI-BDS-04	ACSI-BDS-05	ACSI-BDS-205	ACSI-BDS-06	ACSI-BDS-07	ACSI-BDS-08	ACSI-BDS-09	ACSI-BDS-10
Sample Date:	02/23/2006	02/23/2006	02/23/2006	02/23/2006	02/23/2006	04/25/2006	04/28/2006	04/27/2006	04/28/2006	04/28/2006	04/28/2006	05/01/2006	05/01/2006	05/01/2006	05/01/2006
Sample Depth (feet bgs):	2-3	2-3	3.5-4.5	2-3	3.5-4.5	4	4.5-4.5	10	8-9	8-9	8-9	4	4	4.5-4.5	5
Sample Type:	N	FD	N	N	N	N	N	N	N	FD	N	N	N	N	N
Dioxins and Furans cont. (pg/g)															
1,2,3,7,8-PeCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (mg/kg)															
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	0.0016 U	0.0028 U	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	0.065 U	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	0.036	0.0014 U	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	0.0008 U	0.0014 U			0.065 U				
1,2-Dichloroethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	0.041	0.0014 U	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	0.065 U	--	--	--	--
1,3-Dichloropropane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 In-Place Characterization Sampling					2006 Removal Action									
Area/Feature:	Shipping Area					Shipping Area									
Location:	ECS-19			ECS-20		BDS-01	BDS-03	BDS-04	BDS-05		BDS-06	BDS-07	BDS-08	BDS-09	BDS-10
Sample Name:	ACSI-ECS-19-2-3	ACSI-ECS-31-2-3	ACSI-ECS-19-3.5-4.5	ACSI-ECS-20-2-3	ACSI-ECS-20-3.5-4.5	ACSI-BDS-01	ACSI-BDS-03	ACSI-BDS-04	ACSI-BDS-05	ACSI-BDS-205	ACSI-BDS-06	ACSI-BDS-07	ACSI-BDS-08	ACSI-BDS-09	ACSI-BDS-10
Sample Date:	02/23/2006	02/23/2006	02/23/2006	02/23/2006	02/23/2006	04/25/2006	04/28/2006	04/27/2006	04/28/2006	04/28/2006	04/28/2006	05/01/2006	05/01/2006	05/01/2006	05/01/2006
Sample Depth (feet bgs):	2-3	2-3	3.5-4.5	2-3	3.5-4.5	4	4.5-4.5	10	8-9	8-9	8-9	4	4	4.5-4.5	5
Sample Type:	N	FD	N	N	N	N	N	N	N	FD	N	N	N	N	N
VOCs cont. (mg/kg)															
1,4-Dichlorobenzene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	0.065 U	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	0.0041 U	0.0086	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	0.004	0.0014 U	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	0.019	0.059	--	--	--	--	--	--	--
Acrolein	--	--	--	--	--	--	0.041 U	0.071 U	--	--	--	--	--	--	--
Acrylonitrile	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	0.014 U	0.0008 U	0.0014 U	0.013 U	0.013 U	0.019 U	0.028	0.017 U	0.019 U	0.017 U
Bromobenzene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Bromoethane	--	--	--	--	--	--	0.0016 U	0.0028 U	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Carbon disulfide	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Chlorobenzene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	0.028 U	0.075	0.0014 U	0.026 U	0.026 U	0.038 U	0.028	0.033 U	0.037 U	0.034 U
Freon 113	--	--	--	--	--	--	0.0016 U	0.0028 U	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	0.0027	0.0014 U	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	0.057 U	0.044	0.0014 U	0.052 U	0.053 U	0.075 U	0.1	0.15	0.075 U	0.067 U
Methyl iodide	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	0.0016 U	0.0028 U	--	--	--	--	--	--	--
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 In-Place Characterization Sampling					2006 Removal Action									
Area/Feature:	Shipping Area					Shipping Area									
Location:	ECS-19			ECS-20		BDS-01	BDS-03	BDS-04	BDS-05		BDS-06	BDS-07	BDS-08	BDS-09	BDS-10
Sample Name:	ACSI-ECS-19-2-3	ACSI-ECS-31-2-3	ACSI-ECS-19-3.5-4.5	ACSI-ECS-20-2-3	ACSI-ECS-20-3.5-4.5	ACSI-BDS-01	ACSI-BDS-03	ACSI-BDS-04	ACSI-BDS-05	ACSI-BDS-205	ACSI-BDS-06	ACSI-BDS-07	ACSI-BDS-08	ACSI-BDS-09	ACSI-BDS-10
Sample Date:	02/23/2006	02/23/2006	02/23/2006	02/23/2006	02/23/2006	04/25/2006	04/28/2006	04/27/2006	04/28/2006	04/28/2006	04/28/2006	05/01/2006	05/01/2006	05/01/2006	05/01/2006
Sample Depth (feet bgs):	2-3	2-3	3.5-4.5	2-3	3.5-4.5	4	4.5-4.5	10	8-9	8-9	8-9	4	4	4.5-4.5	5
Sample Type:	N	FD	N	N	N	N	N	N	N	FD	N	N	N	N	N
VOCs cont. (mg/kg)															
n-Butylbenzene	--	--	--	--	--	--	0.044 M	0.0014 U	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	0.019	0.0014 U	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	0.028 U	0.0008 U	0.0014 U	0.026 U	0.026 U	0.038 U	0.026 U	0.033 U	0.037 U	0.034 U
sec-Butylbenzene	--	--	--	--	--	--	0.0023	0.0014 U	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	0.028 U	0.0008 U	0.0014 U	0.026 U	0.026 U	0.038 U	0.026 U	0.033 U	0.037 U	0.034 U
trans-1,2-Dichloroethene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	0.0008 U	0.0014 U	--	--	--	--	--	--	--
Xylenes (total)	--	--	--	--	--	0.11 U	0.088 U	0.21 U	0.1 U	0.1 U	0.15 U	0.12	0.16	0.15 U	0.13 U
SVOCs (mg/kg)															
2,4,5-Trichlorophenol	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
2,4,6-Trichlorophenol	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
2,4-Dichlorophenol	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
2,4-Dimethylphenol	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
2,4-Dinitrophenol	--	--	--	--	--	--	--	0.58 U	--	--	0.65 U	--	--	--	--
2,4-Dinitrotoluene	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
2,6-Dinitrotoluene	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
2-Chloronaphthalene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
2-Chlorophenol	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
2-Methylnaphthalene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
2-Methylphenol	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
2-Nitroaniline	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
2-Nitrophenol	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
3,3'-Dichlorobenzidine	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
3-Nitroaniline	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
4,6-Dinitro-2-methylphenol	--	--	--	--	--	--	--	0.58 U	--	--	0.65 U	--	--	--	--
4-Bromophenyl phenyl ether	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
4-Chloro-3-methylphenol	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
4-Chloroaniline	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 In-Place Characterization Sampling					2006 Removal Action									
Area/Feature:	Shipping Area					Shipping Area									
Location:	ECS-19			ECS-20		BDS-01	BDS-03	BDS-04	BDS-05		BDS-06	BDS-07	BDS-08	BDS-09	BDS-10
Sample Name:	ACSI-ECS-19-2-3	ACSI-ECS-31-2-3	ACSI-ECS-19-3.5-4.5	ACSI-ECS-20-2-3	ACSI-ECS-20-3.5-4.5	ACSI-BDS-01	ACSI-BDS-03	ACSI-BDS-04	ACSI-BDS-05	ACSI-BDS-205	ACSI-BDS-06	ACSI-BDS-07	ACSI-BDS-08	ACSI-BDS-09	ACSI-BDS-10
Sample Date:	02/23/2006	02/23/2006	02/23/2006	02/23/2006	02/23/2006	04/25/2006	04/28/2006	04/27/2006	04/28/2006	04/28/2006	04/28/2006	05/01/2006	05/01/2006	05/01/2006	05/01/2006
Sample Depth (feet bgs):	2-3	2-3	3.5-4.5	2-3	3.5-4.5	4	4.5-4.5	10	8-9	8-9	8-9	4	4	4.5-4.5	5
Sample Type:	N	FD	N	N	N	N	N	N	N	FD	N	N	N	N	N
SVOCs cont. (mg/kg)															
4-Chlorophenyl phenyl ether	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
4-Methylphenol	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
4-Nitroaniline	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
4-Nitrophenol	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Anthracene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Benzo(ghi)perylene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Benzoic acid	--	--	--	--	--	--	--	0.58 U	--	--	0.65 U	--	--	--	--
Benzyl alcohol	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Bis(2-chloroethoxy)methane	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Bis(2-chloroethyl) ether	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Butylbenzyl phthalate	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Carbazole	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Chrysene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Diethyl phthalate	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Dimethyl phthalate	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Di-n-butyl phthalate	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Di-n-octyl phthalate	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Fluorene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Hexachlorobenzene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	0.0041 U	0.0071 U	--	--	0.065 U	--	--	--	--
Hexachlorocyclopentadiene	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
Hexachloroethane	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Isophorone	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Naphthalene	--	--	--	--	--	--	0.048	0.0071 U	--	--	0.065 U	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 In-Place Characterization Sampling					2006 Removal Action									
Area/Feature:	Shipping Area					Shipping Area									
Location:	ECS-19			ECS-20		BDS-01	BDS-03	BDS-04	BDS-05		BDS-06	BDS-07	BDS-08	BDS-09	BDS-10
Sample Name:	ACSI-ECS-19-2-3	ACSI-ECS-31-2-3	ACSI-ECS-19-3.5-4.5	ACSI-ECS-20-2-3	ACSI-ECS-20-3.5-4.5	ACSI-BDS-01	ACSI-BDS-03	ACSI-BDS-04	ACSI-BDS-05	ACSI-BDS-205	ACSI-BDS-06	ACSI-BDS-07	ACSI-BDS-08	ACSI-BDS-09	ACSI-BDS-10
Sample Date:	02/23/2006	02/23/2006	02/23/2006	02/23/2006	02/23/2006	04/25/2006	04/28/2006	04/27/2006	04/28/2006	04/28/2006	04/28/2006	05/01/2006	05/01/2006	05/01/2006	05/01/2006
Sample Depth (feet bgs):	2-3	2-3	3.5-4.5	2-3	3.5-4.5	4	4.5-4.5	10	8-9	8-9	8-9	4	4	4.5-4.5	5
Sample Type:	N	FD	N	N	N	N	N	N	N	FD	N	N	N	N	N
SVOCs cont. (mg/kg)															
Nitrobenzene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
N-Nitrosodiphenylamine	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
N-Nitrosodipropylamine	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
Pentachlorophenol	--	--	--	--	--	--	--	0.29 U	--	--	0.33 U	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Phenol	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
Pyrene	--	--	--	--	--	--	--	0.058 U	--	--	0.065 U	--	--	--	--
EPH (mg/kg)															
C8-C10 Aliphatic hydrocarbons	2.2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	2.2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatic hydrocarbons	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatic hydrocarbons	36	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatic hydrocarbons	280	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	2.2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	2.2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatic hydrocarbons	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatic hydrocarbons	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatic hydrocarbons	81	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VPH (mg/kg)															
C5-C6 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 Removal Action														
Area/Feature:	Shipping Area														
Location:	BDS-11	BDS-12	BDS-13	BDS-14	BDS-15	BDS-16	BDS-17	BDS-18	BDS-19	BDS-22	BDS-23	BDS-24	BDS-25	SWS-02	SWS-05
Sample Name:	ACSI-BDS-11	ACSI-BDS-12	ACSI-BDS-13	ACSI-BDS-14	ACSI-BDS-15	ACSI-BDS-16	ACSI-BDS-17	ACSI-BDS-18	ACSI-BDS-19	ACSI-BDS-22	ACSI-BDS-23	ACSI-BDS-24	ACSI-BDS-25	ACSI-SWS-02	ACSI-SWS-05
Sample Date:	05/01/2006	05/01/2006	05/02/2006	05/02/2006	05/03/2006	05/02/2006	05/05/2006	05/11/2006	05/12/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/01/2006	04/28/2006
Sample Depth (feet bgs):	4	4	10	10	10	10	9	8	4	10	8-9	8	8	2-4	2-4
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
HCID (detect/non-detect)															
Gasoline	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TPH (mg/kg)															
Gasoline-range hydrocarbons	27	6.1 U	11 U	14 U	7 U	7 U	6.2 U	4.5 U	24	4.4 U	4.2 U	4.9 U	5.1 U	5.2 U	4.4 U
Diesel-range hydrocarbons	86	9.3	110	620	15	8.1	14	5.7 U	100	6 U	6 U	6.2 U	6.1 U	5.5 U	5.3 U
Oil-range hydrocarbons	220	24	91	670	12 U	12 U	21	11 U	260	12 U	12 U	15	21	13	16
Hydraulic fluid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals (mg/kg)															
Arsenic	--	--	9	10	6	6 U	6 U	--	--	--	--	--	--	--	--
Barium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg)															
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans (pg/g)															
1,2,3,4,6,7,8-HpCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 Removal Action														
Area/Feature:	Shipping Area														
Location:	BDS-11	BDS-12	BDS-13	BDS-14	BDS-15	BDS-16	BDS-17	BDS-18	BDS-19	BDS-22	BDS-23	BDS-24	BDS-25	SWS-02	SWS-05
Sample Name:	ACSI-BDS-11	ACSI-BDS-12	ACSI-BDS-13	ACSI-BDS-14	ACSI-BDS-15	ACSI-BDS-16	ACSI-BDS-17	ACSI-BDS-18	ACSI-BDS-19	ACSI-BDS-22	ACSI-BDS-23	ACSI-BDS-24	ACSI-BDS-25	ACSI-SWS-02	ACSI-SWS-05
Sample Date:	05/01/2006	05/01/2006	05/02/2006	05/02/2006	05/03/2006	05/02/2006	05/05/2006	05/11/2006	05/12/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/01/2006	04/28/2006
Sample Depth (feet bgs):	4	4	10	10	10	10	9	8	4	10	8-9	8	8	2-4	2-4
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Dioxins and Furans cont. (pg/g)															
1,2,3,7,8-PeCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (mg/kg)															
1,1,1,2-Tetrachloroethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,1,1-Trichloroethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,1,2-Trichloroethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,1-Dichloroethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,1-Dichloroethene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,1-Dichloropropene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,2,3-Trichlorobenzene	0.005 U	--	--	--	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
1,2,3-Trichloropropane	0.002 U	--	--	--	--	0.0023 U	--	--	0.0018 U	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.005 U	--	0.065 U	0.064 U	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
1,2,4-Trimethylbenzene	0.0037 M	--	--	--	--	0.0041	--	--	0.0071	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	0.005 U	--	--	--	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
1,2-Dibromoethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,2-Dichlorobenzene	0.001 U	--	0.065 U	0.064 U		0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,2-Dichloroethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,2-Dichloropropane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,3,5-Trimethylbenzene	0.0013 M	--	--	--	--	0.0018	--	--	0.002	--	--	--	--	--	--
1,3-Dichlorobenzene	0.001 U	--	0.065 U	0.064 U	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
1,3-Dichloropropane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 Removal Action														
Area/Feature:	Shipping Area														
Location:	BDS-11	BDS-12	BDS-13	BDS-14	BDS-15	BDS-16	BDS-17	BDS-18	BDS-19	BDS-22	BDS-23	BDS-24	BDS-25	SWS-02	SWS-05
Sample Name:	ACSI-BDS-11	ACSI-BDS-12	ACSI-BDS-13	ACSI-BDS-14	ACSI-BDS-15	ACSI-BDS-16	ACSI-BDS-17	ACSI-BDS-18	ACSI-BDS-19	ACSI-BDS-22	ACSI-BDS-23	ACSI-BDS-24	ACSI-BDS-25	ACSI-SWS-02	ACSI-SWS-05
Sample Date:	05/01/2006	05/01/2006	05/02/2006	05/02/2006	05/03/2006	05/02/2006	05/05/2006	05/11/2006	05/12/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/01/2006	04/28/2006
Sample Depth (feet bgs):	4	4	10	10	10	10	9	8	4	10	8-9	8	8	2-4	2-4
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOCs cont. (mg/kg)															
1,4-Dichlorobenzene	0.001 U	--	0.065 U	0.064 U	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
2,2-Dichloropropane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
2-Butanone	0.012	--	--	--	--	0.0058 U	--	--	0.017	--	--	--	--	--	--
2-Chloroethylvinyl ether	0.005 U	--	--	--	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
2-Chlorotoluene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
2-Hexanone	0.005 U	--	--	--	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
4-Chlorotoluene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
4-Isopropyltoluene	0.001 U	--	--	--	--	0.0014	--	--	0.0011	--	--	--	--	--	--
4-Methyl-2-pentanone	0.005 U	--	--	--	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
Acetone	0.055	--	--	--	--	0.026	--	--	0.074	--	--	--	--	--	--
Acrolein	0.05 U	--	--	--	--	0.058 U	--	--	0.044 U	--	--	--	--	--	--
Acrylonitrile	0.005 U	--	--	--	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
Benzene	0.0012	0.015 U	0.12	0.036 U	0.017 U	0.022	0.015 U	0.011 U	0.0009	0.011 U	0.01 U	0.012 U	0.013 U	0.013 U	0.011 U
Bromobenzene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Bromodichloromethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Bromoethane	0.002 U	--	--	--	--	0.0023 U	--	--	0.0018 U	--	--	--	--	--	--
Bromoform	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Bromomethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Carbon disulfide	0.001 U	--	--	--	--	0.0012 U	--	--	0.001	--	--	--	--	--	--
Carbon tetrachloride	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Chlorobenzene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Chlorobromomethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Chloroethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Chloroform	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Chloromethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
cis-1,2-Dichloroethene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
cis-1,3-Dichloropropene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Dibromochloromethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Dibromomethane	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Ethylbenzene	0.0011 M	0.03 U	0.057 U	0.072 U	0.035 U	0.0012 U	0.031 U	0.023 U	0.0013	0.022 U	0.021 U	0.024 U	0.025 U	0.026 U	0.022 U
Freon 113	0.002 U	--	--	--	--	0.0023 U	--	--	0.0018 U	--	--	--	--	--	--
Isopropylbenzene	0.0051	--	--	--	--	0.0052	--	--	0.0009 U	--	--	--	--	--	--
m,p-Xylene	0.0034	0.061 U	0.21	0.14 U	0.07 U	0.015	0.062 U	0.045 U	0.0046	0.044 U	0.042 U	0.049 U	0.051 U	0.052 U	0.044 U
Methyl iodide	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Methylene chloride	0.002 U	--	--	--	--	0.0023 U	--	--	0.0018 U	--	--	--	--	--	--
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 Removal Action														
Area/Feature:	Shipping Area														
Location:	BDS-11	BDS-12	BDS-13	BDS-14	BDS-15	BDS-16	BDS-17	BDS-18	BDS-19	BDS-22	BDS-23	BDS-24	BDS-25	SWS-02	SWS-05
Sample Name:	ACSI-BDS-11	ACSI-BDS-12	ACSI-BDS-13	ACSI-BDS-14	ACSI-BDS-15	ACSI-BDS-16	ACSI-BDS-17	ACSI-BDS-18	ACSI-BDS-19	ACSI-BDS-22	ACSI-BDS-23	ACSI-BDS-24	ACSI-BDS-25	ACSI-SWS-02	ACSI-SWS-05
Sample Date:	05/01/2006	05/01/2006	05/02/2006	05/02/2006	05/03/2006	05/02/2006	05/05/2006	05/11/2006	05/12/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/01/2006	04/28/2006
Sample Depth (feet bgs):	4	4	10	10	10	10	9	8	4	10	8-9	8	8	2-4	2-4
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOCs cont. (mg/kg)															
n-Butylbenzene	0.017	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
n-Propylbenzene	0.018	--	--	--	--	0.0092	--	--	0.0009	--	--	--	--	--	--
o-Xylene	0.001 U	0.03 U	0.057 U	0.072 U	0.035 U	0.0013	0.031 U	0.023 U	0.0024	0.022 U	0.021 U	0.024 U	0.025 U	0.026 U	0.022 U
sec-Butylbenzene	0.0031	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Styrene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
tert-Butylbenzene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Tetrachloroethene (PCE)	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Toluene	0.001 U	0.03 U	0.057 U	0.072 U	0.035 U	0.0012 U	0.031 U	0.023 U	0.003	0.022 U	0.021 U	0.024 U	0.025 U	0.026 U	0.022 U
trans-1,2-Dichloroethene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
trans-1,3-Dichloropropene	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	0.005 U	--	--	--	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
Trichloroethene (TCE)	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Vinyl acetate	0.005 U	--	--	--	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
Vinyl chloride	0.001 U	--	--	--	--	0.0012 U	--	--	0.0009 U	--	--	--	--	--	--
Xylenes (total)	0.12 U	0.12 U	0.24	0.29 U	0.14 U	0.14 U	0.12 U	0.09 U	0.1 U	0.088 U	0.083 U	0.098 U	0.1 U	0.1 U	0.089 U
SVOCs (mg/kg)															
2,4,5-Trichlorophenol	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
2,4,6-Trichlorophenol	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
2,4-Dichlorophenol	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
2,4-Dimethylphenol	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
2,4-Dinitrophenol	0.64 U	--	0.65 U	0.64 U	--	--	--	--	0.63 U	--	--	--	--	--	--
2,4-Dinitrotoluene	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
2,6-Dinitrotoluene	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
2-Chloronaphthalene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
2-Chlorophenol	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
2-Methylnaphthalene	0.079	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
2-Methylphenol	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
2-Nitroaniline	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
2-Nitrophenol	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
3-Nitroaniline	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	0.64 U	--	0.65 U	0.64 U	--	--	--	--	0.63 U	--	--	--	--	--	--
4-Bromophenyl phenyl ether	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
4-Chloro-3-methylphenol	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
4-Chloroaniline	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 Removal Action														
Area/Feature:	Shipping Area														
Location:	BDS-11	BDS-12	BDS-13	BDS-14	BDS-15	BDS-16	BDS-17	BDS-18	BDS-19	BDS-22	BDS-23	BDS-24	BDS-25	SWS-02	SWS-05
Sample Name:	ACSI-BDS-11	ACSI-BDS-12	ACSI-BDS-13	ACSI-BDS-14	ACSI-BDS-15	ACSI-BDS-16	ACSI-BDS-17	ACSI-BDS-18	ACSI-BDS-19	ACSI-BDS-22	ACSI-BDS-23	ACSI-BDS-24	ACSI-BDS-25	ACSI-SWS-02	ACSI-SWS-05
Sample Date:	05/01/2006	05/01/2006	05/02/2006	05/02/2006	05/03/2006	05/02/2006	05/05/2006	05/11/2006	05/12/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/01/2006	04/28/2006
Sample Depth (feet bgs):	4	4	10	10	10	10	9	8	4	10	8-9	8	8	2-4	2-4
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SVOCs cont. (mg/kg)															
4-Chlorophenyl phenyl ether	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
4-Methylphenol	0.064 U	--	0.065 U	0.37	--	--	--	--	0.063 U	--	--	--	--	--	--
4-Nitroaniline	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
4-Nitrophenol	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
Acenaphthene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Acenaphthylene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Anthracene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.086	--	--	--	--	--	--
Benzo(a)anthracene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.43	--	--	--	--	--	--
Benzo(a)pyrene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.76	--	--	--	--	--	--
Benzo(b)fluoranthene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.94	--	--	--	--	--	--
Benzo(ghi)perylene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.32	--	--	--	--	--	--
Benzo(k)fluoranthene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.39	--	--	--	--	--	--
Benzoic acid	0.64 U	--	0.65 U	0.64 U	--	--	--	--	0.63 U	--	--	--	--	--	--
Benzyl alcohol	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Bis(2-chloroethyl) ether	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Butylbenzyl phthalate	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Carbazole	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Chrysene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.44	--	--	--	--	--	--
Dibenzo(a,h)anthracene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.11	--	--	--	--	--	--
Dibenzofuran	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Diethyl phthalate	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Dimethyl phthalate	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Di-n-butyl phthalate	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Di-n-octyl phthalate	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Fluoranthene	0.065	--	0.065 U	0.064 U	--	--	--	--	0.7	--	--	--	--	--	--
Fluorene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Hexachlorobenzene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Hexachlorobutadiene	0.005 U	--	0.065 U	0.064 U	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
Hexachloroethane	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.28	--	--	--	--	--	--
Isophorone	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Naphthalene	0.011	--	0.065 U	0.064 U	--	0.0058 U	--	--	0.0044 U	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006 Removal Action														
Area/Feature:	Shipping Area														
Location:	BDS-11	BDS-12	BDS-13	BDS-14	BDS-15	BDS-16	BDS-17	BDS-18	BDS-19	BDS-22	BDS-23	BDS-24	BDS-25	SWS-02	SWS-05
Sample Name:	ACSI-BDS-11	ACSI-BDS-12	ACSI-BDS-13	ACSI-BDS-14	ACSI-BDS-15	ACSI-BDS-16	ACSI-BDS-17	ACSI-BDS-18	ACSI-BDS-19	ACSI-BDS-22	ACSI-BDS-23	ACSI-BDS-24	ACSI-BDS-25	ACSI-SWS-02	ACSI-SWS-05
Sample Date:	05/01/2006	05/01/2006	05/02/2006	05/02/2006	05/03/2006	05/02/2006	05/05/2006	05/11/2006	05/12/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/01/2006	04/28/2006
Sample Depth (feet bgs):	4	4	10	10	10	10	9	8	4	10	8-9	8	8	2-4	2-4
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SVOCs cont. (mg/kg)															
Nitrobenzene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
N-Nitrosodipropylamine	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
Pentachlorophenol	0.32 U	--	0.32 U	0.32 U	--	--	--	--	0.32 U	--	--	--	--	--	--
Phenanthrene	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.39	--	--	--	--	--	--
Phenol	0.064 U	--	0.065 U	0.064 U	--	--	--	--	0.063 U	--	--	--	--	--	--
Pyrene	0.088	--	0.065 U	0.064 U	--	--	--	--	0.6	--	--	--	--	--	--
EPH (mg/kg)															
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VPH (mg/kg)															
C5-C6 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006_Removal Action														
Area/Feature:	Shipping Area														
Location:	SWS-06	SWS-16	SWS-17	SWS-18	SWS-19	SWS-21	SWS-22		SWS-23	SWS-24	SWS-25	SWS-26	SWS-27	SWS-28	SWS-29
Sample Name:	ACSI-SWS-06	ACSI-SWS-16	ACSI-SWS-17	ACSI-SWS-18	ACSI-SWS19	ACSI-SWS-21	ACSI-SWS-22	ACSI-SWS-222	ACSI-SWS-23	ACSI-SWS-24	ACSI-SWS-25	ACSI-SWS-26	ACSI-SWS-27	ACSI-SWS-28	ACSI-SWS-29
Sample Date:	05/01/2006	05/11/2006	05/12/2006	05/12/2006	05/12/2006	05/12/2006	05/15/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/17/2006
Sample Depth (feet bgs):	2-4	2-4	2-4	2-4	1-3	2-2.3	1-2	1-2	1-2	3-4.5	1.8-1.8	4-4.8	1.5-2	4-5	4.5-4.5
Sample Type:	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
HCID (detect/non-detect)															
Gasoline	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TPH (mg/kg)															
Gasoline-range hydrocarbons	4.6 U	5.5	4.1 U	4.6 U	5 U	4.5 U	3.8 U	3.7 U	3.5 U	5 U	4.2 U	5.7 U	4.4 U	5.5 U	6.5 U
Diesel-range hydrocarbons	29	200	44	65	30	12	140	84	13	100	5.2 U	26	18	9.4	--
Oil-range hydrocarbons	110	570	260	160	100	62	740	190	26	130	11	190	81	40	--
Hydraulic fluid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals (mg/kg)															
Arsenic	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg)															
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans (pg/g)															
1,2,3,4,6,7,8-HpCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006_Removal Action														
Area/Feature:	Shipping Area														
Location:	SWS-06	SWS-16	SWS-17	SWS-18	SWS-19	SWS-21	SWS-22		SWS-23	SWS-24	SWS-25	SWS-26	SWS-27	SWS-28	SWS-29
Sample Name:	ACSI-SWS-06	ACSI-SWS-16	ACSI-SWS-17	ACSI-SWS-18	ACSI-SWS19	ACSI-SWS-21	ACSI-SWS-22	ACSI-SWS-222	ACSI-SWS-23	ACSI-SWS-24	ACSI-SWS-25	ACSI-SWS-26	ACSI-SWS-27	ACSI-SWS-28	ACSI-SWS-29
Sample Date:	05/01/2006	05/11/2006	05/12/2006	05/12/2006	05/12/2006	05/12/2006	05/15/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/17/2006
Sample Depth (feet bgs):	2-4	2-4	2-4	2-4	1-3	2-2.3	1-2	1-2	1-2	3-4.5	1.8-1.8	4-4.8	1.5-2	4-5	4.5-4.5
Sample Type:	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
Dioxins and Furans cont. (pg/g)															
1,2,3,7,8-PeCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (mg/kg)															
1,1,1,2-Tetrachloroethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	0.0033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	0.0013 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	0.0033 U	0.066 U	0.064 U	0.064 U										
1,2,4-Trimethylbenzene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	0.0033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	0.0007 U	0.066 U	0.064 U	0.064 U										
1,2-Dichloroethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	0.0007 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006_Removal Action														
Area/Feature:	Shipping Area														
Location:	SWS-06	SWS-16	SWS-17	SWS-18	SWS-19	SWS-21	SWS-22		SWS-23	SWS-24	SWS-25	SWS-26	SWS-27	SWS-28	SWS-29
Sample Name:	ACSI-SWS-06	ACSI-SWS-16	ACSI-SWS-17	ACSI-SWS-18	ACSI-SWS19	ACSI-SWS-21	ACSI-SWS-22	ACSI-SWS-222	ACSI-SWS-23	ACSI-SWS-24	ACSI-SWS-25	ACSI-SWS-26	ACSI-SWS-27	ACSI-SWS-28	ACSI-SWS-29
Sample Date:	05/01/2006	05/11/2006	05/12/2006	05/12/2006	05/12/2006	05/12/2006	05/15/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/17/2006
Sample Depth (feet bgs):	2-4	2-4	2-4	2-4	1-3	2-2.3	1-2	1-2	1-2	3-4.5	1.8-1.8	4-4.8	1.5-2	4-5	4.5-4.5
Sample Type:	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
VOCs cont. (mg/kg)															
1,4-Dichlorobenzene	--	0.0007 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	0.0033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	--	0.0033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	0.0033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	0.0033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	0.021	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	--	0.033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	--	0.0033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	0.012 U	0.0007 U	0.01 U	0.011 U	0.012 U	0.011 U	0.0094 U	0.0092 U	0.0087 U	0.012 U	0.011 U	0.014 U	0.011 U	0.014 U	0.016 U
Bromobenzene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	--	0.0013 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	0.023 U	0.0007 U	0.021 U	0.023 U	0.025 U	0.022 U	0.019 U	0.018 U	0.017 U	0.025 U	0.021 U	0.028 U	0.022 U	0.028 U	0.032 U
Freon 113	--	0.0013 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	0.046 U	0.0007 U	0.041 U	0.046 U	0.05 U	0.045 U	0.038 U	0.037 U	0.035 U	0.05 U	0.042 U	0.057 U	0.044 U	0.055 U	0.065 U
Methyl iodide	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	--	0.0013 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006_Removal Action														
Area/Feature:	Shipping Area														
Location:	SWS-06	SWS-16	SWS-17	SWS-18	SWS-19	SWS-21	SWS-22		SWS-23	SWS-24	SWS-25	SWS-26	SWS-27	SWS-28	SWS-29
Sample Name:	ACSI-SWS-06	ACSI-SWS-16	ACSI-SWS-17	ACSI-SWS-18	ACSI-SWS19	ACSI-SWS-21	ACSI-SWS-22	ACSI-SWS-222	ACSI-SWS-23	ACSI-SWS-24	ACSI-SWS-25	ACSI-SWS-26	ACSI-SWS-27	ACSI-SWS-28	ACSI-SWS-29
Sample Date:	05/01/2006	05/11/2006	05/12/2006	05/12/2006	05/12/2006	05/12/2006	05/15/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/17/2006
Sample Depth (feet bgs):	2-4	2-4	2-4	2-4	1-3	2-2.3	1-2	1-2	1-2	3-4.5	1.8-1.8	4-4.8	1.5-2	4-5	4.5-4.5
Sample Type:	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
VOCs cont. (mg/kg)															
n-Butylbenzene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	0.023 U	0.0007 U	0.021 U	0.023 U	0.025 U	0.022 U	0.019 U	0.018 U	0.017 U	0.025 U	0.021 U	0.028 U	0.022 U	0.028 U	0.032 U
sec-Butylbenzene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	0.023 U	0.0007 U	0.021 U	0.023 U	0.025 U	0.022 U	0.019 U	0.018 U	0.017 U	0.025 U	0.021 U	0.028 U	0.022 U	0.028 U	0.032 U
trans-1,2-Dichloroethene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	--	0.0033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	--	0.0033 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	0.0007 U	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (total)	0.092 U	0.091 U	0.083 U	0.092 U	0.1 U	0.089 U	0.076 U	0.073 U	0.07 U	0.099 U	0.084 U	0.11 U	0.088 U	0.11 U	0.13 U
SVOCs (mg/kg)															
2,4,5-Trichlorophenol	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	--	0.65 U	0.66 U	0.64 U	0.64 U	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	--	0.1	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	--	0.65 U	0.66 U	0.64 U	0.64 U	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006_Removal Action														
Area/Feature:	Shipping Area														
Location:	SWS-06	SWS-16	SWS-17	SWS-18	SWS-19	SWS-21	SWS-22		SWS-23	SWS-24	SWS-25	SWS-26	SWS-27	SWS-28	SWS-29
Sample Name:	ACSI-SWS-06	ACSI-SWS-16	ACSI-SWS-17	ACSI-SWS-18	ACSI-SWS19	ACSI-SWS-21	ACSI-SWS-22	ACSI-SWS-222	ACSI-SWS-23	ACSI-SWS-24	ACSI-SWS-25	ACSI-SWS-26	ACSI-SWS-27	ACSI-SWS-28	ACSI-SWS-29
Sample Date:	05/01/2006	05/11/2006	05/12/2006	05/12/2006	05/12/2006	05/12/2006	05/15/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/17/2006
Sample Depth (feet bgs):	2-4	2-4	2-4	2-4	1-3	2-2.3	1-2	1-2	1-2	3-4.5	1.8-1.8	4-4.8	1.5-2	4-5	4.5-4.5
Sample Type:	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
SVOCs cont. (mg/kg)															
4-Chlorophenyl phenyl ether	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
Acenaphthene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Anthracene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Benzo(ghi)perylene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Benzoic acid	--	0.65 U	0.66 U	0.64 U	0.64 U	--	--	--	--	--	--	--	--	--	--
Benzyl alcohol	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Butylbenzyl phthalate	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Carbazole	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Chrysene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Fluoranthene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Fluorene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	0.0033 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Isophorone	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	0.077	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2006_Removal Action														
Area/Feature:	Shipping Area														
Location:	SWS-06	SWS-16	SWS-17	SWS-18	SWS-19	SWS-21	SWS-22		SWS-23	SWS-24	SWS-25	SWS-26	SWS-27	SWS-28	SWS-29
Sample Name:	ACSI-SWS-06	ACSI-SWS-16	ACSI-SWS-17	ACSI-SWS-18	ACSI-SWS19	ACSI-SWS-21	ACSI-SWS-22	ACSI-SWS-222	ACSI-SWS-23	ACSI-SWS-24	ACSI-SWS-25	ACSI-SWS-26	ACSI-SWS-27	ACSI-SWS-28	ACSI-SWS-29
Sample Date:	05/01/2006	05/11/2006	05/12/2006	05/12/2006	05/12/2006	05/12/2006	05/15/2006	05/15/2006	05/15/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/16/2006	05/17/2006
Sample Depth (feet bgs):	2-4	2-4	2-4	2-4	1-3	2-2.3	1-2	1-2	1-2	3-4.5	1.8-1.8	4-4.8	1.5-2	4-5	4.5-4.5
Sample Type:	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
SVOCs cont. (mg/kg)															
Nitrobenzene	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
N-Nitrosodipropylamine	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	--	0.32 U	0.33 U	0.32 U	0.32 U	--	--	--	--	--	--	--	--	--	--
Phenanthrene	--	0.067	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Phenol	--	0.065 U	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
Pyrene	--	0.078	0.066 U	0.064 U	0.064 U	--	--	--	--	--	--	--	--	--	--
EPH (mg/kg)															
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VPH (mg/kg)															
C5-C6 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1a
2005-2006 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Notes

Historic waste characterization and excavated sample locations are not included as they are no longer representative of environmental conditions present at the site.

-- = not analyzed.
bgs = below ground surface.
EPH = extractable petroleum hydrocarbons.
ESA = environmental site assessment.
FD = field duplicate sample.
HCID = hydrocarbon identification.
J = result is estimated.
JK = result is estimated and an estimated maximum potential concentration.
mg/kg = milligrams per kilogram.
N = normal environmental sample.
ND = non-detect.
PCB = polychlorinated biphenyl.
pg/g = picograms per gram.
SVOC = semivolatile organic compound.
TPH = total petroleum hydrocarbons.
U = result is non-detect at the method reporting limit.
VOC = volatile organic compound.
VPH = volatile petroleum hydrocarbons.

Reference

[1]CH2MHILL. 2007. *Final Remedial Investigation/Feasibility Study Report.* Abitibi West Tacoma Mill. Prepared for Abitibi Consolidated Sales Corporation. CH2MHILL. April.

Table 2-1b
2022 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2022 Supplemental Characterization													
Area/Feature:	AOI-001					AOI-002								
Location:	AOI-001-1	AOI-001-2	AOI-001-3	AOI-001-4		AOI-002-1		AOI-002-2		AOI-002-3		AOI-002-4		
Sample Name:	AOI-001-SS-1-0-6	AOI-001-SS-2-0-6	AOI-001-SS-3-0-6	AOI-001-SS-4-0-6	AOI-001-SUBSS-4-6-12	AOI-002-SS-1-0-6	AOI-002-SUBSS-1-6-12	AOI-002-SS-2-0-6	AOI-002-SUBSS-2-6-12	AOI-002-SS-3-0-6	AOI-002-SUBSS-3-6-12	AOI-002-SS-4-0-6	AOI-002-SS-4-0-6-DUP	AOI-002-SUBSS-4-6-12
Sample Date:	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022
Sample Depth (feet bgs):	0-0.5	0-0.5	0-0.5	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0-0.5	0.5-1.0
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
Physical Parameters (%)														
Total organic carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total solids	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (%)														
Percent passing 1 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 1 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 2 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 4 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 8 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 16 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 32 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 63 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 125 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 250 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 500 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 1,000 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 2,000 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 4,000 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 4,750 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Gravel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals (mg/kg)														
Antimony	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	8.71	8.65	10.6	14.7	8.06	4.19 J	5.65	10.4	6.36	25.9	24.9	7.65	8.02	7.63
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	43.3	44.7	10.5	21	9.05	5.43 J	8.75	16.5	8.8	49.2	45.8	12.6	12.9	12.1
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1b
2022 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2022 Supplemental Characterization													
Area/Feature:	AOI-001					AOI-002								
Location:	AOI-001-1	AOI-001-2	AOI-001-3	AOI-001-4		AOI-002-1		AOI-002-2		AOI-002-3		AOI-002-4		
Sample Name:	AOI-001-SS-1-0-6	AOI-001-SS-2-0-6	AOI-001-SS-3-0-6	AOI-001-SS-4-0-6	AOI-001-SUBSS-4-6-12	AOI-002-SS-1-0-6	AOI-002-SUBSS-1-6-12	AOI-002-SS-2-0-6	AOI-002-SUBSS-2-6-12	AOI-002-SS-3-0-6	AOI-002-SUBSS-3-6-12	AOI-002-SS-4-0-6	AOI-002-SS-4-0-6-DUP	AOI-002-SUBSS-4-6-12
Sample Date:	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022
Sample Depth (feet bgs):	0-0.5	0-0.5	0-0.5	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0-0.5	0.5-1.0
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
Organochlorine Pesticides (mg/kg)														
4,4'-DDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane (technical)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg)														
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1262	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1268	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxins and Furans (pg/g)														
1,2,3,4,6,7,8-HpCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1b
2022 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2022 Supplemental Characterization													
Area/Feature:	AOI-001					AOI-002								
Location:	AOI-001-1	AOI-001-2	AOI-001-3	AOI-001-4		AOI-002-1		AOI-002-2		AOI-002-3		AOI-002-4		
Sample Name:	AOI-001-SS-1-0-6	AOI-001-SS-2-0-6	AOI-001-SS-3-0-6	AOI-001-SS-4-0-6	AOI-001-SUBSS-4-6-12	AOI-002-SS-1-0-6	AOI-002-SUBSS-1-6-12	AOI-002-SS-2-0-6	AOI-002-SUBSS-2-6-12	AOI-002-SS-3-0-6	AOI-002-SUBSS-3-6-12	AOI-002-SS-4-0-6	AOI-002-SS-4-0-6-DUP	AOI-002-SUBSS-4-6-12
Sample Date:	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022
Sample Depth (feet bgs):	0-0.5	0-0.5	0-0.5	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0-0.5	0.5-1.0
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
Dioxins and Furans cont. (pg/g)														
OCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDFs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDDs	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (mg/kg)														
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs (mg/kg)														
2,4-Dimethylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3- & 4-Methylphenol (m,p-Cresol)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(ghi)perylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(j+k)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl alcohol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1b
2022 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2022 Supplemental Characterization													
Area/Feature:	AOI-001					AOI-002								
Location:	AOI-001-1	AOI-001-2	AOI-001-3	AOI-001-4		AOI-002-1		AOI-002-2		AOI-002-3		AOI-002-4		
Sample Name:	AOI-001-SS-1-0-6	AOI-001-SS-2-0-6	AOI-001-SS-3-0-6	AOI-001-SS-4-0-6	AOI-001-SUBSS-4-6-12	AOI-002-SS-1-0-6	AOI-002-SUBSS-1-6-12	AOI-002-SS-2-0-6	AOI-002-SUBSS-2-6-12	AOI-002-SS-3-0-6	AOI-002-SUBSS-3-6-12	AOI-002-SS-4-0-6	AOI-002-SS-4-0-6-DUP	AOI-002-SUBSS-4-6-12
Sample Date:	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022	08/24/2022
Sample Depth (feet bgs):	0-0.5	0-0.5	0-0.5	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0.5-1.0	0-0.5	0-0.5	0.5-1.0
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
SVOCs cont. (mg/kg)														
Dimethyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-1b
2022 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2022 Supplemental Characterization										2022 Stream Investigation
Area/Feature:	AOI-001						AOI-002				Garrison Creek
Location:	AOI-001-1	AOI-001-2	AOI-001-3	AOI-001-DU1			AOI-002-1	AOI-002-2	AOI-002-3	AOI-002-DU1	GCB01
Sample Name:	AOI-001-SS-1-0-2	AOI-001-SS-2-0-2	AOI-001-SS-3-0-2	AOI-001-ISM	AOI-001-ISM-DUP	AOI-001-ISM-TRIP	AOI-002-SS-1-0-2	AOI-002-SS-2-0-2	AOI-002-SS-3-0-2	AOI-002-ISM	GCB01-S-0_15
Sample Date:	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/24/2022	08/24/2022	08/24/2022	08/23/2022	10/07/2022
Sample Depth (feet bgs):	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-15
Sample Type:	N	N	N	ISM	FD	FT	N	N	N	ISM	N
Physical Parameters (%)											
Total organic carbon	87,000	83,000	21,000	56,000	61,000	50,000	19,000	70,000	61,000	35,000	3,500
Total solids	--	--	--	--	--	--	--	--	--	--	92.3
Grain Size (%)											
Percent passing 1 micron sieve	--	--	--	--	--	--	--	--	--	--	2.10
Percent retained 1 micron sieve	--	--	--	--	--	--	--	--	--	--	1.70
Percent retained 2 micron sieve	--	--	--	--	--	--	--	--	--	--	2.30
Percent retained 4 micron sieve	--	--	--	--	--	--	--	--	--	--	0.70
Percent retained 8 micron sieve	--	--	--	--	--	--	--	--	--	--	1.50
Percent retained 16 micron sieve	--	--	--	--	--	--	--	--	--	--	1.60
Percent retained 32 micron sieve	--	--	--	--	--	--	--	--	--	--	1.60
Percent retained 63 micron sieve	--	--	--	--	--	--	--	--	--	--	2.30
Percent retained 125 micron sieve	--	--	--	--	--	--	--	--	--	--	4.60
Percent retained 250 micron sieve	--	--	--	--	--	--	--	--	--	--	11.9
Percent retained 500 micron sieve	--	--	--	--	--	--	--	--	--	--	13.6
Percent retained 1,000 micron sieve	--	--	--	--	--	--	--	--	--	--	11.1
Percent retained 2,000 micron sieve	--	--	--	--	--	--	--	--	--	--	12.4
Percent retained 4,000 micron sieve	--	--	--	--	--	--	--	--	--	--	3.60
Percent retained 4,750 micron sieve	--	--	--	--	--	--	--	--	--	--	29.0
Clay	--	--	--	--	--	--	--	--	--	--	6.10
Silt	--	--	--	--	--	--	--	--	--	--	5.40
Sand	--	--	--	--	--	--	--	--	--	--	43.5
Gravel	--	--	--	--	--	--	--	--	--	--	45.0
Metals (mg/kg)											
Antimony	--	--	--	--	--	--	--	--	--	--	5.6 U
Arsenic	--	--	--	--	--	--	--	--	--	--	11 U
Cadmium	--	--	--	--	--	--	--	--	--	--	0.56 U
Chromium	--	--	--	--	--	--	--	--	--	--	18
Copper	--	--	--	--	--	--	--	--	--	--	21
Lead	--	--	--	--	--	--	--	--	--	--	5.6 U
Mercury	--	--	--	--	--	--	--	--	--	--	0.28 U
Selenium	--	--	--	--	--	--	--	--	--	--	11 U
Silver	--	--	--	--	--	--	--	--	--	--	1.1 U
Zinc	--	--	--	--	--	--	--	--	--	--	28

Table 2-1b
2022 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2022 Supplemental Characterization										2022 Stream Investigation
Area/Feature:	AOI-001						AOI-002				Garrison Creek
Location:	AOI-001-1	AOI-001-2	AOI-001-3	AOI-001-DU1			AOI-002-1	AOI-002-2	AOI-002-3	AOI-002-DU1	GCB01
Sample Name:	AOI-001-SS-1-0-2	AOI-001-SS-2-0-2	AOI-001-SS-3-0-2	AOI-001-ISM	AOI-001-ISM-DUP	AOI-001-ISM-TRIP	AOI-002-SS-1-0-2	AOI-002-SS-2-0-2	AOI-002-SS-3-0-2	AOI-002-ISM	GCB01-S-0_15
Sample Date:	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/24/2022	08/24/2022	08/24/2022	08/23/2022	10/07/2022
Sample Depth (feet bgs):	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-15
Sample Type:	N	N	N	ISM	FD	FT	N	N	N	ISM	N
Organochlorine Pesticides (mg/kg)											
4,4'-DDD	--	--	--	--	--	--	--	--	--	--	0.011 U
4,4'-DDE	--	--	--	--	--	--	--	--	--	--	0.011 U
4,4'-DDT	--	--	--	--	--	--	--	--	--	--	0.011 U
Aldrin	--	--	--	--	--	--	--	--	--	--	0.0056 U
Chlordane (technical)	--	--	--	--	--	--	--	--	--	--	0.056 U
Dieldrin	--	--	--	--	--	--	--	--	--	--	0.011 U
Endrin ketone	--	--	--	--	--	--	--	--	--	--	0.011 U
Heptachlor	--	--	--	--	--	--	--	--	--	--	0.0056 U
PCB Aroclors (mg/kg)											
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	0.056 U
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	0.056 U
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	0.056 U
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	0.056 U
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	0.056 U
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	0.056 U
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	0.056 U
Aroclor 1262	--	--	--	--	--	--	--	--	--	--	0.056 U
Aroclor 1268	--	--	--	--	--	--	--	--	--	--	0.056 U
Dioxins and Furans (pg/g)											
1,2,3,4,6,7,8-HpCDD	317	299	56.3	175	122	121	5.07	21.3	50.8	33.2	2.24 J
1,2,3,4,6,7,8-HpCDF	44.2	40.6	6.34	34.1 J	14.4 J	13.2 J	0.85 U	3.31 J	7.37	6.58	0.354 J
1,2,3,4,7,8,9-HpCDF	2.56 J	2.41 J	0.611 J	2.61 J	0.956 J	1.06 J	0.122 J	0.369 J	0.753 J	0.522 J	0.374 U
1,2,3,4,7,8-HxCDD	7.8	8.52	4.7	2.94 J	2.25 J	2.52 J	0.447 UJK	2.78 J	6.19	2.03 J	0.428 U
1,2,3,4,7,8-HxCDF	6.48	10.8	1.6 J	7.14 J	2.64 J	2.59 J	0.42 U	1.26 U	3.42 J	1.53 J	0.229 U
1,2,3,6,7,8-HxCDD	24.8	27.6	6	11	8.11	8.73	0.575 J	3.24 J	7.71	3.21 J	0.409 U
1,2,3,6,7,8-HxCDF	3.07 J	3.94 J	1.43 J	2.7 J	1.26 J	1.3 J	0.235 U	0.887 J	3.08 J	1.04 J	0.223 U
1,2,3,7,8,9-HxCDD	13.6	14.7	5.34	6.28	4.93	5.25	0.482 UJK	2.94 J	6.92	2.61 J	0.405 U
1,2,3,7,8,9-HxCDF	1.36 J	1.43 J	0.507 J	2.87 J	0.734 J	0.697 J	0.108 U	0.323 J	0.847 J	0.466 J	0.387 U
1,2,3,7,8-PeCDD	4.57 J	7.9 UK	4.97	2.44 J	2.05 J	2.58 J	0.479 UJK	3.2 J	7.71	2.57 J	0.432 U
1,2,3,7,8-PeCDF	12.2	22.9	2.68 J	4.56 J	3.9 J	3.86 J	0.558 U	2.23 J	7.42	2.18 J	0.301 U
2,3,4,6,7,8-HxCDF	3.75 J	3.9 J	1.51 J	3.13 J	1.44 J	1.39 J	0.233 J	1 J	3.03 J	0.987 J	0.254 U
2,3,4,7,8-PeCDF	4.44 J	5.35	2.97 J	3.84 J	2.04 J	2.02 J	0.423 UJK	1.98 J	7.68	1.8 J	0.317 U
2,3,7,8-TCDD	1.51	1.5	1.34	1.36	1.06	1.39	0.222 U	0.907 J	2.51	1.09	0.417 U
2,3,7,8-TCDF	9.39	10.4	4.28	6.17	5.46	5.3	0.87 J	3.83	11	2.86	0.507 U
OCDD	2,620	1,910	325	1,400	1,100	1,000	21.9	69.3	166	196	3.29 UJK

Table 2-1b
2022 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2022 Supplemental Characterization										2022 Stream Investigation
Area/Feature:	AOI-001						AOI-002				Garrison Creek
Location:	AOI-001-1	AOI-001-2	AOI-001-3	AOI-001-DU1			AOI-002-1	AOI-002-2	AOI-002-3	AOI-002-DU1	GCB01
Sample Name:	AOI-001-SS-1-0-2	AOI-001-SS-2-0-2	AOI-001-SS-3-0-2	AOI-001-ISM	AOI-001-ISM-DUP	AOI-001-ISM-TRIP	AOI-002-SS-1-0-2	AOI-002-SS-2-0-2	AOI-002-SS-3-0-2	AOI-002-ISM	GCB01-S-0_15
Sample Date:	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/24/2022	08/24/2022	08/24/2022	08/23/2022	10/07/2022
Sample Depth (feet bgs):	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-15
Sample Type:	N	N	N	ISM	FD	FT	N	N	N	ISM	N
Dioxins and Furans cont. (pg/g)											
OCDF	85.4	58	8.87 J	42.9	30.6	28.7	1.7 J	4.02 J	7.91 J	14.6	0.772 U
Total HpCDDs	573 J	523 J	110	329	235	233	9.2 J	39.8	93.6	61.5	4.61 J
Total HpCDFs	124 J	107 J	15 J	104 J	42 JK	38.5 J	1.78 U	7.37 J	15.7 J	17.7 JK	0.354 J
Total HxCDDs	226 J	267 J	154 J	113 J	89.7 J	98.8 J	16.3 JK	96.8 J	246 J	75.7 J	9.57 UJK
Total HxCDFs	76 JK	84.4 JK	18 JK	85.3 JK	27.9 JK	26.8 JK	2.3 U	11 JK	32.4 JK	14.2 JK	0.984 J
Total PeCDDs	117 J	136 UJK	249 J	83.7 J	73.9 J	83.5 J	21.3 UJK	184 J	388 J	105 J	9.17 UJK
Total PeCDFs	83 JK	144 JK	38.3 J	44.7 JK	29.4 JK	27.6 JK	5.45 JK	27.3 JK	101 JK	26.2 JK	4.99 UJK
Total TCDDs	228 JK	171 JK	351 JK	114 JK	101 JK	112 JK	31.2 J	307 JK	606 J	153 JK	7.78 UJK
Total TCDF	146 JK	148 JK	92.8 JK	54.2 JK	48.2 JK	52.6 JK	12.1 JK	74.1 JK	265 JK	56.6 JK	4.04 UJK
VOCs (mg/kg)											
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	0.00094 U
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	0.00094 U
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	0.00094 U
SVOCs (mg/kg)											
2,4-Dimethylphenol	--	--	--	--	--	--	--	--	--	--	0.037 U
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	0.0075 U
2-Methylphenol	--	--	--	--	--	--	--	--	--	--	0.037 U
3- & 4-Methylphenol (m,p-Cresol)	--	--	--	--	--	--	--	--	--	--	0.037 U
Acenaphthene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Anthracene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Benzo(ghi)perylene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Benzo(j+k)fluoranthene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Benzoic acid	--	--	--	--	--	--	--	--	--	--	0.38 U
Benzyl alcohol	--	--	--	--	--	--	--	--	--	--	0.037 U
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--	0.19 U
Butylbenzyl phthalate	--	--	--	--	--	--	--	--	--	--	0.19 U
Carbazole	--	--	--	--	--	--	--	--	--	--	0.037 U
Chrysene	--	--	--	--	--	--	--	--	--	--	0.02
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Dibenzofuran	--	--	--	--	--	--	--	--	--	--	0.037 U
Diethyl phthalate	--	--	--	--	--	--	--	--	--	--	0.19 U

Table 2-1b
2022 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2022 Supplemental Characterization										2022 Stream Investigation
Area/Feature:	AOI-001						AOI-002				Garrison Creek
Location:	AOI-001-1	AOI-001-2	AOI-001-3	AOI-001-DU1			AOI-002-1	AOI-002-2	AOI-002-3	AOI-002-DU1	GCB01
Sample Name:	AOI-001-SS-1-0-2	AOI-001-SS-2-0-2	AOI-001-SS-3-0-2	AOI-001-ISM	AOI-001-ISM-DUP	AOI-001-ISM-TRIP	AOI-002-SS-1-0-2	AOI-002-SS-2-0-2	AOI-002-SS-3-0-2	AOI-002-ISM	GCB01-S-0_15
Sample Date:	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/25/2022	08/24/2022	08/24/2022	08/24/2022	08/23/2022	10/07/2022
Sample Depth (feet bgs):	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-0.2	0-15
Sample Type:	N	N	N	ISM	FD	FT	N	N	N	ISM	N
SVOCs cont. (mg/kg)											
Dimethyl phthalate	--	--	--	--	--	--	--	--	--	--	0.037 U
Di-n-butyl phthalate	--	--	--	--	--	--	--	--	--	--	0.19 U
Di-n-octyl phthalate	--	--	--	--	--	--	--	--	--	--	0.19 U
Fluoranthene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Fluorene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Hexachlorobenzene	--	--	--	--	--	--	--	--	--	--	0.037 U
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	0.037 U
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--	--	--	--	--	0.0075 U
Naphthalene	--	--	--	--	--	--	--	--	--	--	0.0075 U
N-Nitrosodiphenylamine	--	--	--	--	--	--	--	--	--	--	0.037 U
Pentachlorophenol	--	--	--	--	--	--	--	--	--	--	0.19 U
Phenanthrene	--	--	--	--	--	--	--	--	--	--	0.031
Phenol	--	--	--	--	--	--	--	--	--	--	0.037 U
Pyrene	--	--	--	--	--	--	--	--	--	--	0.041

Table 2-1b
2022 Historical Soil Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Notes

-- = not analyzed.

AOI = area of interest.

bgs = below ground surface.

FD = field duplicate sample.

J = result is estimated.

JK = result is estimated and an estimated maximum potential concentration.

mg/kg = milligrams per kilogram.

N = normal environmental sample.

ND = non-detect.

PCB = polychlorinated biphenyl.

pg/g = picograms per gram.

SVOC = semivolatile organic compound.

TPH = total petroleum hydrocarbons.

U = result is non-detect at the estimated detection limit or method reporting limit.

UK = result is non-detect and an estimated maximum potential concentration.

UJK = result is non-detect, an estimated value, and an estimated maximum potential concentration..

VOC = volatile organic compound.

References

[1]MFA. 2023. *Supplemental Metals and Dioxins Characterization Report* . Abitibi Consolidated Sales Corp. Prepared for HDG, LP. Maul Foster &

[2]MFA. 2023. Audrey Hackett, Maul Foster & Alongi, Inc. *Garrison Creek Restoration Investigation Data Summary* . Letter to Rand Bellar, HDG, LP. February 6.

Table 2-2
Historical Sediment Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2005 Phase II ESA	2022 Supplemental Characterization					
Area/Feature:	Outfall	AOI-003					
Location:	OU1	AOI-003-1	AOI-003-2		AOI-003-3	AOI-003-4	AOI-003-5
Sample Name:	OU1	AOI-003-SED1	AOI-003-SED2	AOI-003-SED2-DUP	AOI-003-SED3	AOI-003-SED4	AOI-003-SED5
Sample Date:	02/24/2005	08/23/2022	08/23/2022	08/23/2022	08/23/2022	08/23/2022	08/23/2022
Sample Depth (inches bml):	--	0-4	0-4	0-4	0-4	0-4	0-4
Sample Type:	N	N	N	FD	N	N	N
Other Parameters (mg/kg)							
Sulfide	1,300	--	--	--	--	--	--
HEM (mg/kg)							
Polar oil & grease	739 UJ	--	--	--	--	--	--
Nonpolar oil & grease	672 U	--	--	--	--	--	--
Total HEM	3,750	--	--	--	--	--	--
TPH (mg/kg)							
Gasoline-range hydrocarbons	20 U	--	--	--	--	--	--
Diesel-range hydrocarbons	51 U	--	--	--	--	--	--
Oil-range hydrocarbons	100 U	--	--	--	--	--	--
Metals (mg/kg)							
Arsenic	20 U	4.4	2.5	2.89	6.38	8.98	3.11
Barium	29	--	--	--	--	--	--
Cadmium	1.2	--	--	--	--	--	--
Chromium	31	--	--	--	--	--	--
Lead	38	25.6	14.4	18.2	18.2	21.6	18.7
Mercury	0.19	--	--	--	--	--	--
Selenium	20 U	--	--	--	--	--	--
Silver	1 U	--	--	--	--	--	--
PCBs (mg/kg)							
Aroclor 1016	0.02 U	--	--	--	--	--	--
Aroclor 1221	0.02 U	--	--	--	--	--	--
Aroclor 1232	0.02 U	--	--	--	--	--	--
Aroclor 1242	0.02 U	--	--	--	--	--	--
Aroclor 1248	0.02 U	--	--	--	--	--	--
Aroclor 1254	0.02 U	--	--	--	--	--	--
Aroclor 1260	0.02 U	--	--	--	--	--	--
VOCs (mg/kg)							
1,2,4-Trichlorobenzene	0.02 U	--	--	--	--	--	--
1,2-Dichlorobenzene	0.02 U	--	--	--	--	--	--
1,3-Dichlorobenzene	0.02 U	--	--	--	--	--	--
1,4-Dichlorobenzene	0.02 U	--	--	--	--	--	--

Table 2-2
Historical Sediment Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Location:	OU1	AOI-003-1	AOI-003-2		AOI-003-3	AOI-003-4	AOI-003-5
Sample Name:	OU1	AOI-003-SED1	AOI-003-SED2	AOI-003-SED2-DUP	AOI-003-SED3	AOI-003-SED4	AOI-003-SED5
Sample Date:	02/24/2005	08/23/2022	08/23/2022	08/23/2022	08/23/2022	08/23/2022	08/23/2022
Sample Depth (inches bml):	--	0-4	0-4	0-4	0-4	0-4	0-4
Sample Type:	N	N	N	FD	N	N	N
SVOCs (mg/kg)							
2,4,5-Trichlorophenol	0.1 U	--	--	--	--	--	--
2,4,6-Trichlorophenol	0.1 U	--	--	--	--	--	--
2,4-Dichlorophenol	0.1 U	--	--	--	--	--	--
2,4-Dimethylphenol	0.02 U	--	--	--	--	--	--
2,4-Dinitrophenol	0.2 U	--	--	--	--	--	--
2,4-Dinitrotoluene	0.1 U	--	--	--	--	--	--
2,6-Dinitrotoluene	0.1 U	--	--	--	--	--	--
2-Chloronaphthalene	0.02 U	--	--	--	--	--	--
2-Chlorophenol	0.02 U	--	--	--	--	--	--
2-Methylnaphthalene	0.02 U	--	--	--	--	--	--
2-Methylphenol	0.02 U	--	--	--	--	--	--
2-Nitroaniline	0.1 U	--	--	--	--	--	--
2-Nitrophenol	0.1 U	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.1 U	--	--	--	--	--	--
3-Nitroaniline	0.1 U	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	0.2 U	--	--	--	--	--	--
4-Bromophenyl phenyl ether	0.02 U	--	--	--	--	--	--
4-Chloro-3-methylphenol	0.1 U	--	--	--	--	--	--
4-Chloroaniline	0.1 U	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	0.02 U	--	--	--	--	--	--
4-Methylphenol	0.02 U	--	--	--	--	--	--
4-Nitroaniline	0.1 U	--	--	--	--	--	--
4-Nitrophenol	0.1 U	--	--	--	--	--	--
Acenaphthene	0.02 U	--	--	--	--	--	--
Acenaphthylene	0.02 U	--	--	--	--	--	--
Anthracene	0.02 U	--	--	--	--	--	--
Benzo(a)anthracene	0.043	--	--	--	--	--	--
Benzo(a)pyrene	0.039	--	--	--	--	--	--
Benzo(b)fluoranthene	0.036	--	--	--	--	--	--
Benzo(ghi)perylene	0.023	--	--	--	--	--	--
Benzo(k)fluoranthene	0.026	--	--	--	--	--	--
Benzoic acid	0.2 U	--	--	--	--	--	--
Benzyl alcohol	0.02 U	--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	0.02 U	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	0.02 U	--	--	--	--	--	--

Table 2-2
Historical Sediment Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Location:	OU1	AOI-003-1	AOI-003-2		AOI-003-3	AOI-003-4	AOI-003-5
Sample Name:	OU1	AOI-003-SED1	AOI-003-SED2	AOI-003-SED2-DUP	AOI-003-SED3	AOI-003-SED4	AOI-003-SED5
Sample Date:	02/24/2005	08/23/2022	08/23/2022	08/23/2022	08/23/2022	08/23/2022	08/23/2022
Sample Depth (inches bml):	--	0-4	0-4	0-4	0-4	0-4	0-4
Sample Type:	N	N	N	FD	N	N	N
SVOCs cont. (mg/kg)							
Bis(2-chloroethyl) ether	0.02 U	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	0.022	--	--	--	--	--	--
Butylbenzyl phthalate	0.02 U	--	--	--	--	--	--
Carbazole	0.02 U	--	--	--	--	--	--
Chrysene	0.057	--	--	--	--	--	--
Dibenzo(a,h)anthracene	0.02 U	--	--	--	--	--	--
Dibenzofuran	0.02 U	--	--	--	--	--	--
Diethyl phthalate	0.02 U	--	--	--	--	--	--
Dimethyl phthalate	0.02 U	--	--	--	--	--	--
Di-n-butyl phthalate	0.02 U	--	--	--	--	--	--
Di-n-octyl phthalate	0.02 U	--	--	--	--	--	--
Fluoranthene	0.056	--	--	--	--	--	--
Fluorene	0.02 U	--	--	--	--	--	--
Hexachlorobenzene	0.02 U	--	--	--	--	--	--
Hexachlorobutadiene	0.02 U	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.1 U	--	--	--	--	--	--
Hexachloroethane	0.02 U	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	0.024	--	--	--	--	--	--
Isophorone	0.02 U	--	--	--	--	--	--
Naphthalene	0.02 U	--	--	--	--	--	--
Nitrobenzene	0.02 U	--	--	--	--	--	--
N-Nitrosodiphenylamine	0.02 U	--	--	--	--	--	--
N-Nitrosodipropylamine	0.1 U	--	--	--	--	--	--
Pentachlorophenol	0.1 U	--	--	--	--	--	--
Phenanthrene	0.02 U	--	--	--	--	--	--
Phenol	0.02 U	--	--	--	--	--	--
Pyrene	0.058	--	--	--	--	--	--

Table 2-2
Historical Sediment Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Notes

-- = not analyzed.

bml = below mudline.

ESA = environmental site assessment.

FD = field duplicate sample.

HEM = hexane extractable material.

mg/kg = milligrams per kilogram.

N = normal environmental sample.

PCB = polychlorinated biphenyl.

SVOC = semivolatile organic compound.

TPH = total petroleum hydrocarbons.

U = result is non-detect at the method reporting limit.

UJ = result is non-detect with an estimated method reporting limit.

VOC = volatile organic compound.

References

[1]CH2MHILL. 2007. *Final Remedial Investigation/Feasibility Study Report.* Abitibi West Tacoma Mill. Prepared for Abitibi Consolidated Sales Corporation. CH2MHILL. April.

[2]MFA. 2023. *Supplemental Metals and Dioxins Characterization Report* . Abitibi Consolidated Sales Corp. Prepared for HDG, LP. Maul Foster & Alongi, Inc.: Seattle, WA. January 26.

Table 2-3
Historical Forest Duff Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1]	2022 Supplemental Characterization		
Area/Feature:	AOI-001	AOI-002	
Location:	AOI-001-DUFF	AOI-002-DUFF	
Sample Name:	AOI-001-DUFF	AOI-002-DUFF	AOI-002-DUFF-DUP
Sample Date:	08/25/2022	08/23/2022	08/23/2022
Sample Type:	N	N	FD
Total Metals (mg/kg)			
Arsenic	5.13	4.61	4.02
Lead	9.47	12.2 J	8.33 J

Notes

AOI = area of interest.

FD = field duplicate sample.

J = result is estimated.

mg/kg = milligrams per kilogram.

N = normal environmental sample.

Reference

[1]MFA. 2023. *Supplemental Metals and Dioxins Characterization Report* . Abitibi Consolidated Sales Corp. Prepared for HDG, LP. Maul Foster & Alongi, Inc.:

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Phase II ESA								2005 Supplemental Field Investigation						
Location Type:	Temporary Well								Temporary Well						
Location:	MP1	MP2	MP3	MP4		MP5	MP6	MP7	DP1		DP2		DP3	DP4	DP5
Sample Name:	MP1	MP2	MP3	MP4	MP4DUP	MP5	MP6	MP7	DP1	DP-DUP1	DP2	DP-DUP2	DP3	DP4	DP5
Sample Date:	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/02/2005	03/02/2005	03/02/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005
Sample Type:	N	N	N	N	FD	N	N	N	N	FD	N	FD	N	N	N
HCID (detect/non-detect)															
Gasoline	--	ND	--	DETECT	DETECT	ND	ND	ND	DETECT	--	ND	--	--	--	ND
Diesel	--	DETECT	DETECT	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
Lube oil	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--
TPH (ug/L)															
Gasoline-range hydrocarbons	250 U	--	250 U	--	--	--	--	--	--	--	--	--	250 U	1,300	--
Diesel-range hydrocarbons	630 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oil-range hydrocarbons	630 U	--	630 U	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals (ug/L)															
Arsenic	4.4	7.7	15	40	42	6.2	8.7	5.6	--	9	--	--	--	--	--
Barium	38	37	55	22	14	8	18	23	--	--	--	--	--	--	--
Cadmium	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	--	--	--	--	--	--
Chromium	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
Lead	2	3	3	15	13	3	1	1	--	--	--	--	--	--	--
Mercury	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	--	--	--	--	--	--	--
Selenium	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	--	--	--	--	--	--
Silver	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	--	--	--	--	--	--	--
Total Metals (ug/l)															
Arsenic	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (ug/L)															
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Phase II ESA								2005 Supplemental Field Investigation						
Location Type:	Temporary Well								Temporary Well						
Location:	MP1	MP2	MP3	MP4		MP5	MP6	MP7	DP1		DP2		DP3	DP4	DP5
Sample Name:	MP1	MP2	MP3	MP4	MP4DUP	MP5	MP6	MP7	DP1	DP-DUP1	DP2	DP-DUP2	DP3	DP4	DP5
Sample Date:	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/02/2005	03/02/2005	03/02/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005
Sample Type:	N	N	N	N	FD	N	N	N	N	FD	N	FD	N	N	N
VOCs cont. (ug/L)															
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	180	--	--	--	1 U	5 U	5 U	5 U	1 U	56	1 U
Bromobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	11	11	--	--	--	1 U	5 U	1 U	5 U	1 U	1.3	1 U
Freon 113	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	45	44	--	--	--	1.1	10 U	1 U	10 U	1 U	10 U	1 U
Methyl iodide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	--	--	--	--	--		--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Phase II ESA								2005 Supplemental Field Investigation						
Location Type:	Temporary Well								Temporary Well						
Location:	MP1	MP2	MP3	MP4		MP5	MP6	MP7	DP1		DP2		DP3	DP4	DP5
Sample Name:	MP1	MP2	MP3	MP4	MP4DUP	MP5	MP6	MP7	DP1	DP-DUP1	DP2	DP-DUP2	DP3	DP4	DP5
Sample Date:	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/02/2005	03/02/2005	03/02/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005
Sample Type:	N	N	N	N	FD	N	N	N	N	FD	N	FD	N	N	N
VOCs cont. (ug/L)															
Methyl tert-butyl ether	--	--	--	5 U	5 U	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	5 U	5 U	--	--	--	1 U	5 U	1 U	5 U	1 U	1.5	1 U
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	7.1	7.4	--	--	--	1 U	5 U	1 U	5 U	1 U	2.4	1 U
trans-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs (ug/L)															
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-oxybis(1-Chloropropane)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
2,4-Dichlorophenol	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
2,4-Dimethylphenol	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
2,4-Dinitrophenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	--	--	--	--
2,4-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
2,6-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
2-Chloronaphthalene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
2-Chlorophenol	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
2-Methylnaphthalene	1 U	1 U	30	1.6	1.8	1 U	1 U	1 U	--	--	--	--	--	--	--
2-Methylphenol	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
2-Nitroaniline	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
2-Nitrophenol	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Phase II ESA								2005 Supplemental Field Investigation						
Location Type:	Temporary Well								Temporary Well						
Location:	MP1	MP2	MP3	MP4		MP5	MP6	MP7	DP1		DP2		DP3	DP4	DP5
Sample Name:	MP1	MP2	MP3	MP4	MP4DUP	MP5	MP6	MP7	DP1	DP-DUP1	DP2	DP-DUP2	DP3	DP4	DP5
Sample Date:	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/02/2005	03/02/2005	03/02/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005
Sample Type:	N	N	N	N	FD	N	N	N	N	FD	N	FD	N	N	N
SVOCs cont. (ug/L)															
3,3'-Dichlorobenzidine	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
3-Nitroaniline	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
4-Chloroaniline	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
4-Methylphenol	1 U	3	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
4-Nitroaniline	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
4-Nitrophenol	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
Acenaphthene	1 U	1 U	33	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Acenaphthylene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Anthracene	1 U	1 U	3.7	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Benzo(a)anthracene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Benzo(a)pyrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Benzo(b)fluoranthene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Benzo(ghi)perylene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Benzo(k)fluoranthene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Benzoic acid	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	--	--	--	--
Benzyl alcohol	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	1 U	1.5	1 U	2.4	2.2	1 U	1 U	1 U	--	--	--	--	--	--	--
Butylbenzyl phthalate	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Carbazole	1 U	1 U	9.5	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Chrysene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Dibenzofuran	1 U	1 U	15	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Diethyl phthalate	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Dimethyl phthalate	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Di-n-butyl phthalate	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Di-n-octyl phthalate	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Fluoranthene	1 U	1 U	3	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Fluorene	1 U	1 U	18	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Hexachlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Hexachlorobutadiene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Phase II ESA								2005 Supplemental Field Investigation						
Location Type:	Temporary Well								Temporary Well						
Location:	MP1	MP2	MP3	MP4		MP5	MP6	MP7	DP1		DP2		DP3	DP4	DP5
Sample Name:	MP1	MP2	MP3	MP4	MP4DUP	MP5	MP6	MP7	DP1	DP-DUP1	DP2	DP-DUP2	DP3	DP4	DP5
Sample Date:	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/03/2005	03/02/2005	03/02/2005	03/02/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005
Sample Type:	N	N	N	N	FD	N	N	N	N	FD	N	FD	N	N	N
SVOCs cont. (ug/L)															
Hexachlorocyclopentadiene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
Hexachloroethane	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Isophorone	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Naphthalene	1 U	1 U	130	1.2	1.4	1 U	1 U	1 U	--	--	--	--	--	--	--
Nitrobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
N-Nitrosodipropylamine	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
Pentachlorophenol	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	--	--	--	--	--	--
Phenanthrene	1 U	1 U	22	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
Phenol	1 U	1 U	1 U	1.2 YU	1.1 YU	1 U	1 U	1 U	--	--	--	--	--	--	--
Pyrene	1 U	1 U	1.8	1 U	1 U	1 U	1 U	1 U	--	--	--	--	--	--	--
EPH (ug/L)															
C8-C10 Aliphatic hydrocarbons	--	40 U	40 U	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	40 U	40 U	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatic hydrocarbons	--	40 U	40 U	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatic hydrocarbons	--	40 U	40 U	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatic hydrocarbons	--	40 U	76	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	40 U	40 U	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	40 U	150	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatic hydrocarbons	--	40 U	140	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatic hydrocarbons	--	40 U	100	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatic hydrocarbons	--	40 U	40	--	--	--	--	--	--	--	--	--	--	--	--
VPH (ug/L)															
C5-C6 Aliphatic hydrocarbons	--	--	--	490	500	--	--	--	50 U	50 U	50 U	50 U	50 U	160	50 U
C6-C8 Aliphatic hydrocarbons	--	--	--	1,700	1,700	--	--	--	82	51	50 U	96	50 U	620	50 U
C8-C10 Aliphatic hydrocarbons	--	--	--	57	64	--	--	--	50 U	50 U	50 U	50 U	50 U	50 U	50 U
C10-C12 Aliphatic hydrocarbons	--	--	--	72	80	--	--	--	50 U	50 U	50 U	50 U	50 U	50 U	50 U
C8-C10 Aromatic hydrocarbons	--	--	--	160	160	--	--	--	50 U	50 U	50 U	50 U	50 U	100	50 U
C10-C12 Aromatic hydrocarbons	--	--	--	110	120	--	--	--	87	50 U	50 U	93	50 U	410	50 U
C12-C13 Aromatic hydrocarbons	--	--	--	50 U	50 U	--	--	--	50 U	50 U	50 U	50 U	50 U	130	50 U

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Supplemental Field Investigation													
Location Type:	Temporary Well													
Location:	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19
Sample Name:	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19
Sample Date:	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
HCID (detect/non-detect)														
Gasoline	--	--	--	--	--	--	ND	--	--	--	--	--	--	--
Diesel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TPH (ug/L)														
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oil-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dissolved Metals (ug/L)														
Arsenic	--	10	--	--	8	8	--	--	--	--	--	--	--	--
Barium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Metals (ug/l)														
Arsenic	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (ug/L)														
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Supplemental Field Investigation													
Location Type:	Temporary Well													
Location:	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19
Sample Name:	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19
Sample Date:	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOCs cont. (ug/L)														
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	15	5 U	5 U	5 U
Bromobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Freon 113	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	10 U	10 U	10 U	10 U	10 U	10 U	1 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl iodide	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Supplemental Field Investigation													
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Sample Name:	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19
Sample Date:	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOCs cont. (ug/L)														
Methyl tert-butyl ether	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	5 U	5 U	5 U	5 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SVOCs (ug/L)														
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2'-oxybis(1-Chloropropane)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Supplemental Field Investigation													
Location Type:	Temporary Well													
Location:	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19
Sample Name:	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19
Sample Date:	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SVOCs cont. (ug/L)														
3,3'-Dichlorobenzidine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(ghi)perylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl alcohol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2005 Supplemental Field Investigation													
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Sample Name:	DP6	DP7	DP8	DP9	DP10	DP11	DP12	DP13	DP14	DP15	DP16	DP17	DP18	DP19
Sample Date:	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/25/2005	05/25/2005	05/25/2005	05/25/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005	05/26/2005
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SVOCs cont. (ug/L)														
Hexachlorocyclopentadiene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodipropylamine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EPH (ug/L)														
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VPH (ug/L)														
C5-C6 Aliphatic hydrocarbons	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	65	50 U	50 U	50 U	50 U
C6-C8 Aliphatic hydrocarbons	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	200	75	50 U	50 U	50 U
C8-C10 Aliphatic hydrocarbons	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
C10-C12 Aliphatic hydrocarbons	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
C8-C10 Aromatic hydrocarbons	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
C10-C12 Aromatic hydrocarbons	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
C12-C13 Aromatic hydrocarbons	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring														
Location Type:	Monitoring Well														
Location:	MW01							MW02							
Sample Name:	ACSI-GWS-01-01	ACSI-GWS-02-01	ACSI-GWS-03-01	ACSI-GWS-06-01	ACSI-GWS-07-01	ASCI-GWS-04-01	ASCI-GWS-05-01	ACSI-GWS-01-02	ACSI-GWS-01-100	ACSI-GWS-02-02	ACSI-GWS-02-200	ACSI-GWS-03-02	ACSI-GWS-03-200	ACSI-GWS-06-02	ACSI-GWS-06-200
Sample Date:	09/01/2006	12/12/2006	03/21/2007	12/18/2007	03/20/2008	06/19/2007	10/08/2007	08/31/2006	08/31/2006	12/12/2006	12/12/2006	03/21/2007	03/21/2007	12/18/2007	12/18/2007
Sample Type:	N	N	N	N	N	N	N	N	FD	N	FD	N	FD	N	FD
HCID (detect/non-detect)															
Gasoline	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TPH (ug/L)															
Gasoline-range hydrocarbons	920	250 U	250 U	100 U	160	250 U	100 U	250 U	250 U	580	250 U	930	950	560	540
Diesel-range hydrocarbons	1,000	640	270	270	250	250 U	250 U	630 U	630 U	290	250 U	250 U	250 U	250 U	250 U
Oil-range hydrocarbons	500 U	500 U	500 U	500 U	500 U	500 U	500 U	630 U	630 U	500 U	500 U	500 U	500 U	500 U	500 U
Dissolved Metals (ug/L)															
Arsenic	8.7	0.7	2.3	3.8	1.7	3.2	4.2	18	19	7	0.6	8.7	7.7	1.2	10.2
Barium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Metals (ug/l)															
Arsenic	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (ug/L)															
1,1,1,2-Tetrachloroethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,1,1-Trichloroethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,1-Dichloropropene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.5 U	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--
1,2,3-Trichloropropane	0.5 U	0.5 U	0.5 U	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--
1,2,4-Trichlorobenzene	0.5 U	0.5 U	0.5 U	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--
1,2,4-Trimethylbenzene	1	0.5	0.2 U	--	--	--	--	0.3	0.3	0.2	0.2 U	0.2 U	0.2 U	--	--
1,2-Dibromo-3-chloropropane	2 U	0.5 U	0.5 U	--	--	--	--	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--
1,2-Dibromoethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,2-Dichlorobenzene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,2-Dichloropropane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,3,5-Trimethylbenzene	0.2	0.2 U	0.2 U	--	--	--	--	0.3	0.3	0.2 U	0.2 U	1.3	1.1	--	--
1,3-Dichlorobenzene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring														
Location Type:	Monitoring Well														
Location:	MW01							MW02							
Sample Name:	ACSI-GWS-01-01	ACSI-GWS-02-01	ACSI-GWS-03-01	ACSI-GWS-06-01	ACSI-GWS-07-01	ASCI-GWS-04-01	ASCI-GWS-05-01	ACSI-GWS-01-02	ACSI-GWS-01-100	ACSI-GWS-02-02	ACSI-GWS-02-200	ACSI-GWS-03-02	ACSI-GWS-03-200	ACSI-GWS-06-02	ACSI-GWS-06-200
Sample Date:	09/01/2006	12/12/2006	03/21/2007	12/18/2007	03/20/2008	06/19/2007	10/08/2007	08/31/2006	08/31/2006	12/12/2006	12/12/2006	03/21/2007	03/21/2007	12/18/2007	12/18/2007
Sample Type:	N	N	N	N	N	N	N	N	FD	N	FD	N	FD	N	FD
VOCs cont. (ug/L)															
1,3-Dichloropropane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
1,4-Dichlorobenzene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
2,2-Dichloropropane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
2-Butanone	1 U	1 U	1 U	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	--
2-Chloroethylvinyl ether	0.5 U	0.5 U	0.5 U	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--
2-Chlorotoluene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
2-Hexanone	1 U	3 U	3 U	--	--	--	--	1 U	1 U	3 U	3 U	3 U	3 U	--	--
4-Chlorotoluene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
4-Isopropyltoluene	2.2	0.4	0.2 U	--	--	--	--	0.2	0.2 U	0.2 U	0.2 U	0.3	0.2	--	--
4-Methyl-2-pentanone	1 U	1 U	1 U	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	--
Acetone	7.9	8.6 M	3 U	--	--	--	--	1 U	1 U	69 M	3 U	3 U	3 U	--	--
Acrolein	5 U	5 U	5 U	--	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	--	--
Acrylonitrile	1 U	1 U	1 U	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	--
Benzene	0.3	0.2 U	0.2 U	0.25 U	0.25 U	1 U	0.25 U	0.3	0.3	1.8	0.2 U	1.6	1.5	0.41	0.25 U
Bromobenzene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Bromodichloromethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Bromoethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Bromoform	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Bromomethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Carbon disulfide	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Carbon tetrachloride	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Chlorobenzene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Chlorobromomethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Chloroethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Chloroform	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Chloromethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
cis-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Dibromochloromethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Dibromomethane	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Ethylbenzene	0.9	0.7	0.2 U	0.25 U	0.25 U	1 U	0.25 U	0.2 U	0.2 U	3.2	0.2 U	7.3	7.1	0.25 U	0.25 U
Freon 113	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Hexachlorobutadiene	--	0.5 U	0.5 U	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
Isopropylbenzene	1.3	1.7	0.2 U	--	--	--	--	3.3	3	7.2	0.2 U	9.3	8.7	--	--
m,p-Xylene	0.8	0.6	0.4 U	0.5 U	0.5 U	1 U	0.5 U	3	2.8	3.5	0.4 U	2.1	2	0.63	0.6
Methyl iodide	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Methylene chloride	0.3 U	0.3 U	0.3 U	--	--	--	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring														
Location Type:	Monitoring Well														
Location:	MW01							MW02							
Sample Name:	ACSI-GWS-01-01	ACSI-GWS-02-01	ACSI-GWS-03-01	ACSI-GWS-06-01	ACSI-GWS-07-01	ASCI-GWS-04-01	ASCI-GWS-05-01	ACSI-GWS-01-02	ACSI-GWS-01-100	ACSI-GWS-02-02	ACSI-GWS-02-200	ACSI-GWS-03-02	ACSI-GWS-03-200	ACSI-GWS-06-02	ACSI-GWS-06-200
Sample Date:	09/01/2006	12/12/2006	03/21/2007	12/18/2007	03/20/2008	06/19/2007	10/08/2007	08/31/2006	08/31/2006	12/12/2006	12/12/2006	03/21/2007	03/21/2007	12/18/2007	12/18/2007
Sample Type:	N	N	N	N	N	N	N	N	FD	N	FD	N	FD	N	FD
VOCs cont. (ug/L)															
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	31 E	3.3	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	--	--
n-Butylbenzene	1.5	3 M	0.5	--	--	--	--	1.5	1.4	2.8 M	0.2 U	3.2	3	--	--
n-Propylbenzene	4	6.3	0.5	--	--	--	--	11	10	14	10	28	27	--	--
o-Xylene	0.5	0.2	0.2 U	0.25 U	0.25 U	1 U	0.25 U	0.2	0.2 U	0.2 U	0.2 U	0.2	0.2 U	0.25 U	0.25 U
sec-Butylbenzene	0.5	1	0.2 U	--	--	--	--	0.6	0.5	1.4	0.2 U	2.1	1.9	--	--
Styrene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
tert-Butylbenzene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Tetrachloroethene (PCE)	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Toluene	1	0.2 U	0.2 U	0.25 U	0.25 U	1 U	0.25 U	0.4	0.4	1	0.2 U	0.6	0.6	0.69	0.58
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
trans-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
trans-1,4-Dichloro-2-butene	1 U	1 U	1 U	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--	--
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	--	--	--	--	0.3 YU	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Trichlorofluoromethane (Freon 11)	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Vinyl acetate	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
Vinyl chloride	0.2 U	0.2 U	0.2 U	--	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--
SVOCs (ug/L)															
1,2,4-Trichlorobenzene	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
1,2-Dichlorobenzene	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
1,3-Dichlorobenzene	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
1,4-Dichlorobenzene	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
1-Methylnaphthalene	34	--	--	1 U	2.8	1.6	1 U	2	1.8	--	--	--	--	1.1	1 U
2,2'-oxybis(1-Chloropropane)	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
2,4,5-Trichlorophenol	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
2,4,6-Trichlorophenol	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
2,4-Dichlorophenol	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
2,4-Dimethylphenol	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
2,4-Dinitrophenol	--	--	10 U	--	--	--	--	--	--	--	--	10 U	10 U	--	--
2,4-Dinitrotoluene	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
2,6-Dinitrotoluene	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
2-Chloronaphthalene	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
2-Chlorophenol	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
2-Methylnaphthalene	46	9.8	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
2-Methylphenol	--	--	1 U	1 U	1 U	1 U	1 U	--	--	--	--	1 U	1 U	1 U	1 U
2-Nitroaniline	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
2-Nitrophenol	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring														
Location Type:	Monitoring Well														
Location:	MW01							MW02							
Sample Name:	ACSI-GWS-01-01	ACSI-GWS-02-01	ACSI-GWS-03-01	ACSI-GWS-06-01	ACSI-GWS-07-01	ASCI-GWS-04-01	ASCI-GWS-05-01	ACSI-GWS-01-02	ACSI-GWS-01-100	ACSI-GWS-02-02	ACSI-GWS-02-200	ACSI-GWS-03-02	ACSI-GWS-03-200	ACSI-GWS-06-02	ACSI-GWS-06-200
Sample Date:	09/01/2006	12/12/2006	03/21/2007	12/18/2007	03/20/2008	06/19/2007	10/08/2007	08/31/2006	08/31/2006	12/12/2006	12/12/2006	03/21/2007	03/21/2007	12/18/2007	12/18/2007
Sample Type:	N	N	N	N	N	N	N	N	FD	N	FD	N	FD	N	FD
SVOCs cont. (ug/L)															
3,3'-Dichlorobenzidine	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
3-Nitroaniline	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
4,6-Dinitro-2-methylphenol	--	--	10 U	--	--	--	--	--	--	--	--	10 U	10 U	--	--
4-Bromophenyl phenyl ether	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
4-Chloro-3-methylphenol	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
4-Chloroaniline	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
4-Chlorophenyl phenyl ether	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
4-Methylphenol	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
4-Nitroaniline	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
4-Nitrophenol	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
Acenaphthene	54	58	9.6	--	--	5.8	--	1 U	1 U	0.48	0.1 U	1 U	1 U	--	--
Acenaphthylene	1 U	0.72	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Anthracene	1.9	1.8	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Benzo(a)anthracene	1 U	0.12	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Benzo(a)pyrene	1 U	0.1 U	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Benzo(b)fluoranthene	1 U	0.1 U	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Benzo(ghi)perylene	1 U	0.1 U	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Benzo(k)fluoranthene	1 U	0.1 U	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Benzoic acid	--	--	10 U	--	--	--	--	--	--	--	--	10 U	10 U	--	--
Benzyl alcohol	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
Bis(2-chloro-1-methylethyl) ether	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
Bis(2-chloroethyl) ether	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
Bis(2-ethylhexyl) phthalate	--	--	2.9	--	--	--	--	--	--	--	--	1 U	13	--	--
Butylbenzyl phthalate	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
Carbazole	--	--	1 U	1 U	1 U	1 U	1 U	--	--	--	--	1 U	1 U	1 U	1 U
Chrysene	1 U	0.1 U	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Dibenzo(a,h)anthracene	1 U	0.1 U	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Dibenzofuran	20	16	3.4	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Diethyl phthalate	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
Dimethyl phthalate	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
Di-n-butyl phthalate	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
Di-n-octyl phthalate			1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
Fluoranthene	4.9	3	1.2	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Fluorene	28	27	5	--	--	--	--	1 U	1 U	0.11	0.1 U	1 U	1 U	--	--
Hexachlorobenzene		--	1 U	--	--	--	--			--	--	1 U	1 U	--	--
Hexachlorobutadiene	0.5 U	--	1 U	--	--	--	--	0.5 U	0.5 U	--	--	1 U	1 U	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring														
Location Type:	Monitoring Well														
Location:	MW01							MW02							
Sample Name:	ACSI-GWS-01-01	ACSI-GWS-02-01	ACSI-GWS-03-01	ACSI-GWS-06-01	ACSI-GWS-07-01	ASCI-GWS-04-01	ASCI-GWS-05-01	ACSI-GWS-01-02	ACSI-GWS-01-100	ACSI-GWS-02-02	ACSI-GWS-02-200	ACSI-GWS-03-02	ACSI-GWS-03-200	ACSI-GWS-06-02	ACSI-GWS-06-200
Sample Date:	09/01/2006	12/12/2006	03/21/2007	12/18/2007	03/20/2008	06/19/2007	10/08/2007	08/31/2006	08/31/2006	12/12/2006	12/12/2006	03/21/2007	03/21/2007	12/18/2007	12/18/2007
Sample Type:	N	N	N	N	N	N	N	N	FD	N	FD	N	FD	N	FD
SVOCs cont. (ug/L)															
Hexachlorocyclopentadiene		--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
Hexachloroethane			1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
Indeno(1,2,3-cd)pyrene	1 U	0.1 U	1 U	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Isophorone			1 U	--	--	--	--					1 U	1 U	--	--
Naphthalene	250	3.8	1.2	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.12 UY	0.1 U	1 U	1 U	1 U	1 U
Nitrobenzene	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
N-Nitrosodiphenylamine	--	--	1 U	--	--	--	--	--	--	--	--	1 U	1 U	--	--
N-Nitrosodipropylamine	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
Pentachlorophenol	--	--	5 U	--	--	--	--	--	--	--	--	5 U	5 U	--	--
Phenanthrene	34	6.2	5.1	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
Phenol	--	--	1 U	--	--	1 U	--	--	--	--	--	1 U	1 U	--	--
Pyrene	2.7	1.5	1	--	--	--	--	1 U	1 U	0.1 U	0.1 U	1 U	1 U	--	--
EPH (ug/L)															
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VPH (ug/L)															
C5-C6 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring													
Location Type:	Monitoring Well													
Location:					MW02		MW03				MW04			
Sample Name:	ACSI-GWS-07-02	ACSI-GWS-07-200	ASCI-GWS-04-02	ASCI-GWS-04-200	ASCI-GWS-05-02	ASCI-GWS-05-200	ACSI-GWS-01-03	ACSI-GWS-02-03	ACSI-GWS-03-03	ASCI-GWS-05-03	ACSI-GWS-01-04	ACSI-GWS-02-04	ACSI-GWS-06-04	ASCI-GWS-04-04
Sample Date:	03/20/2008	03/20/2008	06/19/2007	06/19/2007	10/08/2007	10/08/2007	08/31/2006	12/12/2006	03/21/2007	10/08/2007	09/01/2006	12/12/2006	12/18/2007	06/19/2007
Sample Type:	N	FD	N	FD	N	FD	N	N	N	N	N	N	N	N
HCID (detect/non-detect)														
Gasoline	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lube oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TPH (ug/L)														
Gasoline-range hydrocarbons	580	630	670	610	550	550	250 U	250 U	250 U	100 U	--	--	--	--
Diesel-range hydrocarbons	250 U	250 U	250 U	250 U	250 U	250 U	630 U	250 U	250 U	250 U	--	--	--	--
Oil-range hydrocarbons	500 U	500 U	500 U	500 U	500 U	500 U	630 U	500 U	500 U	500 U	--	--	--	--
Dissolved Metals (ug/L)														
Arsenic	8	7.8	8.9	8.6	14.9	14	23	0.6	6.4	8.9	6.9	4.1	7.6	3.8
Barium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Metals (ug/l)														
Arsenic	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs (ug/L)														
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	2 U	0.5 U	0.5 U	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring													
Location Type:	Monitoring Well													
Location:					MW02		MW03				MW04			
Sample Name:	ACSI-GWS-07-02	ACSI-GWS-07-200	ASCI-GWS-04-02	ASCI-GWS-04-200	ASCI-GWS-05-02	ASCI-GWS-05-200	ACSI-GWS-01-03	ACSI-GWS-02-03	ACSI-GWS-03-03	ASCI-GWS-05-03	ACSI-GWS-01-04	ACSI-GWS-02-04	ASCI-GWS-06-04	ASCI-GWS-04-04
Sample Date:	03/20/2008	03/20/2008	06/19/2007	06/19/2007	10/08/2007	10/08/2007	08/31/2006	12/12/2006	03/21/2007	10/08/2007	09/01/2006	12/12/2006	12/18/2007	06/19/2007
Sample Type:	N	FD	N	FD	N	FD	N	N	N	N	N	N	N	N
VOCs cont. (ug/L)														
1,3-Dichloropropane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	--
2-Chloroethylvinyl ether	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	1 U	3 U	3 U	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	--
Acetone	--	--	--	--	--	--	9.3	3 U	3 U	--	--	--	--	--
Acrolein	--	--	--	--	--	--	5 U	5 U	5 U	--	--	--	--	--
Acrylonitrile	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	--
Benzene	0.25 U	0.25 U	1 U	1 U	0.25 U	0.25 U	0.2 U	0.2 U	0.2 U	0.25 U	--	--	--	--
Bromobenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Bromoethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Bromoform	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Carbon disulfide	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Chlorobenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Chlorobromomethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Chloroform	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Ethylbenzene	0.78	0.72	1 U	1 U	0.25 U	0.25 U	0.2 U	0.2 U	0.2 U	0.25 U	--	--	--	--
Freon 113	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	--	0.5 U	0.5 U	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.3	--	--	--	--	--
m,p-Xylene	1	1	1.9	1.6	1	1	0.8	0.4 U	0.2 U	0.59	--	--	--	--
Methyl iodide	--	--	--	--	--	--	0.2 U	0.2 U	1	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	0.3 U	0.3 U	0.3 U	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring													
Location Type:	Monitoring Well													
Location:					MW02		MW03				MW04			
Sample Name:	ACSI-GWS-07-02	ACSI-GWS-07-200	ASCI-GWS-04-02	ASCI-GWS-04-200	ASCI-GWS-05-02	ASCI-GWS-05-200	ACSI-GWS-01-03	ACSI-GWS-02-03	ACSI-GWS-03-03	ASCI-GWS-05-03	ACSI-GWS-01-04	ACSI-GWS-02-04	ASCI-GWS-06-04	ASCI-GWS-04-04
Sample Date:	03/20/2008	03/20/2008	06/19/2007	06/19/2007	10/08/2007	10/08/2007	08/31/2006	12/12/2006	03/21/2007	10/08/2007	09/01/2006	12/12/2006	12/18/2007	06/19/2007
Sample Type:	N	FD	N	FD	N	FD	N	N	N	N	N	N	N	N
VOCs cont. (ug/L)														
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	0.5 U	0.5	--	--	--	--	--
n-Butylbenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2	--	--	--	--	--
o-Xylene	0.25 U	0.25 U	1 U	1 U	0.25 U	0.25 U	0.2 U	0.2 U	0.2 U	0.25 U	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Styrene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Tetrachloroethene (PCE)	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Toluene	0.57	0.51	1 U	1 U	0.33	0.25 U	0.2 U	0.2 U	0.2 U	0.25 U	--	--	--	--
trans-1,2-Dichloroethene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
trans-1,4-Dichloro-2-butene	--	--	--	--	--	--	1 U	1 U	1 U	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Vinyl acetate	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--	--	--
SVOCs (ug/L)														
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
1-Methylnaphthalene	1.1	1.3	2.1	2.1	1.7	2.4	1 U	--	--	1 U	--	--	--	--
2,2'-oxybis(1-Chloropropane)	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2,4,5-Trichlorophenol	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
2,4,6-Trichlorophenol	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
2,4-Dichlorophenol	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
2,4-Dimethylphenol	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2,4-Dinitrophenol	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--
2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
2-Chloronaphthalene	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2-Chlorophenol	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
2-Methylnaphthalene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
2-Methylphenol	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	--	--	--	--
2-Nitroaniline	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
2-Nitrophenol	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring													
Location Type:	Monitoring Well													
Location:					MW02		MW03				MW04			
Sample Name:	ACSI-GWS-07-02	ACSI-GWS-07-200	ASCI-GWS-04-02	ASCI-GWS-04-200	ASCI-GWS-05-02	ASCI-GWS-05-200	ACSI-GWS-01-03	ACSI-GWS-02-03	ACSI-GWS-03-03	ASCI-GWS-05-03	ACSI-GWS-01-04	ACSI-GWS-02-04	ACSI-GWS-06-04	ASCI-GWS-04-04
Sample Date:	03/20/2008	03/20/2008	06/19/2007	06/19/2007	10/08/2007	10/08/2007	08/31/2006	12/12/2006	03/21/2007	10/08/2007	09/01/2006	12/12/2006	12/18/2007	06/19/2007
Sample Type:	N	FD	N	FD	N	FD	N	N	N	N	N	N	N	N
SVOCs cont. (ug/L)														
3,3'-Dichlorobenzidine	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
3-Nitroaniline	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
4,6-Dinitro-2-methylphenol	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--
4-Bromophenyl phenyl ether	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
4-Chloro-3-methylphenol	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
4-Chloroaniline	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
4-Chlorophenyl phenyl ether	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
4-Methylphenol	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
4-Nitroaniline	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
4-Nitrophenol	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Anthracene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Benzo(ghi)perylene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Benzoic acid	--	--	--	--	--	--	--	--	10 U	--	--	--	--	--
Benzyl alcohol	--	--	--	--	--	--	--	--	-- U	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Bis(2-chloroethyl) ether	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Butylbenzyl phthalate	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Carbazole	1 U	1 U	1 U	1 U	1 U	1 U	--	--	1 U	1 U	--	--	--	--
Chrysene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Diethyl phthalate	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Dimethyl phthalate	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Di-n-butyl phthalate	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Di-n-octyl phthalate	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Fluorene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Hexachlorobenzene	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Hexachlorobutadiene	--	--	--	--	--	--	0.5 U	--	1 U	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring													
Location Type:	Monitoring Well													
Location:					MW02		MW03				MW04			
Sample Name:	ACSI-GWS-07-02	ACSI-GWS-07-200	ASCI-GWS-04-02	ASCI-GWS-04-200	ASCI-GWS-05-02	ASCI-GWS-05-200	ACSI-GWS-01-03	ACSI-GWS-02-03	ACSI-GWS-03-03	ASCI-GWS-05-03	ACSI-GWS-01-04	ACSI-GWS-02-04	ASCI-GWS-06-04	ASCI-GWS-04-04
Sample Date:	03/20/2008	03/20/2008	06/19/2007	06/19/2007	10/08/2007	10/08/2007	08/31/2006	12/12/2006	03/21/2007	10/08/2007	09/01/2006	12/12/2006	12/18/2007	06/19/2007
Sample Type:	N	FD	N	FD	N	FD	N	N	N	N	N	N	N	N
SVOCs cont. (ug/L)														
Hexachlorocyclopentadiene	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Hexachloroethane	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Isophorone	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Naphthalene	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.1 U	1 U	1 U	--	--	--	--
Nitrobenzene	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
N-Nitrosodipropylamine	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Pentachlorophenol	--	--	--	--	--	--	--	--	5 U	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
Phenol	--	--	--	--	--	--	--	--	1 U	--	--	--	--	--
Pyrene	--	--	--	--	--	--	1 U	0.1 U	1 U	--	--	--	--	--
EPH (ug/L)														
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C16 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C16-C21 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C21-C34 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VPH (ug/L)														
C5-C6 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C6-C8 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C12-C13 Aromatic hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring			2022 Stream Investigation
Location Type:	Off-Property Monitoring Well			Temporary Well
Location:	MW05			GCB01
Sample Name:	ACSI-GWS-03-05	ASCI-GWS-04-05	ASCI-GWS-05-05	GCB01-GW-7.0
Sample Date:	03/21/2007	06/19/2007	10/08/2007	10/07/2022
Sample Type:	N	N	N	N
HCID (detect/non-detect)				
Gasoline	--	--	--	--
Diesel	--	--	--	--
Lube oil	--	--	--	--
TPH (ug/L)				
Gasoline-range hydrocarbons	250 U	250 U	100 U	--
Diesel-range hydrocarbons	250 U	250 U	250 U	--
Oil-range hydrocarbons	500 U	500 U	500 U	--
Dissolved Metals (ug/L)				
Arsenic	2	3	2	7.2
Barium	--	--	--	--
Cadmium	--	--	--	--
Chromium	--	--	--	--
Lead	--	--	--	--
Mercury	--	--	--	--
Selenium	--	--	--	--
Silver	--	--	--	--
Total Metals (ug/l)				
Arsenic	--	--	--	18
VOCs (ug/L)				
1,1,1,2-Tetrachloroethane	0.2 U	--	--	--
1,1,1-Trichloroethane	0.2 U	--	--	--
1,1,2,2-Tetrachloroethane	0.2 U	--	--	--
1,1,2-Trichloroethane	0.2 U	--	--	--
1,1-Dichloroethane	0.2 U	--	--	--
1,1-Dichloroethene	0.2 U	--	--	--
1,1-Dichloropropene	0.2 U	--	--	--
1,2,3-Trichlorobenzene	0.5 U	--	--	--
1,2,3-Trichloropropane	0.5 U	--	--	--
1,2,4-Trichlorobenzene	0.5 U	--	--	--
1,2,4-Trimethylbenzene	0.2 U	--	--	--
1,2-Dibromo-3-chloropropane	0.5 U	--	--	--
1,2-Dibromoethane	0.2 U	--	--	--
1,2-Dichlorobenzene	0.2 U	--	--	--
1,2-Dichloroethane	0.2 U	--	--	--
1,2-Dichloropropane	0.2 U	--	--	--
1,3,5-Trimethylbenzene	0.2 U	--	--	--
1,3-Dichlorobenzene	0.2 U	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring			2022 Stream Investigation
Location Type:	Off-Property Monitoring Well			Temporary Well
Location:	MW05			GCB01
Sample Name:	ACSI-GWS-03-05	ASCI-GWS-04-05	ASCI-GWS-05-05	GCB01-GW-7.0
Sample Date:	03/21/2007	06/19/2007	10/08/2007	10/07/2022
Sample Type:	N	N	N	N
VOCs cont. (ug/L)				
1,3-Dichloropropane	0.2 U	--	--	--
1,4-Dichlorobenzene	0.2 U	--	--	--
2,2-Dichloropropane	0.2 U	--	--	--
2-Butanone	1 U	--	--	--
2-Chloroethylvinyl ether	0.5 U	--	--	--
2-Chlorotoluene	0.2 U	--	--	--
2-Hexanone	3 U	--	--	--
4-Chlorotoluene	0.2 U	--	--	--
4-Isopropyltoluene	0.2 U	--	--	--
4-Methyl-2-pentanone	1 U	--	--	--
Acetone	3 U	--	--	--
Acrolein	5 U	--	--	--
Acrylonitrile	1 U	--	--	--
Benzene	0.2 U	1 U	0.25 U	--
Bromobenzene	0.2 U	--	--	--
Bromodichloromethane	0.2 U	--	--	--
Bromoethane	0.2 U	--	--	--
Bromoform	0.2 U	--	--	--
Bromomethane	0.2 U	--	--	--
Carbon disulfide	0.2 U	--	--	--
Carbon tetrachloride	0.2 U	--	--	--
Chlorobenzene	0.2 U	--	--	--
Chlorobromomethane	0.2 U	--	--	--
Chloroethane	0.2 U	--	--	--
Chloroform	0.2 U	--	--	--
Chloromethane	0.2 U	--	--	--
cis-1,2-Dichloroethene	0.2 U	--	--	--
cis-1,3-Dichloropropene	0.2 U	--	--	--
Dibromochloromethane	0.2 U	--	--	--
Dibromomethane	0.2 U	--	--	--
Ethylbenzene	0.2 U	1 U	0.25 U	--
Freon 113	0.2 U	--	--	--
Hexachlorobutadiene	0.5 U	--	--	--
Isopropylbenzene	0.2 U	--	--	--
m,p-Xylene	0.4 U	1 U	0.5 U	--
Methyl iodide	0.2 U	--	--	--
Methylene chloride	0.3 U	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring			2022 Stream Investigation
Location Type:	Off-Property Monitoring Well			Temporary Well
Location:	MW05			GCB01
Sample Name:	ACSI-GWS-03-05	ASCI-GWS-04-05	ASCI-GWS-05-05	GCB01-GW-7.0
Sample Date:	03/21/2007	06/19/2007	10/08/2007	10/07/2022
Sample Type:	N	N	N	N
VOCs cont. (ug/L)				
Methyl tert-butyl ether	--	--	--	--
Naphthalene	0.5 U	--	--	--
n-Butylbenzene	0.2 U	--	--	--
n-Propylbenzene	0.2 U	--	--	--
o-Xylene	0.2 U	1 U	0.25 U	--
sec-Butylbenzene	0.2 U	--	--	--
Styrene	0.2 U	--	--	--
tert-Butylbenzene	0.2 U	--	--	--
Tetrachloroethene (PCE)	0.2 U	--	--	--
Toluene	0.2 U	1 U	0.25 U	--
trans-1,2-Dichloroethene	0.2 U	--	--	--
trans-1,3-Dichloropropene	0.2 U	--	--	--
trans-1,4-Dichloro-2-butene	1 U	--	--	--
Trichloroethene (TCE)	0.2 U	--	--	--
Trichlorofluoromethane (Freon 11)	0.2 U	--	--	--
Vinyl acetate	0.2 U	--	--	--
Vinyl chloride	0.2 U	--	--	--
SVOCs (ug/L)				
1,2,4-Trichlorobenzene	1 U	--	--	--
1,2-Dichlorobenzene	1 U	--	--	--
1,3-Dichlorobenzene	1 U	--	--	--
1,4-Dichlorobenzene	1 U	--	--	--
1-Methylnaphthalene	--	1 U	1 U	--
2,2'-oxybis(1-Chloropropane)	1 U	--	--	--
2,4,5-Trichlorophenol	5 U	--	--	--
2,4,6-Trichlorophenol	5 U	--	--	--
2,4-Dichlorophenol	5 U	--	--	--
2,4-Dimethylphenol	1 U	--	--	--
2,4-Dinitrophenol	10 U	--	--	--
2,4-Dinitrotoluene	5 U	--	--	--
2,6-Dinitrotoluene	5 U	--	--	--
2-Chloronaphthalene	1 U	--	--	--
2-Chlorophenol	1 U	--	--	--
2-Methylnaphthalene	1 U	--	--	--
2-Methylphenol	1 U	1 U	1 U	--
2-Nitroaniline	5 U	--	--	--
2-Nitrophenol	5 U	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring			2022 Stream Investigation
Location Type:	Off-Property Monitoring Well			Temporary Well
Location:	MW05			GCB01
Sample Name:	ACSI-GWS-03-05	ASCI-GWS-04-05	ASCI-GWS-05-05	GCB01-GW-7.0
Sample Date:	03/21/2007	06/19/2007	10/08/2007	10/07/2022
Sample Type:	N	N	N	N
SVOCs cont. (ug/L)				
3,3'-Dichlorobenzidine	5 U	--	--	--
3-Nitroaniline	5 U	--	--	--
4,6-Dinitro-2-methylphenol	10 U	--	--	--
4-Bromophenyl phenyl ether	1 U	--	--	--
4-Chloro-3-methylphenol	5 U	--	--	--
4-Chloroaniline	5 U	--	--	--
4-Chlorophenyl phenyl ether	1 U	--	--	--
4-Methylphenol	1 U	--	--	--
4-Nitroaniline	5 U	--	--	--
4-Nitrophenol	5 U	--	--	--
Acenaphthene	1 U	--	--	--
Acenaphthylene	1 U	--	--	--
Anthracene	1 U	--	--	--
Benzo(a)anthracene	1 U	--	--	--
Benzo(a)pyrene	1 U	--	--	--
Benzo(b)fluoranthene	1 U	--	--	--
Benzo(ghi)perylene	1 U	--	--	--
Benzo(k)fluoranthene	1 U	--	--	--
Benzoic acid	10 U	--	--	--
Benzyl alcohol	5 U	--	--	--
Bis(2-chloro-1-methylethyl) ether	--	--	--	--
Bis(2-chloroethoxy)methane	1 U	--	--	--
Bis(2-chloroethyl) ether	1 U	--	--	--
Bis(2-ethylhexyl) phthalate	5	--	--	--
Butylbenzyl phthalate	1 U	--	--	--
Carbazole	1 U	--	--	--
Chrysene	1 U	--	--	--
Dibenzo(a,h)anthracene	1 U	--	--	--
Dibenzofuran	1 U	--	--	--
Diethyl phthalate	1 U	--	--	--
Dimethyl phthalate	1 U	--	--	--
Di-n-butyl phthalate	1 U	--	--	--
Di-n-octyl phthalate	1 U	--	--	--
Fluoranthene	1 U	--	--	--
Fluorene	1 U	--	--	--
Hexachlorobenzene	1 U	--	--	--
Hexachlorobutadiene	1 U	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2][3]	2006-2008 GW Install/Monitoring			2022 Stream Investigation
Location Type:	Off-Property Monitoring Well			Temporary Well
Location:	MW05			GCB01
Sample Name:	ACSI-GWS-03-05	ASCI-GWS-04-05	ASCI-GWS-05-05	GCB01-GW-7.0
Sample Date:	03/21/2007	06/19/2007	10/08/2007	10/07/2022
Sample Type:	N	N	N	N
SVOCs cont. (ug/L)				
Hexachlorocyclopentadiene	5 U	--	--	--
Hexachloroethane	1 U	--	--	--
Indeno(1,2,3-cd)pyrene	1 U	--	--	--
Isophorone	1 U	--	--	--
Naphthalene	1 U	1 U	1 U	--
Nitrobenzene	1 U	--	--	--
N-Nitrosodiphenylamine	1 U	--	--	--
N-Nitrosodipropylamine	5 U	--	--	--
Pentachlorophenol	5 U	--	--	--
Phenanthrene	1 U	--	--	--
Phenol	1 U	--	--	--
Pyrene	1 U	--	--	--
EPH (ug/L)				
C8-C10 Aliphatic hydrocarbons	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--
C12-C16 Aliphatic hydrocarbons	--	--	--	--
C16-C21 Aliphatic hydrocarbons	--	--	--	--
C21-C34 Aliphatic hydrocarbons	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--
C12-C16 Aromatic hydrocarbons	--	--	--	--
C16-C21 Aromatic hydrocarbons	--	--	--	--
C21-C34 Aromatic hydrocarbons	--	--	--	--
VPH (ug/L)				
C5-C6 Aliphatic hydrocarbons	--	--	--	--
C6-C8 Aliphatic hydrocarbons	--	--	--	--
C8-C10 Aliphatic hydrocarbons	--	--	--	--
C10-C12 Aliphatic hydrocarbons	--	--	--	--
C8-C10 Aromatic hydrocarbons	--	--	--	--
C10-C12 Aromatic hydrocarbons	--	--	--	--
C12-C13 Aromatic hydrocarbons	--	--	--	--

Table 2-4
Historical Groundwater Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Notes

-- = not analyzed.
EPH = extractable petroleum hydrocarbons.
ESA = environmental site assessment.
FD = field duplicate sample.
GW = groundwater.
HCID = hydrocarbon identification.
J = result is estimated.
N = normal environmental sample.
ND = non-detect.
PCB = polychlorinated biphenyl.
SVOC = semivolatile organic compound.
TPH = total petroleum hydrocarbons.
U = result is non-detect at the method repor
ug/L = micrograms per liter.
VOC = volatile organic compound.
VPH = volatile petroleum hydrocarbons.

References

[1]CH2M HILL. 2007. *Final Remedial Investigation/Feasibility Study Report.* Abitibi West Tacoma Mill. Prepared for Abitibi Consolidated Sales Corporation. CH2MHILL. April.

[2]CH2M HILL. 2008. Linnea Eng and Marcella Ripich, CH2M HILL. *West Tacoma Mill Summary Groundater Monitoring Report* . Memorandum to Marv Coleman, Washington State Department of Ecology, and Nicole Roy and Alice Minville, AbitibiBowater. July 16.

[3]MFA. 2023. Audrey Hackett, Maul Foster & Alongi, Inc. *Garrison Creek Restoration Investigation Data Summary* . Letter to Rand Bellar, HDG, LP. February 6.

Table 2-5
Historical Surface Water Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2005 Phase II ESA			2022 Stream Investigation
Location Type:	Seep Water			Surface Water
Location:	LBSP1	LBSP2	LBSP3	GCSW01
Sample Name:	LBSP1	LBSP2	LBSP3	GCSW01
Sample Date:	03/04/2005	03/04/2005	03/04/2005	10/07/2022
TPH (ug/L)				
Gasoline-range hydrocarbons	250 U	250 U	250 U	--
Diesel-range hydrocarbons	630 U	630 U	630 U	--
Oil-range hydrocarbons	630 U	630 U	630 U	--
Dissolved Metals (ug/L)				
Arsenic	4.4	1.6	0.4	3 U
Barium	7	8	3	--
Cadmium	2 U	2 U	2 U	--
Chromium	5 U	5 U	5 U	--
Lead	1 U	1 U	1 U	--
Mercury	0.1 U	0.1 U	0.1 U	--
Selenium	50 U	50 U	50 U	--
Silver	3 U	3 U	3 U	--
Totals Metals (ug/L)				
Arsenic	--	--	--	3.3 U
VOCs (ug/L)				
1,2,4-Trichlorobenzene	1 U	1 U	1 U	--
1,2-Dichlorobenzene	1 U	1 U	1 U	--
1,3-Dichlorobenzene	1 U	1 U	1 U	--
1,4-Dichlorobenzene	1 U	1 U	1 U	--
SVOCs (ug/L)				
2,4,5-Trichlorophenol	5 U	5 U	5 U	--
2,4,6-Trichlorophenol	5 U	5 U	5 U	--
2,4-Dichlorophenol	5 U	5 U	5 U	--
2,4-Dimethylphenol	1 U	1 U	1 U	--
2,4-Dinitrophenol	10 U	10 U	10 U	--
2,4-Dinitrotoluene	5 U	5 U	5 U	--
2,6-Dinitrotoluene	5 U	5 U	5 U	--
2-Chloronaphthalene	1 U	1 U	1 U	--
2-Chlorophenol	1 U	1 U	1 U	--
2-Methylnaphthalene	1 U	1 U	1 U	--
2-Methylphenol	1 U	1 U	1 U	--
2-Nitroaniline	5 U	5 U	5 U	--
2-Nitrophenol	5 U	5 U	5 U	--
3,3'-Dichlorobenzidine	5 U	5 U	5 U	--
3-Nitroaniline	5 U	5 U	5 U	--

Table 2-5
Historical Surface Water Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2005 Phase II ESA			2022 Stream Investigation
Location Type:	Seep Water			Surface Water
Location:	LBSP1	LBSP2	LBSP3	GCSW01
Sample Name:	LBSP1	LBSP2	LBSP3	GCSW01
Sample Date:	03/04/2005	03/04/2005	03/04/2005	10/07/2022
SVOCs cont. (ug/L)				
4,6-Dinitro-2-methylphenol	10 U	10 U	10 U	--
4-Bromophenyl phenyl ether	1 U	1 U	1 U	--
4-Chloro-3-methylphenol	5 U	5 U	5 U	--
4-Chloroaniline	5 U	5 U	5 U	--
4-Chlorophenyl phenyl ether	1 U	1 U	1 U	--
4-Methylphenol	1 U	1 U	1 U	--
4-Nitroaniline	5 U	5 U	5 U	--
4-Nitrophenol	5 U	5 U	5 U	--
Acenaphthene	1 U	1 U	1 U	--
Acenaphthylene	1 U	1 U	1 U	--
Anthracene	1 U	1 U	1 U	--
Benzo(a)anthracene	1 U	1 U	1 U	--
Benzo(a)pyrene	1 U	1 U	1 U	--
Benzo(b)fluoranthene	1 U	1 U	1 U	--
Benzo(ghi)perylene	1 U	1 U	1 U	--
Benzo(k)fluoranthene	1 U	1 U	1 U	--
Benzoic acid	10 U	10 U	10 U	--
Benzyl alcohol	5 U	5 U	5 U	--
Bis(2-chloro-1-methylethyl) ether	1 U	1 U	1 U	--
Bis(2-chloroethoxy)methane	1 U	1 U	1 U	--
Bis(2-chloroethyl) ether	1 U	1 U	1 U	--
Bis(2-ethylhexyl) phthalate	1 U	1 U	1 U	--
Butylbenzyl phthalate	1 U	1 U	1 U	--
Carbazole	1 U	1 U	1 U	--
Chrysene	1 U	1 U	1 U	--
Dibenzo(a,h)anthracene	1 U	1 U	1 U	--
Dibenzofuran	1 U	1 U	1 U	--
Diethyl phthalate	1 U	1 U	1 U	--
Dimethyl phthalate	1 U	1 U	1 U	--
Di-n-butyl phthalate	1 U	1 U	1 U	--
Di-n-octyl phthalate	1 U	1 U	1 U	--
Fluoranthene	1 U	1 U	1 U	--
Fluorene	1 U	1 U	1 U	--
Hexachlorobenzene	1 U	1 U	1 U	--
Hexachlorobutadiene	1 U	1 U	1 U	--

Table 2-5
Historical Surface Water Analytical Results
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Task/Study:[1][2]	2005 Phase II ESA			2022 Stream Investigation
Location Type:	Seep Water			Surface Water
Location:	LBSP1	LBSP2	LBSP3	GCSW01
Sample Name:	LBSP1	LBSP2	LBSP3	GCSW01
Sample Date:	03/04/2005	03/04/2005	03/04/2005	10/07/2022
SVOCs cont. (ug/L)				
Hexachlorocyclopentadiene	5 U	5 U	5 U	--
Hexachloroethane	1 U	1 U	1 U	--
Indeno(1,2,3-cd)pyrene	1 U	1 U	1 U	--
Isophorone	1 U	1 U	1 U	--
Naphthalene	1 U	1 U	1 U	--
Nitrobenzene	1 U	1 U	1 U	--
N-Nitrosodiphenylamine	1 U	1 U	1 U	--
N-Nitrosodipropylamine	5 U	5 U	5 U	--
Pentachlorophenol	5 U	5 U	5 U	--
Phenanthrene	1 U	1 U	1 U	--
Phenol	1 U	1 U	1 U	--
Pyrene	1 U	1 U	1 U	

Notes

-- = not analyzed.

ESA = environmental site assessment.

SVOC = semivolatile organic compound.

TPH = total petroleum hydrocarbons.

U = result is non-detect at the method reporting limit.

ug/L = micrograms per liter.

VOC = volatile organic compound.

References

[1]CH2MHILL. 2007. *Final Remedial Investigation/Feasibility Study Report.* Abitibi West Tacoma Mill. Prepared for Abitibi Consolidated Sales Corporation. CH2MHILL. April.

[2]MFA. 2023. Audrey Hackett, Maul Foster & Alongi, Inc. *Garrison Creek Restoration Investigation Data Summary* . Letter to Rand Bellar, HDG, LP. February 6.

Table 3-1
Proposed Sample Rationale
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Area	Location Type	Sample Type	Location ID	Historical Features of Interest	Sampling Rationale
Mill Area	ISM	Surface soil	SRI-DU1	Mill Area (16 acres)	Evaluate potential deposition of dioxins/furans to surface soils across the Mill Area.
Forested Area	ISM	Surface soil	SRI-DU2 SRI-DU3 SRI-DU4	Forested Area (Accessible Portions)	Evaluate potential deposition of dioxins/furans to surface soils in accessible portions of the Forested Area.
Mill Area	TSP Metals	Surface soil	SRI-SS-001 through SRI-SS-072	Mill Area (16 acres)	Evaluate potential deposition of TSP metals to surface soils across the Mill Area.
Mill Area	Test Pit	Soil	SRI-TP-01	Recycle Warehouse	Due to remnant foundation and construction rubble, advance two test pits west and downgradient of former Recycle Warehouse.
			SRI-TP-02		
			SRI-TP-03	Hog Fuel Storage	Due to construction rubble limiting access, advance test pit near feature of interest.
			SRI-TP-04	Hog Fuel Storage and Hydrapulper Building	
			SRI-TP-05	Shipping Warehouse	Due to subgrade basement and annual flooding, advance test pit west and downgradient of Shipping Warehouse.
			SRI-TP-06	Steam Plant	Due to construction rubble limiting access, advance test pit near feature of interest.
			SRI-TP-07	TMP Building	
			SRI-TP-08		
			SRI-TP-09	Steam Plant	
			SRI-TP-10	Decker Building	
			SRI-TP-11		
			SRI-TP-12	Maintenance	
			SRI-TP-13	Decker Building	
			SRI-TP-14	Paper Machine Tank Farm	
			SRI-TP-15	#2 Paper Machine	
			SRI-TP-16	#3 Paper Machine	

Table 3-1
Proposed Sample Rationale
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Area	Location Type	Sample Type	Location ID	Historical Features of Interest	Sampling Rationale
Mill Area	Boring/Temp Well	Soil and groundwater	SRI-B-01	Truck Scale Area	Advance boring near former Truck Scale Area and downgradient of Chip Compressor to evaluate soil and groundwater conditions in area with limited previous investigation.
			SRI-B-02	Recycle Warehouse and Hydrapulper Building	Owing to presence of remnant concrete foundations with possible subsurface basements, advance boring west of Recycle Warehouse and north of Hydrapulper Building in downgradient direction to evaluate soil and groundwater conditions.
			SRI-B-03	Hydrapulper Building and Hog Fuel Storage	Owing to presence of construction rubble presenting access limitation, advance boring west of Hydrapulper Building and north of Hog Fuel Storage in downgradient direction to evaluate soil and groundwater conditions.
			SRI-B-04	# 3 Paper Machine, #2 Paper Machine, and Maintenance	Due to subgrade basement and water inundation beneath the #3 Paper Machine, and standing water over portions of former #2 Paper Machine and former Maintenance building, advance boring to the west in cross- and downgradient position to assess soil and groundwater.
			SRI-B-05	E&I Shop, Paint Shop, and Truck Shop	Advance boring on southern portion of the Mill Area to evaluate soil and groundwater conditions downgradient of the former E&I Shop, former Paint Shop, and former Truck Shop.

Table 3-1
Proposed Sample Rationale
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Area	Location Type	Sample Type	Location ID	Historical Features of Interest	Sampling Rationale
Mill Area	Boring	Soil	SRI-B-06	E&I Shop, Paint Shop, and Truck Shop	Advance boring on southern portion of the Mill Area to evaluate soil and groundwater conditions downgradient of the former E&I Shop, former Paint Shop, and former Truck Shop.
			SRI-B-07	#3 Paper Machine and Paper Machine Tank Farm	Owing to access limitations including construction rubble and possible subgrade basements, advance a soil boring east of the #3 Paper Machine and Paper Machine Tank Farm to access soil conditions.
			SRI-B-08	Hydrapulper Building and TMP Building	Owing to access limitations including construction rubble and remnant concrete foundations, advance a soil boring east of the Hydrapulper Building and TMP Building.
Mill Area	Existing Monitoring Well	Groundwater	MW02, MW03, or MW04	Hog Fuel Storage, Steam Plant, and Shipping Warehouse	Redevelop and sample groundwater from one existing monitoring well situated downgradient of Hog Fuel Storage, Steam Plant, and Shipping Warehouse.

Notes

dioxins/furans = polychlorinated dibenzo-p-dioxins and dibenzofurans.

ISM = incremental sampling methodology.

TSP = Tacoma Smelter Plume.

TSP metals = arsenic and lead.

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Table 4-1
Containers, Preservation, and Holding Times
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Matrix	Method	Parameter or Parameter Group[a]	Sample Container	Preservation (store all at 4°C)	Holding Time[b]
Soil	EPA 6020B	Metals (except mercury)	8-oz jar	None	6 months
		Mercury			28 days
	EPA 1613B	Dioxins/Furans	ISM locations: 0.5 gallon jar (protect from light)	None	1 year
				None	1 year
	NWTPH-Dx	Diesel- and oil-range hydrocarbons	8-oz jar	None	14 days
	EPA 8270E-SIM	PAHs	8-oz jar	None	14 days
	EPA 8260D	VOCs	EPA 5035 kit[c]	Methanol	14 days
Water	EPA 6020B	Total metals (except mercury)	250-mL polyethylene bottle	HNO_3 to pH < 2	6 months
		Total mercury			28 days
		Dissolved metals (except mercury)	250-mL polyethylene bottle	Field-filtered; HNO_3 to pH <2	6 months
		Dissolved mercury			28 days
	NWTPH-Dx	Diesel- and oil-range hydrocarbons	1-L amber glass bottle	HCl to pH < 2	14 days
	EPA 8270E-SIM	PAHs	1-L amber glass bottle	None	7 days
	EPA 8260D	VOCs	40-mL VOA vials	HCl to pH < 2	14 days

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Table 4-1
Containers, Preservation, and Holding Times
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Notes

Various sample analyses can be combined in same container. Field samplers will consult with laboratory prior to combining sample volumes.

°C = degrees Celsius.

EPA = U.S. Environmental Protection Agency.

HCl = hydrochloric acid.

HNO_3 = nitric acid.

ISM = incremental sampling methodology.

L = liter.

mL = milliliter.

NWTPH = Northwest Total Petroleum Hydrocarbons.

oz = ounce.

PAH = polycyclic aromatic hydrocarbon.

SIM = selected ion monitoring.

VOA = volatile organic analysis.

VOC = volatile organic compound.

[a]Custom analyte lists for each parameter group (where applicable) are listed on Table 4-2 and 4-3.
responsible for testing extracts within the method-specified extraction holding times.

[c]5035A sample kit includes two prepared 40-mL VOA vials with 5 mL of methanol and one 2-oz jar for moisture content determination.

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Table 4-2
Preferred Soil Analytical Methods and Performance Criteria
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Analyte	Preferred Analytical Method	MRL	LCS/LCSD Accuracy (%)	MS/MSD Accuracy (%)	Precision (RPD)	Completeness (%)
Total Metals (mg/kg)						
Arsenic	EPA 6020B	1	80 - 120	75 - 125	20	90
Barium		1	80 - 120	75 - 125	20	90
Cadmium		0.2	80 - 120	75 - 125	20	90
Chromium		1	80 - 120	75 - 125	20	90
Lead		0.2	80 - 120	75 - 125	20	90
Mercury		0.1	80 - 120	75 - 125	20	90
Selenium		1	80 - 120	75 - 125	20	90
Silver		0.2	80 - 120	75 - 125	20	90
TPH (mg/kg)						
Diesel-range hydrocarbons	NWTPH-Dx	20	38 - 132	38 - 132	30	90
Oil-range hydrocarbons		40	NA	NA	30	90
PAHs (mg/kg)						
Acenaphthene	EPA 8270E-SIM	0.01	40 - 123	40 - 123	30	90
Acenaphthylene		0.01	32 - 132	32 - 132	30	90
Anthracene		0.01	47 - 123	47 - 123	30	90
Benz(a)anthracene		0.01	49 - 126	49 - 126	30	90
Benzo(a)pyrene		0.01	45 - 129	45 - 129	30	90
Benzo(b)fluoranthene		0.01	45 - 132	45 - 132	30	90
Benzo(k)fluoranthene		0.01	47 - 132	47 - 132	30	90
Benzo(g,h,i)perylene		0.01	43 - 134	43 - 134	30	90
Chrysene		0.01	50 - 124	50 - 124	30	90
Dibenz(a,h)anthracene		0.01	45 - 134	45 - 134	30	90
Fluoranthene		0.01	50 - 127	50 - 127	30	90
Fluorene		0.01	43 - 125	43 - 125	30	90
Indeno(1,2,3-cd)pyrene		0.01	45 - 133	45 - 133	30	90
1-Methylnaphthalene		0.01	40 - 120	40 - 120	30	90
2-Methylnaphthalene		0.01	38 - 122	38 - 122	30	90
Naphthalene		0.01	35 - 123	35 - 123	30	90
Phenanthrene		0.01	50 - 121	50 - 121	30	90
Pyrene		0.01	47 - 127	47 - 127	30	90
Dibenzofuran		0.01	44 - 120	44 - 120	30	90
VOCs (mg/kg)						
Acetone	EPA 8260D	1	80 - 120	36 - 164	30	90
Acrylonitrile		0.1	80 - 120	65 - 134	30	90
Benzene		0.01	80 - 120	77 - 121	30	90
Bromobenzene		0.025	80 - 120	78 - 121	30	90
Bromochloromethane		0.05	80 - 120	78 - 125	30	90
Bromodichloromethane		0.05	80 - 120	75 - 127	30	90
Bromoform		0.1	80 - 120	67 - 132	30	90
Bromomethane		0.5	80 - 120	53 - 143	30	90

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Table 4-2
Preferred Soil Analytical Methods and Performance Criteria
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Analyte	Preferred Analytical Method	MRL	LCS/LCSD Accuracy (%)	MS/MSD Accuracy (%)	Precision (RPD)	Completeness (%)
VOCs cont. (mg/kg)						
2-Butanone (MEK)	EPA 8260D	0.5	80 - 120	51 - 148	30	90
n-Butylbenzene		0.05	80 - 120	70 - 128	30	90
sec-Butylbenzene		0.05	80 - 120	73 - 126	30	90
tert-Butylbenzene		0.05	80 - 120	73 - 125	30	90
Carbon disulfide		0.5	80 - 120	63 - 132	30	90
Carbon tetrachloride		0.05	80 - 120	70 - 135	30	90
Chlorobenzene		0.025	80 - 120	79 - 120	30	90
Chloroethane		0.5	80 - 120	59 - 139	30	90
Chloroform		0.05	80 - 120	78 - 123	30	90
Chloromethane		0.25	80 - 120	50 - 136	30	90
2-Chlorotoluene		0.05	80 - 120	75 - 122	30	90
4-Chlorotoluene		0.05	80 - 120	72 - 124	30	90
Dibromochloromethane		0.1	80 - 120	74 - 126	30	90
1,2-Dibromo-3-chloropropane		0.25	80 - 120	61 - 132	30	90
1,2-Dibromoethane (EDB)		0.05	80 - 120	78 - 122	30	90
Dibromomethane		0.05	80 - 120	78 - 125	30	90
1,2-Dichlorobenzene		0.025	80 - 120	78 - 121	30	90
1,3-Dichlorobenzene		0.025	80 - 120	77 - 121	30	90
1,4-Dichlorobenzene		0.025	80 - 120	75 - 120	30	90
Dichlorodifluoromethane		0.1	80 - 120	29 - 149	30	90
1,1-Dichloroethane		0.025	80 - 120	76 - 125	30	90
1,2-Dichloroethane (EDC)		0.025	80 - 120	73 - 128	30	90
1,1-Dichloroethene		0.025	80 - 120	70 - 131	30	90
cis-1,2-Dichloroethene		0.025	80 - 120	77 - 123	30	90
trans-1,2-Dichloroethene		0.025	80 - 120	74 - 125	30	90
1,2-Dichloropropane		0.025	80 - 120	76 - 123	30	90
1,3-Dichloropropane		0.05	80 - 120	77 - 121	30	90
2,2-Dichloropropane		0.05	80 - 120	67 - 133	30	90
1,1-Dichloropropene		0.05	80 - 120	76 - 125	30	90
cis-1,3-Dichloropropene		0.05	80 - 120	74 - 126	30	90
trans-1,3-Dichloropropene		0.05	80 - 120	71 - 130	30	90
Ethylbenzene		0.025	80 - 120	76 - 122	30	90
Hexachlorobutadiene		0.1	80 - 120	61 - 135	30	90
2-Hexanone		0.5	80 - 120	53 - 145	30	90
Isopropylbenzene		0.05	80 - 120	68 - 134	30	90
4-Isopropyltoluene		0.05	80 - 120	73 - 127	30	90
Methylene chloride		0.5	80 - 120	70 - 128	30	90
4-Methyl-2-pentanone (MiBK)		0.5	80 - 120	65 - 135	30	90
Methyl tert-butyl ether (MTBE)		0.05	80 - 120	73 - 125	30	90
Naphthalene		0.1	80 - 120	62 - 129	30	90

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Table 4-2
Preferred Soil Analytical Methods and Performance Criteria
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Analyte	Preferred Analytical Method	MRL	LCS/LCSD Accuracy (%)	MS/MSD Accuracy (%)	Precision (RPD)	Completeness (%)
VOCs cont. (mg/kg)						
n-Propylbenzene	EPA 8260D	0.025	80 - 120	73 - 125	30	90
Styrene		0.05	80 - 120	76 - 124	30	90
1,1,1,2-Tetrachloroethane		0.025	80 - 120	78 - 125	30	90
1,1,2,2-Tetrachloroethane		0.05	80 - 120	70 - 124	30	90
Tetrachloroethene (PCE)		0.025	80 - 120	73 - 128	30	90
Toluene		0.05	80 - 120	77 - 121	30	90
1,2,3-Trichlorobenzene		0.25	80 - 120	66 - 130	30	90
1,2,4-Trichlorobenzene		0.25	80 - 120	67 - 129	30	90
1,1,1-Trichloroethane		0.025	80 - 120	73 - 130	30	90
1,1,2-Trichloroethane		0.025	80 - 120	78 - 121	30	90
Trichloroethene (TCE)		0.025	80 - 120	77 - 123	30	90
Trichlorofluoromethane		0.1	80 - 120	62 - 140	30	90
1,2,3-Trichloropropane		0.05	80 - 120	73 - 125	30	90
1,2,4-Trimethylbenzene		0.05	80 - 120	75 - 123	30	90
1,3,5-Trimethylbenzene		0.05	80 - 120	73 - 124	30	90
Vinyl chloride		0.025	80 - 120	56 - 135	30	90
m,p-Xylene		0.05	80 - 120	77 - 124	30	90
o-Xylene		0.025	80 - 120	77 - 123	30	90
Dioxins and Furans (pg/g)						
1,2,3,4,6,7,8-HpCDD	EPA 1613B	5	70 - 140	70 - 130	20	90
1,2,3,4,6,7,8-HpCDF		5	82 - 122	70 - 130	20	90
1,2,3,4,7,8,9-HpCDF		5	78 - 138	70 - 130	20	90
1,2,3,4,7,8-HxCDD		5	70 - 164	70 - 130	20	90
1,2,3,4,7,8-HxCDF		5	72 - 134	70 - 130	20	90
1,2,3,6,7,8-HxCDD		5	76 - 134	70 - 130	20	90
1,2,3,6,7,8-HxCDF		5	84 - 130	70 - 130	20	90
1,2,3,7,8,9-HxCDD		5	64 - 162	70 - 130	20	90
1,2,3,7,8,9-HxCDF		5	78 - 130	70 - 130	20	90
1,2,3,7,8-PeCDD		5	70 - 142	70 - 130	20	90
1,2,3,7,8-PeCDF		5	80 - 134	70 - 130	20	90
2,3,4,6,7,8-HxCDF		5	70 - 156	70 - 130	20	90
2,3,4,7,8-PeCDF		5	68 - 160	70 - 130	20	90
2,3,7,8-TCDD		1	67 - 158	70 - 130	20	90
2,3,7,8-TCDF		1	75 - 158	70 - 130	20	90
OCDD		10	78 - 144	70 - 130	20	90
OCDF		10	63 - 170	70 - 130	20	90

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Table 4-2
Preferred Soil Analytical Methods and Performance Criteria
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Notes

Limits are provided by Apex Laboratories, LLC, except dioxins/furans which are provided by Cape Fear Analytical, LLC. Subcontract laboratory is subject to change.

Accuracy and precision acceptance criteria are performance-based and may be updated by the laboratory. Actual MRLs may vary due to sample dilutions and dry weight.

EPA = U.S. Environmental Protection Agency.

LCS/LCSD = laboratory control sample/laboratory control sample duplicate.

mg/kg = milligrams per kilogram.

MRL = method reporting limit.

MS/MSD = matrix spike/matrix spike duplicate.

NA = not applicable.

NWTPH = Northwest Total Petroleum Hydrocarbons.

PAH = polycyclic aromatic hydrocarbon.

pg/g = picograms per gram.

RPD = relative percent difference.

SIM = selected ion monitoring.

TPH = total petroleum hydrocarbons.

VOC = volatile organic compound.

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Table 4-3
Preferred Groundwater Analytical Methods and Performance Criteria
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Analyte	Preferred Analytical Method	MRL	LCS/LCSD Accuracy (%)	MS/MSD Accuracy (%)	Precision (RPD)	Completeness (%)
Total/Dissolved Metals (ug/L)						
Arsenic	EPA 6020B	1	80 - 120	75 - 125	20	90
Barium		2	80 - 120	75 - 125	20	90
Cadmium		0.2	80 - 120	75 - 125	20	90
Chromium		2	80 - 120	75 - 125	20	90
Lead		0.2	80 - 120	75 - 125	20	90
Mercury		0.1	80 - 120	75 - 125	20	90
Selenium		1	80 - 120	75 - 125	20	90
Silver		0.2	80 - 120	75 - 125	20	90
TPH (ug/L)						
Diesel-range hydrocarbons	NWTPH-Dx	200	36 - 132	36 - 132	30	90
Oil-range hydrocarbons		400	NA	NA	30	90
PAHs (ug/L)						
Acenaphthene	EPA 8270E-SIM	0.04	47 - 122	47 - 122	30	90
Acenaphthylene		0.04	41 - 130	41 - 130	30	90
Anthracene		0.04	57 - 123	57 - 123	30	90
Benz(a)anthracene		0.04	58 - 125	58 - 125	30	90
Benzo(a)pyrene		0.04	54 - 128	54 - 128	30	90
Benzo(b)fluoranthene		0.04	53 - 131	53 - 131	30	90
Benzo(k)fluoranthene		0.04	57 - 129	57 - 129	30	90
Benzo(g,h,i)perylene		0.04	50 - 134	50 - 134	30	90
Chrysene		0.04	59 - 123	59 - 123	30	90
Dibenz(a,h)anthracene		0.04	51 - 134	51 - 134	30	90
Fluoranthene		0.04	57 - 128	57 - 128	30	90
Fluorene		0.04	52 - 124	52 - 124	30	90
Indeno(1,2,3-cd)pyrene		0.04	52 - 134	52 - 134	30	90
1-Methylnaphthalene		0.08	41 - 120	41 - 120	30	90
2-Methylnaphthalene		0.08	40 - 121	40 - 121	30	90
Naphthalene		0.08	40 - 121	40 - 121	30	90
Phenanthrene		0.04	59 - 120	59 - 120	30	90
Pyrene		0.04	57 - 126	57 - 126	30	90
Dibenzofuran		0.04	53 - 120	53 - 120	30	90
VOCs (ug/L)						
Acetone	EPA 8260D	20	80 - 120	39 - 160	30	90
Acrylonitrile		2	80 - 120	63 - 135	30	90
Benzene		0.2	80 - 120	79 - 120	30	90
Bromobenzene		0.5	80 - 120	80 - 120	30	90
Bromochloromethane		1	80 - 120	78 - 123	30	90
Bromodichloromethane		1	80 - 120	79 - 125	30	90
Bromoform		1	80 - 120	66 - 130	30	90
Bromomethane		5	80 - 120	53 - 141	30	90

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Table 4-3
Preferred Groundwater Analytical Methods and Performance Criteria
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Analyte	Preferred Analytical Method	MRL	LCS/LCSD Accuracy (%)	MS/MSD Accuracy (%)	Precision (RPD)	Completeness (%)
VOCs cont. (ug/L)						
2-Butanone (MEK)	EPA 8260D	10	80 - 120	56 - 143	30	90
n-Butylbenzene		1	80 - 120	75 - 128	30	90
sec-Butylbenzene		1	80 - 120	77 - 126	30	90
tert-Butylbenzene		1	80 - 120	78 - 124	30	90
Carbon disulfide		10	80 - 120	64 - 133	30	90
Carbon tetrachloride		1	80 - 120	72 - 136	30	90
Chlorobenzene		0.5	80 - 120	80 - 120	30	90
Chloroethane		5	80 - 120	60 - 138	30	90
Chloroform		1	80 - 120	79 - 124	30	90
Chloromethane		5	80 - 120	50 - 139	30	90
2-Chlorotoluene		1	80 - 120	79 - 122	30	90
4-Chlorotoluene		1	80 - 120	78 - 122	30	90
Dibromochloromethane		1	80 - 120	74 - 126	30	90
1,2-Dibromo-3-chloropropane		5	80 - 120	62 - 128	30	90
1,2-Dibromoethane (EDB)		0.5	80 - 120	77 - 121	30	90
Dibromomethane		1	80 - 120	79 - 123	30	90
1,2-Dichlorobenzene		0.5	80 - 120	80 - 120	30	90
1,3-Dichlorobenzene		0.5	80 - 120	80 - 120	30	90
1,4-Dichlorobenzene		0.5	80 - 120	79 - 120	30	90
Dichlorodifluoromethane		1	80 - 120	32 - 152	30	90
1,1-Dichloroethane		0.4	80 - 120	77 - 125	30	90
1,2-Dichloroethane (EDC)		0.4	80 - 120	73 - 128	30	90
1,1-Dichloroethene		0.4	80 - 120	71 - 131	30	90
cis-1,2-Dichloroethene		0.4	80 - 120	78 - 123	30	90
trans-1,2-Dichloroethene		0.4	80 - 120	75 - 124	30	90
1,2-Dichloropropane		0.5	80 - 120	78 - 122	30	90
1,3-Dichloropropane		1	80 - 120	80 - 120	30	90
2,2-Dichloropropane		1	80 - 120	60 - 139	30	90
1,1-Dichloropropene		1	80 - 120	79 - 125	30	90
cis-1,3-Dichloropropene		1	80 - 120	75 - 124	30	90
trans-1,3-Dichloropropene		1	80 - 120	73 - 127	30	90
Ethylbenzene		0.5	80 - 120	79 - 121	30	90
Hexachlorobutadiene		5	80 - 120	66 - 134	30	90
2-Hexanone		10	80 - 120	57 - 139	30	90
Isopropylbenzene		1	80 - 120	72 - 131	30	90
4-Isopropyltoluene		1	80 - 120	77 - 127	30	90
Methylene chloride		10	80 - 120	74 - 124	30	90
4-Methyl-2-pentanone (MiBK)		10	80 - 120	67 - 130	30	90
Methyl tert-butyl ether (MTBE)		1	80 - 120	71 - 124	30	90
Naphthalene		5	80 - 120	61 - 128	30	90

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Table 4-3
Preferred Groundwater Analytical Methods and Performance Criteria
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Analyte	Preferred Analytical Method	MRL	LCS/LCSD Accuracy (%)	MS/MSD Accuracy (%)	Precision (RPD)	Completeness (%)
VOCs cont. (ug/L)						
n-Propylbenzene	EPA 8260D	0.5	80 - 120	76 - 126	30	90
Styrene		1	80 - 120	78 - 123	30	90
1,1,1,2-Tetrachloroethane		0.4	80 - 120	78 - 124	30	90
1,1,2,2-Tetrachloroethane		0.5	80 - 120	71 - 121	30	90
Tetrachloroethene (PCE)		0.4	80 - 120	74 - 129	30	90
Toluene		1	80 - 120	80 - 121	30	90
1,2,3-Trichlorobenzene		2	80 - 120	69 - 129	30	90
1,2,4-Trichlorobenzene		2	80 - 120	69 - 130	30	90
1,1,1-Trichloroethane		0.4	80 - 120	74 - 131	30	90
1,1,2-Trichloroethane		0.5	80 - 120	80 - 120	30	90
Trichloroethene (TCE)		0.4	80 - 120	79 - 123	30	90
Trichlorofluoromethane		2	80 - 120	65 - 141	30	90
1,2,3-Trichloropropane		1	80 - 120	73 - 122	30	90
1,2,4-Trimethylbenzene		1	80 - 120	76 - 124	30	90
1,3,5-Trimethylbenzene		1	80 - 120	75 - 124	30	90
Vinyl chloride		0.2	80 - 120	58 - 137	30	90
m,p-Xylene		1	80 - 120	80 - 121	30	90
o-Xylene		0.5	80 - 120	78 - 122	30	90

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Table 4-3
Preferred Groundwater Analytical Methods and Performance Criteria
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Notes

Limits are provided by Apex Laboratories, LLC, except dioxins/furans which are provided by Cape Fear Analytical, LLC. Subcontract laboratory is subject to change.

Accuracy and precision acceptance criteria are performance-based and may be updated by the laboratory. Actual MRLs may vary due to sample dilutions.

EPA = U.S. Environmental Protection Agency.

LCS/LCSD = laboratory control sample/laboratory control sample duplicate.

MRL = method reporting limit.

MS/MSD = matrix spike/matrix spike duplicate.

NA = not applicable.

NWTPH = Northwest Total Petroleum Hydrocarbons.

PAH = polycyclic aromatic hydrocarbon.

pg/L = picograms per liter.

RPD = relative percent difference.

SIM = selected ion monitoring.

TPH = total petroleum hydrocarbons.

ug/L = micrograms per liter.

VOC = volatile organic compound.

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Table 5-1
Quality Control Sample Summary
Former Abitibi Property, Steilacoom, Washington
HDG, LP

Quality Control Sample	Frequency	Acceptance Criteria
Field Quality Control Samples		
Trip blank	One per sample cooler containing VOC samples	Below MRL[(a)]
Equipment rinsate blank	One per 20 samples (or fewer) when samples are collected using nondedicated equipment	Below MRL[(a)]
Field duplicate	One per 20 samples per matrix and location type (or fewer)	50% RPD[(a)]
ISM field triplicate	One triplicate ISM set from one decision unit.	30% RSD[(a)]
Temperature blank	One per sample cooler	4°C (±2°C)
Laboratory Quality Control Samples		
Method Blank	Each analytical batch of samples for every 20 (or fewer) samples received, when required by method	Below MRL[(a)]
Laboratory Control Sample	Each analytical batch of samples for every 20 (or fewer) samples received, when required by method	Within laboratory control limits
Laboratory Duplicate	Each analytical batch of samples for every 20 (or fewer) samples received, when required by method	30% RPD[(a)(b)]
Matrix Spike/Matrix Spike Duplicate	Each analytical batch of samples for every 20 (or fewer) samples received, when required by method	Within laboratory control limits
Surrogate Spikes/Labeled Analogs	Added to all project and quality control samples, as appropriate for the analytical method (labeled analogs for dioxin/furan analyses only)	Within laboratory control limits

Notes

°C = degrees Celsius.

ISM = incremental sampling methodology.

MRL = method reporting limit.

RPD = relative percent difference.

RSD = relative standard difference.

VOC = volatile organic compound.

[(a)]Criteria may change based on data validation.

[(b)]Sample results less than five times the MRL evaluated using a control limit of the MRL.

Appendix A

Standard Operating Procedures

MAUL FOSTER ALONGI

Standard Operating Procedure

Decontamination of Field Equipment

SOP Number: 1
Date: 02/24/2025
Revision Number: 0.2

Scope and Application

This standard operating procedure (SOP) describes the decontamination procedure for field equipment that may come in contact with contaminated media and that Maul Foster & Alongi, Inc. (MFA) staff may reuse at multiple sample locations or sites. Decontamination is performed to reduce the potential for cross-contamination of samples that will be collected with multiuse equipment and that will undergo physical or chemical analyses. Other equipment that is multiuse—not used specifically for sample collection (e.g., water level meter, pump used for well development)—also requires decontamination. Finally, decontamination is necessary to minimize the potential for MFA staff's exposure to chemicals.

Typically, decontamination is not necessary for field equipment that is disposable and intended to be used only once (e.g., disposable bailer). Additionally, this SOP does not apply to equipment used by subcontractors, such as drilling equipment. However, MFA staff should confirm that subcontractors are implementing appropriate decontamination procedures to minimize the potential for cross-contamination of samples or MFA staff's exposure to chemicals.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Nonphosphate detergent solution (e.g., Alconox, Liquinox)
- Distilled and potable water
- Personal protective equipment (as specified in the site-specific health and safety plan)
- Buckets to contain rinsate, brushes, paper towels

Depending on the site conditions and the types of contaminants that may be present, the use of other decontamination materials, such as deionized water, methanol, hexane, or isopropyl alcohol, may be necessary. The need for other materials should be determined prior to fieldwork. The decontamination procedures using other materials should be described in a site-specific sampling and analysis plan (SAP).

Methodology

When the site-specific SAP specifies additional or different requirements for decontamination, it takes precedence over this SOP. In the absence of a SAP, the following procedures shall be used.

General Sampling Procedure:

1. Rinse the equipment with potable water to remove visible soil, petroleum sheen, or contamination.

2. Scrub the equipment with a brush and solution of distilled water and nonphosphate detergent.

3. Rinse the equipment with distilled water.

4. Allow equipment to air dry or dry it with clean paper towels.

5. At all times, ensure that the decontaminated equipment is stored so as to prevent it from becoming contaminated while not in use. Depending on the size of the equipment, it can be wrapped with new aluminum foil or placed in a new plastic bag.

Rinsate Storage:

All fluids resulting from equipment decontamination shall initially be contained in a bucket and then transferred to a Department of Transportation-approved container (e.g., 55-gallon drum) stored on site at a location that does not interfere with on-site activities (e.g., vehicle traffic, pedestrian areas). Place a label on each container and include the following information:

- The date on which fluids were placed in the container
- Contents (e.g., “water from equipment decontamination”)
- Contact information, including MFA staff or client phone number

Note that labels on containers exposed to sunlight or precipitation are prone to fading. Use a waterproof, indelible ink pen (e.g., Sharpie®) whenever possible. In the field notebook, keep a detailed inventory of all containers, including the number of containers, the approximate quantity of liquids generated, and a description of the source of the fluids. Provide this information to the MFA project manager. For future reference, take photographs of (1) each drum label, (2) the drum(s), and (3) the drum storage vicinity on site.

Note that some clients and site owners have specific requirements for labeling and storage of containers. The requirements should be determined in advance of the fieldwork.

Standard Operating Procedure

Lithologic Logging

SOP Number: 2
Date: 03/09/2021
Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the methods for observing and documenting the physical characteristics of unconsolidated geologic materials (soil and sediment) encountered during field investigations. If a Maul Foster & Alongi, Inc. (MFA) project requires hard rock drilling and description of rock core or cuttings, procedures for describing rock should be specified in a project-specific sampling and analysis plan (SAP).

Equipment and Materials Required

The following materials are necessary for this procedure:

- Blank field forms (e.g., boring logs) for documenting observations
- Dry-erase board
- Camera
- Munsell soil color chart (where required)
- MFA field logging checklist

Methodology

When the project-specific SAP specifies additional or different requirements for lithologic logging, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used. MFA uses a combination of the Unified Soil Classification System (USCS) and the ASTM International method D2487 for describing and classifying soil and sediment by visual and manual examination. Before beginning fieldwork, verify with the project manager the logging standard to be used.

Logging Process:

The objective of lithologic logging is to document the physical characteristics of soil and sediment encountered and the changes in characteristics with depth. Typically, changes with depth will define the strata encountered. Therefore, each stratum encountered should be identified and the following characteristics described in the order given:

- Depth interval of each stratum to the nearest tenth of a foot below ground surface
- USCS classification Group Name and Symbol
- Color, using the Munsell color chart
- Grain-size distribution, as percentages of fines (silt and clay combined), sand, and gravel
- Percentages of larger gravels (cobbles and boulders) if present.
- Consistency when the content of fines is 50 percent or greater

- Density when the combined percentage of sand and gravel is 50 percent or greater
- Sand and gravel grain shapes
- Chemical odors, if noticeable
- Structures, if present (e.g., laminae, pores)
- Presence of organic matter (e.g., roots, leaves, twigs, wood fragments)
- Moisture content as “dry,” “moist,” or “wet”
- If possible, a description of the origin of each stratum (e.g., fill, alluvium)

Standard Operating Procedure

Field Screening for VOCs in Soil

SOP Number: 3
Date: 03/09/2021
Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the use of a photoionization detector (PID) to field screen soil for evidence of organic vapors. The PID measures the organic vapor concentration in parts per million, is not compound-specific.

Never rely on a stand-alone PID reading to identify organic chemical contamination in soil. Always collect multiple PID readings (e.g., at multiple depths along the length of a soil core), since it is the relative difference in concentration between multiple readings (e.g., a sudden increase in concentration at a certain depth interval) that is the typical indictor of contamination. Additionally, PID readings should always be accompanied by observation of the soil samples for other indictors of contamination, such as soil staining or chemical odors, so that these multiple lines of evidence can be used together to identify potential organic chemical contamination in the field.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- PID with calibration gas
- Ziploc®-type bags
- Field forms or notebook for documenting PID readings

Methodology

When the project-specific sampling and analysis plan (SAP) specifies additional or different requirements for organic vapor field screening, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

The electron volt (eV) rating for the PID lamp (e.g., 9.8, 10.6, 11.7) must be greater than the ionization potential (in eV) of a compound in order for the PID to detect the compound. A lamp of at least 9.8 eV should be used for petroleum hydrocarbons. A lamp of at least 10.6 eV should be used for typical chlorinated alkenes. If the project health and safety plan does not specify the lamp size, verify the compatibility of the lamp size with the anticipated compounds expected to be present in soil prior to the field activities, and confirm with the project manager.

General Sampling Procedure:

Calibration:

- The PID should be calibrated daily (or more frequently, as needed).
- Calibrate the PID according to the manufacturer's instructions.

- Document the calibration activities and results in the field notebook.

Measuring organic vapor content:

- Place a representative volume (generally, a "handful") of freshly exposed soil into a Ziploc-type bag.
- Seal the bag and gently knead the bag to loosen the soil.
- Let the bag set for several minutes to allow organic vapors, if present, to volatilize from the soil into the headspace of the bag.
- Partially open the bag so that the tip of the PID intake tube can be inserted into the bag but is not in contact with the soil, then close the bag seal around the intake tube.
- Record the PID measurement and document results in the field notes or boring log.

Static Sheen Test Procedure and Observations:

Sheen Test Procedure:

- Following the PID screen discussed above, add enough water to cover the soil in the container.
- Observe the water for signs of discoloration/sheen and characterize per the table below.

When static sheen testing is required or when making observations of a water surface the following table presents descriptions to be used (consistent with Department of Ecology Guidance)[1].

No Sheen (NS)	No visible sheen on the water surface
Slight Sheen (SS)	Light, colorless, dull sheen; spread is irregular, not rapid. Natural organic oils or iron bacteria in the soil may produce a slight sheen.
Moderate Sheen (MS)	Pronounced sheen over limited area; probably has some color/iridescence; spread is irregular, may be rapid; sheen does not spread over entire water surface.
Heavy Sheen (HS)	Heavy sheen with pronounced color/iridescence; spread is rapid; the entire water surface is covered with sheen.
Biogenic Film (BF)	False positive results may be generated by the presence of decaying organic matter and iron bacteria, which can produce a rainbow-like sheen similar to an oil sheen. These sheens, unlike oil sheens, can typically be broken up creating platy or blocky fragments when agitated or disturbed. Biogenic films can also be foamy.

[1] Department of Ecology. 2016. Guidance for remediation of petroleum contaminated sites. June.

Standard Operating Procedure

Surface and Subsurface Soil Sampling Using Hand Tools

SOP Number: 4
Date: 09/13/2023
Revision Number: 0.2

Scope and Application

This standard operating procedure (SOP) describes the use of hand tools for obtaining surface and subsurface soil samples for physical and/or chemical analysis.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the Health and Safety Plan)
- Tools appropriate for the conditions that may be encountered (e.g., spoon, trowel, shovel, hand auger); tools constructed of stainless steel are preferred.
- Stainless steel bowls
- Tape measure with increments in feet and tenths of a foot.
- Laboratory-supplied sample containers
- Laboratory chain-of-custody form and cooler with ice.
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures).
- Field forms or notebook for documenting the sampling procedures.

Methodology

When the project-specific sampling and analysis plan (SAP) specifies additional or other requirements for soil sampling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

General Sampling Procedure:

- Don gloves as specified in the Health and Safety Plan; replace gloves with new gloves after each sample is collected.
- Clear the ground surface of brush, root mat, grass, leaves, and other debris.
- Use the selected hand tool to remove soil to the targeted sample depth. Use a measuring tape to verify that the sample depth is correct and record the depth in the field notebook or boring log.
- Describe and document the soil lithology in accordance with SOP 2.
- Use the selected hand tool to collect soil and homogenize in a decontaminated stainless-steel bowl or a dedicated Ziploc® bag and then transfer the sample to the sample container using hand tools.

- Before sample collection, and to the extent possible, use the selected hand tool to remove organic debris, anthropogenic material (e.g., brick, metal, glass), and gravels larger than 4 millimeters, unless a project-specific SAP directs otherwise.
- When sampling for gasoline-range total petroleum hydrocarbons (gasoline) or volatile organic compounds (VOCs), a subsample will be obtained from a discrete portion of the collected sample. To minimize the potential loss of volatiles during sampling, the subsample shall not be composited or homogenized. The sample container for gasoline and/or VOC analysis will be filled first if additional containers are necessary for other analysis. Specific procedures for collecting samples for gasoline and/or VOC analysis using the U.S. Environmental Protection Agency Method 5035 are specified in SOP 5.
- The sampling device and field equipment will be decontaminated between sample locations in accordance with SOP 1. Alternatively, new, disposable equipment can be used to collect each sample to preclude the need for equipment decontamination.

Backfilling Sample Locations:

Backfill in accordance with federal and state regulations (e.g., Oregon bentonite requirements per OAR 690-240-0035). Otherwise, manual excavations can be backfilled with excess soil remaining after sample collection, unless the project-specific SAP requires a different backfill procedure.

Standard Operating Procedure

EPA Method 5035 Soil Sampling

SOP Number: 5
Date: 9/25/2024
Revision Number: 0.2

Scope and Application

This standard operating procedure (SOP) describes the methods for obtaining soil samples for chemical analysis for gasoline-range petroleum hydrocarbons (gasoline) and volatile organic compounds (VOCs) by U.S. Environmental Protection Agency Method 5035A. Please see note in general sampling procedure regarding container labeling.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Sampling equipment (e.g., Terra Core Sampler™ or similar sampler capable of collecting a 5-gram soil sample).
- Laboratory-supplied sample containers:
  - Preweighed and labeled 40-milliliter volatile organic analysis (VOA) vials, including preservative (typically methanol)
  - Two-ounce jar for percent total solids/moisture (if required, confirm with the laboratory)
- Laboratory chain-of-custody form and cooler with ice.
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures).
- Field forms or notebook for documenting the sampling procedures.

Methodology

When the site-specific sampling and analysis plan (SAP) specifies additional or different requirements for soil sampling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Laboratory Analytical Considerations:

- VOCs must be analyzed within 14 days of sample collection.
- Samples must be maintained at less than 4°±2°C.
- Discrete VOC samples may be composited at the laboratory.

General Procedure:

- When using the Terra Core Sampler, seat the plunger in the handle.
- Collect the sample by pushing the sampler into the soil until the soil has filled the sampler.
- Remove the sampler and confirm that the soil in it is flush with the mouth of the sampler.

- Wipe all debris from the outside of the sampler. Remove any excess collected soil that extends beyond the mouth of the sampler.
- Rotate the plunger handle 90 degrees until it is aligned with the slots in the body of the sampler. Place the mouth of the sampler into the sample container and extrude the sample into the sample container by pushing the plunger down. Hold the sample at an angle when extruding to minimize splashing of the preservative.
- Immediately remove any soil or debris from the threads of the vial and place the lid on the vial.
- Gently swirl the vial (do not shake) to allow the preservative to uniformly penetrate and wet the soil.
- Repeat process for each additional sample container.
- If required by the laboratory, fill a 2-ounce container to capacity for percent total solids determination.
- **Please note that the tare weight is recorded on the vial or is digitally recorded for that specific container using a bar code. Do not obscure the laboratory-provided tare weight or bar code. Do not place any labels, stickers, tape, etc., on the pre-weighed sample vials.**

Standard Operating Procedure

Test Pit Exploration

SOP Number: 6
Date: 03/09/2021
Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the methods for advancing a test pit by mechanical means to observe subsurface conditions and collect soil samples for laboratory analysis.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Backhoe or excavator to advance the test pit (typically provided and operated by a subcontractor to MFA; subcontractor will assume responsibility for excavation safety and implementing the Occupational Health and Safety Administration [OSHA] excavation requirements)
- Personal protective equipment (as specified in the health and safety plan)
- Laboratory-supplied sample containers
- Measuring tape, caution tape, traffic cones, stakes or fence posts, fence post hammer
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures)
- Field forms or notebook for documenting the sampling procedures

Methodology

When the site-specific sampling and analysis plan (SAP) provides additional or different requirements for test pitting and soil sample collection, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Utility Locate:

- Before beginning fieldwork, assess the proposed test pit location(s) for the presence of overhead and underground utilities, and adjust the locations, as needed, to avoid identified utilities.
- See SOP 18 for the utility-locating procedures.

Excavation Procedure:

- Before advancing each test pit, observe the excavator or backhoe bucket to ensure that it is free of visible soil or evidence of contamination (oil, grease, hydraulic fluid). After each test pit is excavated and backfilled, have the excavator operator hover the bucket over the backfilled test pit while you use a shovel or brush to remove visible soil. Confirm with the MFA project manager whether more rigorous decontamination procedures are necessary.
- Excavate the test pit so that the sidewalls are as vertical as possible to allow for observation of subsurface soils in cross section.

- Advance the test pit to the depth and length needed to meet the project objectives. Use a measuring tape to record the width, length, and depth of the test pit, and document the approximate test pit orientation.
- Avoid standing within the reach or swing of the backhoe or excavator arm.
- Since the sidewalls of the long edge of the test pit are most prone to collapse, view the test pit from the end of the test pit opposite the excavator. If possible, have the operator lay back the slope of the test pit end to less than a 1:1 slope, or stay 2 to 3 feet from the edge of the test pit for safety.
- On the MFA test pit log and in accordance with SOP 2, document the soil stratigraphy observed in the test pit sidewall, depth to groundwater (if encountered), and soil sample locations. Use the excavator or backhoe bucket to retrieve soil samples representative of each stratum encountered for lithologic descriptions. Confirm with the project manager whether a sketch of the test pit sidewall profile is required.
- Place the excavated soil to one side of the test pit a minimum of 3 feet from the edge of the test pit. If required for the project, place the excavated soil on plastic sheeting. If an obvious topsoil layer is observed (e.g., dark brown soil with roots and a vegetated ground surface), stockpile the topsoil layer separate from deeper soil.
- Entering excavations:
  - Do not enter excavations more than 3 feet deep unless the walls are sloped at 34 degrees or less. If the slope cannot be established or maintained, then the project manager must be notified to ensure that the operations are conducted safely and consistent with the OSHA requirements. Soil samples for laboratory analysis can be collected manually from the test pit sidewall under the above conditions.
  - If the excavation cannot be entered safely, use the excavator or backhoe bucket to retrieve soil samples from the desired sample depth. Observe the sample retrieval to confirm that the sample is representative of the desired depth and is not contaminated by soil from a shallower depth that sloughed into the bucket. Collect the soil sample directly from the center of the excavator bucket and close to, but not in contact with, the bucket teeth.

Backfilling Excavation:

- If possible, backfill the test pit immediately upon completion of sampling. If the test pit must remain open and unattended by MFA staff for a period of time, ensure that one end of the test pit is sloped to provide a route of egress from the test pit. Place caution tape around the entire test pit perimeter and no less than 5 feet from the test pit edge, mounted to temporary fence posts or stakes to prevent accidental entry.
- Soils shall be returned the test pit in the approximate order in which they were removed. Soil from the deepest portion of the test pit should be returned to the excavation first, followed by shallower soil. If a topsoil layer was encountered and separately stockpiled, place the topsoil last.
- Confirm with the project manager whether the project requires off-site disposal of excavated soil and use of imported soil as backfill.
- Confirm with the project manager whether specific backfill compaction requirements apply to the work, such as in areas that will be repaved and used for vehicular traffic. In the absence of project-specific compaction requirements, place backfill into the test in lifts of no more than 2

feet thickness, and use the excavator or backhoe bucket to compact each lift to a non-yielding state. Mound soil in unpaved locations to minimize accumulation of surface water that may occur after settlement.

Standard Operating Procedure

Push-Probe Drilling

SOP Number: 7
Date: 03/09/2021
Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the use of a push probe (i.e., Geoprobe™) to observe subsurface conditions and collect samples of various environmental media (e.g., soil, sediment, groundwater, soil vapor) for laboratory analysis. Push-probe drilling is generally not suitable for soils with gravel/rock clast larger than about 4 inches in diameter. If gravelly/rocky soils are expected at the project site, consider use of the sonic drilling method described in SOP 8.

Push-probe drilling can be used for a variety of purposes, including:

- Retrieving cores to document subsurface soil or sediment conditions and to obtain samples for physical and/or chemical evaluation
- Sampling soil vapors, using temporary well points
- Collecting reconnaissance groundwater samples from temporary well screens
- Installing permanent monitoring wells

Equipment and Materials Required

The following equipment and materials are necessary for this procedure:

- Push-probe drill rig and operator provided by a subcontractor to MFA. Ensure that the subcontractor is licensed to perform the drilling work.
- Sampling equipment appropriate for the media to be sampled (e.g., water level meter, pumps, hand tools, and pump tubing).
- Laboratory-supplied sample containers.
- Traffic cones, measuring tape, buckets.
- Department of Transportation (DOT)-approved containers (e.g., 55-gallon drum) for storing excess soil and decontamination water; the drums are typically provided by the drilling subcontractor.
- Boring log form and notebook.
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures).
- Personal protective equipment (as required by the project health and safety plan).

Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for push-probe drilling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Utility Locate:

- Before beginning the fieldwork, assess the proposed drilling location(s) for the presence of overhead and underground utilities, and adjust the locations, as needed, to avoid identified utilities.
- See SOP 18 for the utility locating procedures.

Push-Probe Drilling Process:

- The push-probe drilling rig is equipped with a soil sampling device that retrieves a continuous soil core. A combination of static force and percussion is used to drive the soil sampler into unconsolidated geologic material. A plastic liner placed inside the sampler contains the soil core and permits its removal from the sampler for examination. The sampler is driven into the subsurface, typically in 4- or 5-foot intervals, depending on the length of the sampling device. When each interval depth is reached, the soil sampler is removed from the ground, and the liner is removed to facilitate soil observation and sampling.
- This process is repeated for each soil sample interval until the targeted boring depth is reached.
- Ensure that the drilling subcontractor decontaminates all subsurface equipment before and after each boring. Document the decontamination procedures in the field notebook. Store decontamination water in DOT-approved containers for later off-site disposal.

Logging and Soil Sampling Process:

- Remove the soil core from the sampler for field screening, description, and sampling.
- Describe the lithology in accordance with SOP 2.
- Confirm the required depth interval(s) for soil sample collection and field screening with the MFA project manager, or conduct the work in accordance with the SAP. The sample interval may require adjustment based on core recovery, soil stratigraphy and characteristics, and evidence of contamination. Confirm any adjustments to the sample intervals with the project manager.
- If the project requires field screening for organic vapor, conduct it in accordance with SOP 3.
- If the project requires laboratory analyses for gasoline-range petroleum hydrocarbons or volatile organic compounds, conduct the sampling in accordance with SOP 5.
- Contain all soil core remaining after sample collection in DOT-approved containers for later off-site disposal. See SOP 1 for drum storage, labeling, and documentation procedures.

Reconnaissance Groundwater Sampling Process:

- Typically, reconnaissance groundwater samples are collected at the first occurrence of groundwater in a boring. Confirm the required depth and procedures for groundwater sample collection with the MFA project manager, or conduct the work in accordance with the SAP. If the project requires use of the low-flow sampling method, refer to SOP 9 for the low-flow sampling procedures.
- Reconnaissance groundwater samples are collected using a decontaminated stainless steel or disposable, temporary polyvinyl chloride well screen placed in the boring. If the soils in the boring are fine-grained and may cause excessive turbidity in groundwater, consider using a filter pack

around the screen to reduce turbidity. Alternatively, purging the well screen of groundwater prior to sample collection may also reduce the turbidity. See SOP 9 for purging procedures.

- Purging and sampling will be conducted using a peristaltic pump unless otherwise specified in the SAP. New tubing will be used for each boring. Field parameters (e.g., temperature, conductivity, and pH) will be recorded in accordance with SOP 9 during purging and sampling.

Monitoring Well Installation:

- If the project requires installation of a monitoring well in the boring, refer to SOP 11 for the well installation procedures. Confirm the procedures with the MFA project manager.

Borehole Abandonment Process:

- Abandon each borehole in accordance with local and state regulations/procedures. The abandonment will be performed by the drilling subcontractor.
- The abandonment procedure typically consists of backfilling the boring with granular bentonite and hydrating the bentonite with potable water.
- If the boring was advanced through concrete or asphalt, backfill the boring to about 6 inches below grade to allow for placement of asphalt or concrete in the remaining 6 inches to match the surface conditions.

Standard Operating Procedure

Sonic Drilling

SOP Number: 8
Date: 03/09/2021
Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the use of a sonic drilling rig to observe subsurface conditions and collect samples of various environmental media (e.g., soil, sediment, groundwater) for laboratory analysis. The sonic drilling method is ideal for sites with excessively gravelly/rocky soils or for drilling in bedrock.

Sonic drilling can be used for a variety of purposes, including:

- Retrieving cores to document subsurface soil, sediment, or bedrock conditions and to obtain samples for physical and/or chemical evaluation
- Collecting reconnaissance groundwater samples from temporary well screens
- Installing permanent monitoring wells

Equipment and Materials Required

The following materials are necessary for this procedure:

- Sonic drill rig and operator provided by a subcontractor to MFA. Ensure that the subcontractor is licensed to perform the drilling work.
- Sampling equipment appropriate for the media to be sampled (e.g., water level meter, pumps, hand tools, and pump tubing).
- Laboratory-supplied sample containers.
- Traffic cones, measuring tape, buckets.
- Department of Transportation (DOT)-approved containers (e.g., 55-gallon drum) for storing excess soil and decontamination water; the drums are typically provided by the drilling subcontractor.
- Boring log form and notebook.
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures).
- Personal protective equipment (as required by the project health and safety plan).

Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for sonic drilling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Utility Locate:

- Before beginning the fieldwork, assess the proposed drilling location(s) for the presence of overhead and underground utilities, and adjust the locations, as needed, to avoid identified utilities.
- See SOP 18 for the utility-locating procedures.

Sonic Drilling Process:

- The sonic drilling rig is equipped with a core barrel that retrieves a continuous soil core. A combination of high-frequency vibration and rotation is used to advance the core barrel into the subsurface.
- The core barrel is typically driven in 10-foot intervals. When each interval depth is reached, the core barrel is removed from the ground and vibrated to extrude the soil core from the core barrel. Plastic bags are placed over the end of the core barrel to collect and store the core in approximately 2-foot-long segments.
- After core retrieval, a temporary steel outer casing is driven to the bottom of the boring to prevent sloughing or collapse of the boring. The core barrel is then inserted into the casing and advanced to the next depth interval. This process is repeated until the targeted depth is reached.
- Ensure that the drilling subcontractor decontaminates all subsurface equipment before and after each boring. Document the decontamination procedures in the field notebook. Store decontamination water in DOT-approved containers for later off-site disposal.

Logging and Soil Sampling Process:

- Open each bagged segment of soil core for field screening, description, and sampling.
- Describe the lithology in accordance with SOP 2.
- Confirm the required depth interval(s) for soil sample collection and field screening with the MFA project manager, or conduct the work in accordance with the SAP. The sample interval may require adjustment based on core recovery, soil stratigraphy and characteristics, and evidence of contamination. Confirm any adjustments to the sample intervals with the project manager.
- If the project requires field screening for organic vapor, conduct it in accordance with SOP 3.
- If the project requires laboratory analyses for gasoline-range petroleum hydrocarbons or volatile organic compounds, conduct the sampling in accordance with SOP 5.
- Contain all soil core remaining after sample collection in DOT-approved containers for later off-site disposal. See SOP 1 for drum storage, labeling, and documentation procedures.

Reconnaissance Groundwater Sampling Process:

- Typically, reconnaissance groundwater samples are collected at the first occurrence of groundwater in a boring. Confirm the required depth and procedures for groundwater sample collection with the MFA project manager, or conduct the work in accordance with the SAP. If the project requires use of the low-flow sampling method, refer to SOP 9 for the low-flow sampling procedures.

- Reconnaissance groundwater samples are collected using a decontaminated stainless steel or disposable polyvinyl chloride temporary well screen placed in the boring. If the soils in the boring are fine-grained and may cause excessive turbidity in groundwater, consider using a filter pack around the screen to reduce turbidity. Alternatively, purging the well screen of groundwater before sample collection may also reduce the turbidity. See SOP 9 for purging procedures.
- Purging and sampling will be conducted using a peristaltic pump unless otherwise specified in the SAP. New tubing will be used for each boring. Field parameters (e.g., temperature, conductivity, and pH) will be recorded in accordance with SOP 9 during purging and sampling.

Monitoring Well Installation:

- If the project requires installation of a monitoring well in the boring, refer to SOP 11 for the well installation procedures. Confirm the procedures with the MFA project manager.
- If potable water was placed into the boring during drilling (e.g., to cool the core barrel), document the total volume of water placed in the boring; this information will be needed for well development (see SOP 12).

Borehole Abandonment Process:

- Abandon each borehole in accordance with local and state regulations/procedures. The abandonment will be performed by the drilling subcontractor.
- The abandonment procedure typically consists of backfilling the boring with granular bentonite and hydrating the bentonite with potable water.
- If the boring was advanced through concrete or asphalt, backfill the boring to about 6 inches below grade to allow for placement of asphalt or concrete in the remaining 6 inches to match the surface conditions.

Standard Operating Procedure

Low-Flow Groundwater Sampling

SOP Number: 9
Date: 07/25/2023
Revision Number: 0.3

Scope and Application

This standard operating procedure (SOP) describes use of the low-flow sampling method for collection of reconnaissance groundwater samples from borings and groundwater samples from monitoring wells. The method uses low pumping rates during purging and sample collection to minimize water-level drawdown and hydraulic stress at the well-aquifer interface.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- Water quality meter (e.g., Oakton, YSI Inc. multiparameter meter)
- Turbidity meter
- Water-level meter
- Peristaltic pump and tubing
- Laboratory-supplied sample containers
- Laboratory chain-of-custody form and cooler with ice
- Filter if dissolved analyses will be performed
- Well construction logs documenting the screen depth and interval for all wells to be sampled
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures)
- 5-gallon buckets with lids
- Department of Transportation-approved storage containers (e.g., drums, totes)
- Groundwater field sampling datasheet and notebook

Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for low-flow groundwater sampling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

General Sampling Procedure:

Water Level Measurement

- Water-level measurement procedures are described in detail in SOP 13.

- Open the well cap to allow the water level to equilibrate (approximately ten minutes).
- Measure the water level in the well, using an electronic water-level meter to the nearest 0.01 foot to determine the depth to groundwater below the top of the well casing.
- If light nonaqueous-phase liquid (LNAPL)is present (typically indicated by a dark, oily sheen on the top of the water level meter), discuss with the MFA project manager how to proceed.

Purging

- If the water level is above the top of the well screen, place the end of the sample tubing in the middle of the well screen interval. If the water level is below the top of the screen, place the end of the sample tubing at the midpoint between the water level and the bottom of the well screen.
- Typical low-flow sampling pumping rates range from 0.1 to 0.5 liters per minute, depending on the hydrogeologic characteristics at the site. The objective of the rate selected is to minimize excessive drawdown (<0.3 feet) of the water level.
- Measure water quality parameters (dissolved oxygen, pH, electrical conductivity, turbidity, and temperature) using a flow-through cell connected to the discharge end of the peristaltic pump tubing. Purging will be considered complete when the water quality parameters stabilize per the following for three consecutive readings taken over 3-minute intervals (consistent with EPA guidance)[1]:

Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized),
Dissolved Oxygen (10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized),
Specific Conductance (3%),
Temperature (3%),
pH (± 0.1 unit),
Oxidation/Reduction Potential (±10 millivolts).

- Document the purge procedures, including pumping rates, water quality parameter measurements, and the water level during purging, on the groundwater field sampling datasheet.
- Place purge water in Department of Transportation-approved containers (e.g., 55-gallon drum) stored on site. See SOP 1 for drum storage, labeling, and documentation procedures.

Sample Collection

- Following the purging process, collect groundwater samples in laboratory-supplied containers.
- Confirm the laboratory analytical methods and sample container requirement with the MFA project manager or project chemist. If analysis for gasoline-range petroleum hydrocarbons or volatile organic compounds (VOCs) is proposed, fill the sample containers for gasoline and VOC analysis before filling sample containers for other analytical methods. Sample containers for gasoline and VOC analysis shall be filled to capacity without overfilling and capped so that no headspace or air bubbles remain in the container.

[1] EPA. 2017. Low stress (low flow) purging and sampling procedure for the collection of groundwater samples from monitoring wells. September 19.

Low Yield (Alternate Method)

- If drawdown of the water table cannot be avoided by reducing the pumping rate, and the well goes dry during purging, discontinue pumping and water quality parameter measurements.
- Collect the groundwater sample after the water level above the well bottom recovers to 90 percent of the prepurge water level. For example, if the water level was 10 feet above the well bottom before purging, begin sampling when the water level has recovered to 9 feet or more above the well bottom.
- If the water column volume is insufficient to meet the sample volume requirement, allow the water level to again recover to 90 percent before continuing sampling. Repeat this procedure until all sample containers are filled.

Standard Operating Procedure

Well Development

SOP Number: 12
Date: 02/24/2025
Revision Number: 0.2

Scope and Application

This standard operating procedure (SOP) describes the methods for developing new monitoring well installations. New wells should be developed no sooner than a period of 24 hours after the grout seal has been placed; longer periods of 48 to 72 hours may be necessary, depending on applicable local or state regulations. The objective of well development is to ensure that low-turbidity groundwater samples, groundwater levels, and hydraulic conductivity data representative of conditions in the aquifer can be obtained from the well. This SOP is also applicable to the redevelopment of existing monitoring wells.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- Well purge equipment (e.g., Waterra Pump, bailer, and peristaltic pump)
- Water-quality meter (e.g., Oakton and turbidity meter)
- Water-level meter
- Well construction logs for all wells to be developed
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures)
- Five-gallon buckets with lids
- Department of Transportation-approved storage containers (e.g., drums, totes)
- Well development log and notebook

Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for well development, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Owing to the potential for hazardous substances in groundwater, well development requires consideration of the work area and equipment setup, health and safety procedures, use of appropriate personal protective equipment, procedures for equipment decontamination, and disposal of expendable development supplies. Confirm all procedures in advance with the MFA project manager and the MFA health and safety professional.

1. Cut a segment of plastic sheeting to an approximate 10-foot-by-10-foot dimension. Cut a hole in the center of the sheeting and place the sheeting over the well so that the well monument can be accessed through the hole and the sheeting lies flat on the ground. The sheeting defines the

work area for well development. All equipment that may come in contact with groundwater should remain in this work area until it has been decontaminated or containerized for disposal.

2. Measure the depth to water and the total depth of the well before development. Confirm that the entire screen length is below the water level; if it is not, contact the MFA project manager to discuss potential modification of the well-development procedures.

3. Subtract the depth to water from the total well depth to determine the height of the column of groundwater present in the well casing. Multiply the height by the gallon-per-foot value in the table below, corresponding to the diameter of the well being developed, to calculate the volume of water in the well casing. Record the readings and casing volume on the well development log.

Casing Diameter (inches)	Volume (gallons per foot)
1	0.04
2	0.17
3	0.37
4	0.65
5	1.02
6	1.46

4. Surge groundwater through the entire well screen interval with a weighted bailer or Waterra pump with tubing equipped with surge block. Begin surging at the top of the well screen by vigorously moving the bailer or surge block in approximately 1-foot vertical increments. Gradually increase the surge depth until the entre screen interval has been surged. The surge time for each 1-foot increment will depend on type of drilling, lithology, and well completion details. Generally, there should be at least one minute of surging across each increment.

5. After surging the well screen, purge groundwater from the well into buckets at a higher purging rate than the expected purging rate of groundwater sampling. Ideally, purging will be completed using a method that does not continue to surge the well (i.e., peristaltic or submersible pump). If a Waterra pump is used, remove the surge block from the tubing and set the tubing intake above the well screen for purging. Measure the water level during the purging process and adjust the pumping rate to maintain a water level above the top of the screen interval if possible. Document the volume of water removed.

6. When the volume of water purged equals the casing volume, use the water-quality meter to measure the temperature, pH, conductivity, and turbidity of the purge water. Repeat the measurements for each casing volume removed. Note that a YSI water-quality meter or similar meters should not be used in highly turbid water, per the manufacturer's recommendation.

7. After the removal of five casing volumes, review the stability of the water quality meter readings. The well will be considered developed if the water quality readings have stabilized for three consecutive casing volumes for the following:

pH (± 0.1 unit),
Specific Conductance (3%),
Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized),

8. If the water-quality readings stabilize before a total of ten casing volumes are removed, development is complete. If the water-quality readings do not stabilize, well development will be considered complete after ten casing volumes have been removed.
9. If the water level cannot be maintained above the well screen or the well pumps dry during purging, contact the MFA project manager for further instructions.
10. If potable water was placed into the boring during drilling or into the well during installation, remove that volume of water and then begin purging as described in step 5.

MAUL FOSTER ALONGI

Standard Operating Procedure

Monitoring Well—Water Elevation

SOP Number: 13
Date: 03/09/2021
Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the methods for obtaining groundwater level measurements and light nonaqueous-phase liquid (LNAPL) measurements from monitoring wells. Measurement may be collected as an independent event or in conjunction with groundwater sampling or sampling of removed LNAPL.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- Equipment decontamination supplies if equipment will be reused between well locations (see SOP 1 for equipment decontamination procedures)
- Field notebook
- Water-level meter or oil/water interface probe if water levels and LNAPL levels will be measured
- Bailers or tape/paste to confirm LNAPL detections if required; see SOP 10 for procedures for managing LNAPL when removing LNAPL from a well

Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for water-level and LNAPL measurements, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

General Sampling Procedure:

Review well construction details and historical groundwater and LNAPL levels and thicknesses if available.

During groundwater sampling events, measurements should be collected before, during, and after purging and sampling. During purging and low-flow sampling, water-level measurements are conducted to ensure that drawdown is not occurring. Low-flow sampling methods are described in SOP 9. The following procedures should be followed when collecting groundwater-level and LNAPL measurements from wells.

Water Level Measurement

1. Test the water-level meter to ensure proper instrument response. This can be accomplished by immersing the probe tip in a small container of water.
2. Open the well cover and cap and allow the water level to equilibrate with atmospheric pressure for several minutes so that a static water level is attained. Audible air movement into or out of

the well upon loosening of the well cap is an indication that the water level is not in equilibrium with atmospheric pressure.

3. Locate the measurement reference point at the top of the well casing. Typically, this is a small notch in the casing or a point marked with a pen. If no measure point is present, measure the water level from the north side of the casing and note the result in the field notebook.
4. Lower the water-level meter probe into the well casing until the probe signal indicates that water has been contacted.
5. Observe the depth-to-water (DTW) reading from the measurement reference point at the top of the well casing to the nearest 0.01 foot. Over the course of about a minute, raise and re-lower the probe and observe the resulting DTW reading. If the reading remains unchanged to within 0.01 foot, this is an indication that the water level has equilibrated with atmospheric pressure; the reading can then be recorded in the field notebook as the static water level reading. If the reading changes, allow more time for the water level to become static.
6. If the work scope or SAP requires measurement of the depth-to-bottom (DTB), lower the probe to the bottom of the well and record the DTB reading from the reference point to the nearest 0.01 foot.
7. Remove the probe and decontaminate the probe and the portion of the probe tape inserted into the well casing.

Water Level and LNAPL Measurement

1. Repeat above steps 1 through 7.
2. Lower the interface probe into the well casing until the probe signal indicates that LNAPL has been contacted. Typically, the interface probe will signal by a repeating beep when LNAPL is present. A steady signal indicates that LNAPL is absent and that the probe is recording the DTW.
3. Observe the LNAPL reading as described in step 5 above until a static reading to the nearest 0.01 foot is achieved, and record the reading in the field notebook.
4. Lower the probe until a steady signal indicates that water has been contacted. Observe the water-level reading as described in step 5 above to confirm a static water level, and record the reading in the field notebook.
5. If LNAPL is detected in a well with no prior history of LNAPL presence, or the LNAPL thickness is greater than in prior observations, verify the presence and thickness using an alternative technique (e.g., bailer, tape, and water/petroleum colorimetric paste). See SOP 10 for procedures for managing LNAPL when removing LNAPL from a well.
6. Remove the interface probe and decontaminate the probe and the portion of the probe tape inserted into the well casing.

Standard Operating Procedure

Underground Utility Locates

SOP Number: 18
Date: 03/09/2021
Revision Number: 0.1

Scope and Application

This standard operating procedure (SOP) describes the practices for locating underground utilities. Refer to the MFA health and safety plan (HASP) for additional information regarding communication procedures to be followed when an inadvertent utility strike occurs, as well as regarding methods for mitigating hazards during a utility strike.

Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the HASP)
- Marking materials (e.g., marking paint, stakes, flags)
- Field documentation materials

Methodology

When the project-specific sampling and analysis plan (SAP) specifies additional or different requirements for underground utility locates, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Before Conducting Utility Locates:

- Ensure that the locate will be conducted reasonably soon before the excavation work begins, e.g., within 48 hours. There may be project-specific conditions, e.g., weather and/or ground features that could cause markings to fade, which would require scheduling of the excavation work sooner than 48 hours after the locate.
- Clearly define the boundary of the work and the locations of all proposed excavations. Prepare a map of the project area showing the excavation locations.
- Interview site managers/property owners and obtain plans or drawings, if available, showing on-site utilities.
- For project work that will not take place in the public right-of-way, ensure that the public rights-of-way nearest to the project are identified and communicated during the one-call notification.
- Identify the township and range of the project area. This information can be easily attained by a quick email to MFA's GIS Exchange.
- If feasible, conduct a site visit to identify site conditions that could cause fading or disruption of marking paint. Such conditions could include gravel or ground sensitive to erosion and high traffic.
- Check the weather forecast to assess the potential for snow or rain to make marking utilities difficult or cause the markings to fade.

One-Call Utility Notification:

- If possible, initiate the one-call utility notification at least one week before the proposed work begins.
- Include a map or GPS coordinates when submitting the notification.
- Before conducting any excavation activities, confirm with each public utility that the utility locate has been completed.
- On remote or complicated sites, consider meeting public locators on site.
- Document the one-call ticket number and results in the project files.
- Provide the one-call ticket number to subcontractors who will be doing the excavations.

Private Utility Locate:

- Conduct the private utility locate only after confirmation that the public utility locate has been completed and all public utilities have been marked and the results reviewed by MFA staff who will be overseeing the excavations.
- Meet the private locator on site and participate in the entire private utility locate. Be engaged in the process, ask questions, and take time to walk the site thoroughly with the locator.
- Bring a copy of the one-call utility ticket and results of the one-call utility locater to check against the utility markings on the ground.
- If possible, have a site/property representative knowledgeable of on-site utilities participate in the private utility locate.
- If paint alone may not suffice to ensure clear marking of utilities, add vertical markers such as stakes or flags.
- Visually assess the area of the proposed excavation(s) to identify features potentially indicative of buried utilities. Have the private utility locator examine each feature identified below to assess the presence of buried utilities.
  - Examine adjacent public rights-of-way where public utilities have been marked for evidence of utilities that may extend onto the project site.
  - Identify nearby light poles, telephone poles, electrical utility poles, or other overhead utility poles with wires or conductors that run from the overhead utility, down the pole, and into the ground.
  - Identify the location of gas meters, water meters, or other aboveground junction boxes for evidence of utilities extending from these features into the ground.
  - Examine asphalt and concrete ground surfaces for discontinuities in the surface indicative of utility installations. Discontinuities may include recent patches of asphalt or concrete inlaid within older concrete or asphalt surfaces.
  - Identify manholes and catch basins indicative of buried storm or sanitary sewer pipes. Open manholes to examine the orientation of associated pipes to assess whether the utilities may be present near proposed excavations.
  - Identify tank ports and vent pipes.

- Identify irrigation systems and associated features such as valve boxes and controllers.
- Identify any other signs indicating the presence of buried utilities.
- Be wary of utility marks that suddenly begin or dead end.

Preparing to Perform Subsurface Activities after a Locate:

- Ensure that the markings are still visible when the work begins.
- Adjust locations, as needed, to avoid identified utilities, or use alternative methods such as nonmechanical excavation means (i.e., manual excavation or air-knifing) to a minimum depth of 5 feet.

Table
APWA UNIFORM COLOR CODE

	WHITE—Proposed Excavation
	PINK—Temporary Survey Markings
	RED—Electric Power Lines, Cables, Conduit and Lighting Cables
	YELLOW—Gas, Oil, Steam, Petroleum or Gaseous Materials
	ORANGE—Communication, Alarm or Signal Lines, Cables or Conduit
	BLUE—Potable Water
	PURPLE—Reclaimed Water, Irrigation and Slurry Lines
	GREEN—Sewers and Drain Lines

Source: Uniform Color Codes, ANSI Standard Z535.1. American Public Works Association. Revised 1999.

Appendix B

Health and Safety Plan

MAUL FOSTER ALONGI

Health and Safety Plan

Abitibi Consolidated Sales Corp

4302 Chambers Creek Road

Steilacoom, Washington 98388

Prepared for:

HDG, LP

February 13, 2026

Project No. M1882.01.009

Prepared by:

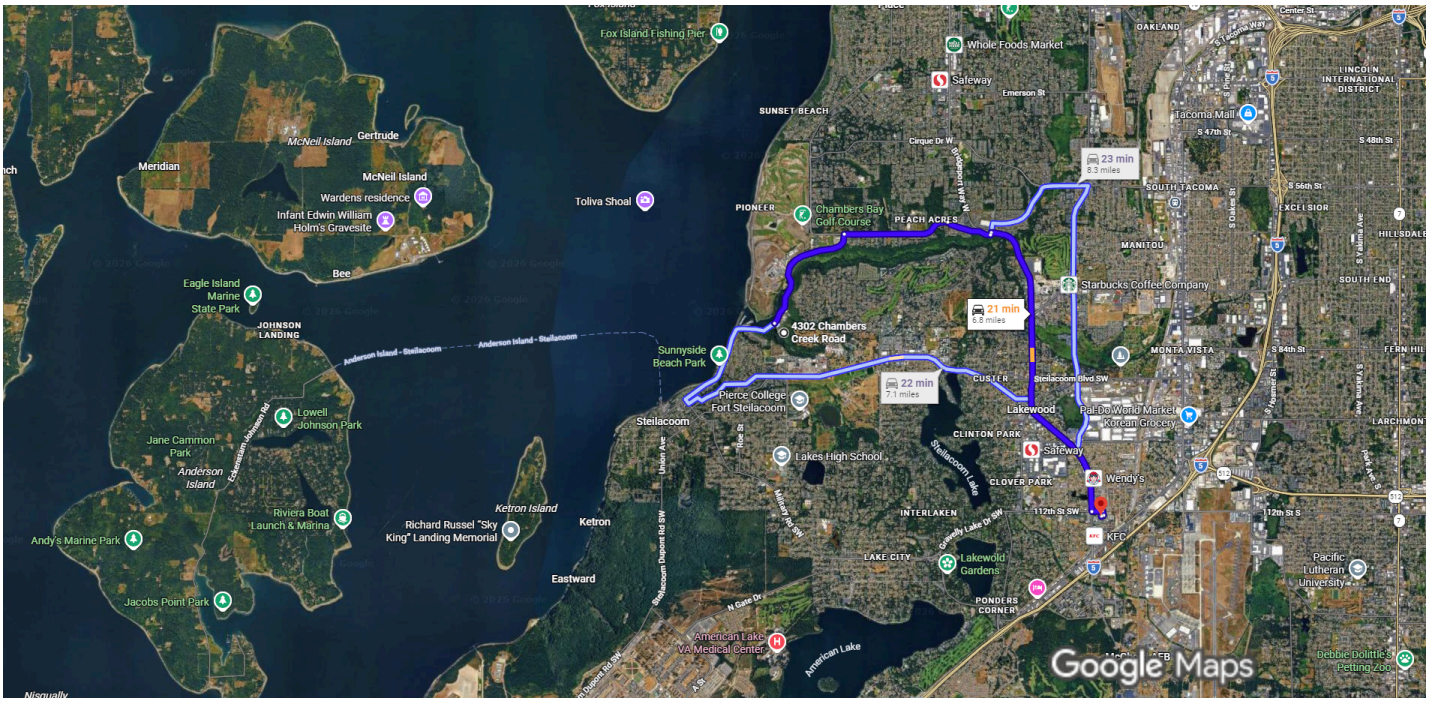
Maul Foster & Alongi, Inc.
2815 2nd Avenue, Suite 540, Seattle, WA 98121

MAUL FOSTER ALONGI

Google Maps

4302 Chambers Creek Rd, Steilacoom, WA 98388 to St Clare Hospital Emergency Room, 11315 Bridgeport Way SW First Floor, Lakewood, WA 98499

Drive 6.8 miles, 21 min



Imagery ©2026 Airbus, CNES / Airbus, Landsat / Copernicus, Maxar Technologies, USDA/FPAC/GEO, Data NOAA, Map data ©2026 Google 2000 ft

4302 Chambers Creek Rd
Steilacoom, WA 98388

Continue to University Place

5 min (2.6 mi)

1. Head toward Chambers Creek Trail

1.4 mi

2. Turn right to stay on Chambers Creek Rd W

1.2 mi

Follow Chambers Creek Rd W to Bridgeport Way W

1 min (0.5 mi)

3. Turn right to stay on Chambers Creek Rd W

0.5 mi

4. Turn left onto 67th Ave W

154 ft

5. Turn right at the 1st cross street onto Bridgeport Way W

Pass by Wendy's (on the left in 3.2 mi)

10 min (3.5 mi)

Continue on 112th St SW to your destination

6. Turn left onto 112th St SW — 2 min (0.2 mi)

0.1 mi

7. Turn right

249 ft

8. Turn right

98 ft

9. Turn left

75 ft

10. Turn right

Destination will be on the left

39 ft

St Clare Hospital Emergency Room

11315 Bridgeport Way SW First Floor, Lakewood, WA 98499

Health and Safety Plan

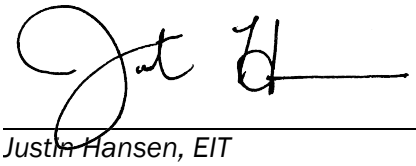
Abitibi Consolidated Sales Corp

4302 Chambers Creek Road

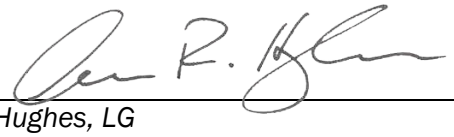
Steilacoom, Washington 98388

The material and data in this plan were prepared under the supervision and direction of the undersigned.

Maul Foster & Alongi, Inc.



Justin Hansen, EIT
Project Environmental Scientist



Alan R. Hughes, LG
Principal Geologist

Contents

Appendixes

Abbreviations

AED	automated external defibrillator
CFR	Code of Federal Regulations
COPC	chemical of potential concern
DAL	dust action level
Forested Area	forested area surrounding former mill operational area
HASP	health and safety plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HSC	health and safety coordinator
JHA	job hazard analysis
MFA	Maul Foster & Alongi, Inc.
mg/m^3	milligrams per cubic meter
Mill Area	former mill operational area
PEL	permissible exposure limit
PIC	principal in charge
PPE	personal protective equipment
the Property	4302 Chambers Creek Road, Steilacoom, Washington 98388
SSO	site safety officer
TSP	Tacoma Smelter Plume

1 Nearest Hospital/Emergency Medical Center

Environmental site investigations and construction oversight will occur at 4302 Chambers Creek Road, Steilacoom, Washington 98388 (the Property).

1.1 Nearest Hospital

St Clare Hospital Emergency Room

11315 Bridgeport Way SW First Floor

Lakewood, WA 98499

Phone: (253) 985-1711

Distance: 6.8 miles

Travel Time: 21 minutes

1.2 Route to Hospital from Property

See the map on the first page of this document.

1.2.1 Driving Directions to Hospital from Property

1. Turn right onto Chambers Creek Road W. Continue for 1.2 miles.
2. Turn right to stay on Chambers Creek Road W. Continue for 0.5 miles.
3. Turn left onto 67th Avenue W. Continue for approximately 150 feet.
4. Turn right at the first cross street onto Bridgeport Way W. Continue for 3.5 miles.
5. Turn left onto 112th Street SW. Continue for 0.1 miles.
6. Turn right. Continue for approximately 250 feet.
7. Turn right. Continue for approximately 100 feet.
8. Turn left. Continue for approximately 75 feet.
9. Turn right. Destination will be on the left.

1.3 Emergency Phone Numbers

Ambulance, Police, Fire	Dial 911
Justin Hansen, EIT	Phone: (206) 556-2022

Project Manager	Cell: (206) 719-6317
Alan Hughes, LG Principal in Charge (PIC)	Phone: (360) 433-0217 Cell: (360) 772-6801
Ysabel Perez, GIT Health and Safety Coordinator (HSC)	Phone: (971) 544-7871 Cell: (360) 608-2485

2 Plan Summary

This health and safety plan (HASP) was developed to describe the procedures and practices necessary for protecting the health and safety of Maul Foster & Alongi, Inc. (MFA), employees conducting activities at the Property. Other employers, including contractors and subcontractors, are expected to develop and implement their own HASPs to manage the health and safety of their personnel.

MFA personnel conducting activities at the Property are responsible for understanding and adhering to this HASP. Before fieldwork begins, the on-Property personnel will designate a site safety officer (SSO) who is familiar with health and safety procedures and with the Property. Safety deficiencies should be immediately communicated to the SSO and, if necessary, to the project manager, PIC/program manager, or MFA's HSC.

All contractors and subcontractors have the primary responsibility for the safety of their own personnel on the Property. All personnel on the Property have stop work authority if they observe conditions that they believe create an imminent danger.

If MFA employees work on the Property for more than a year, this HASP will be reviewed at least annually. Additionally, this HASP will be updated as new or changed conditions are encountered to ensure that it reflects the current known hazards and requirements associated with the Property.

MFA personnel who will be working on the Property are required to read and understand this HASP. MFA personnel entering the work area must sign the personnel acknowledgment sheet (Section 16), certifying that they have read and that they understand this HASP and agree to abide by it.

3 Key Project Personnel

Name	Responsibility
Alan Hughes, LG	PIC or Program Manager
Justin Hansen, EIT	Project Manager
Fiona Bellows	Field Personnel
Arthur Clauss, LG	Field Personnel

Name	Responsibility
Max Karn	Field Personnel
Ysabel Perez, GIT	HSC

4 Emergency Supplies and Equipment List

Equipment	Location and Notes
First Aid Kit	Inside cab of work truck.
Fire Extinguishers	Inside cab of work truck.
Mobile Phones	On MFA staff.
Traffic Cones	In bed of work truck, will be used as needed.
Water and Other Fluid Replenishment	Inside cab of work truck.
Eyewash	Inside cab of work truck, as needed.
Spill Kit	Inside cab of work truck, as needed.
Health and Safety Plan	On MFA staff and in cab of work truck.
Dust Meter	In action packer in bed of work truck.

5 Property Description and Background

5.1 Type of Property

The Property is a former pulp and paper mill comprising two distinct areas: the former operational mill area (Mill Area) and the surrounding forested area (Forested Area). Additionally, the Property is located within a 1,000 square mile area known as the Tacoma Smelter Plume (TSP). Copper smelter operations by American Smelting and Refining Company (also known as ASARCO) emitted arsenic and lead which aerially deposited in surface soils within the TSP.

5.2 Buildings/Structures

Features on the Property historically included structures associated with the former mill, including warehouses, pulping and paper production buildings, silos, and other smaller structures. Hog fuel and natural gas-fired boilers existed on the Property to generate steam. An aeration stabilization

basin and wastewater treatment plant that treated process water during mill operations are located on the far southern portion of the Property. Since 2001, many buildings have been removed but some buildings, remnant concrete foundations, and construction debris remain at the Property.

5.3 Topography

The Property is characterized by two physiographic areas separated by roughly 200 feet of topographic relief: a relatively flat, low-lying area (the Mill Area) and a steep slope are ranging from 150 to 225 feet in elevation with slopes ranging from 45 to 70% (the Forested Area).

5.4 General Geologic/Hydrologic Setting

A 2022 geotechnical investigation identified the geology of the Property as primarily Pleistocene glacial sediments. Previous borings at the Property encountered 5 to 10 feet of silty sand and gravel fill with concrete and woody debris in some portions of the Property. During previous investigations, groundwater has been encountered between 5 and 8 feet below ground surface.

5.5 Property Status

The Property has been vacant since 2001. Though the Property previously received a No Further Action determination from the Washington State Department of Ecology, additional investigation activities are proposed in the Mill Area and Forested Area to further characterize the nature and extent of contamination resulting from mill area operations and aerial deposition of TSP metals.

5.6 General Property History

The Property formerly operated as a paper mill constructed in approximately 1919 and operational until 2000. The mill was constructed on fill placed for grading adjacent to Chambers creek, including Chambers Creek Road. The former mill processed raw pulp into paper products from thermo-mechanical pulp, purchased pulp, and pulp produced from deinked recycled paper. Auxiliary manufacturing operations included unloading and repulping Kraft pulp, water filtration, wastewater treatment, and steam generation using hog fuel and natural gas boilers. All mill area operations ceased in 2000 and the wastewater treatment plant was drained and shut down in May 2001.

6 Hazard Evaluation

6.1 Site Tasks and Operations

MFA has completed job hazard analyses (JHAs) for specific tasks that may be conducted on the Property, depending on the scope of work. JHAs are provided in Appendix A. The following list summarizes planned tasks and operations:

- General work near heavy equipment

- Work near excavations and trenches
- Collecting soil samples
- Collecting groundwater samples
- Working in or near a public right-of-way or near vehicle traffic

The control measures that field personnel must implement to eliminate or minimize these hazards, such as air monitoring, personal protective equipment (PPE), engineering controls, and decontamination procedures, are detailed in the JHAs and in subsequent sections of this HASP.

6.2 Chemical Hazard Evaluation

Chemicals of potential concern (COPCs) are summarized in Appendix B. An exposure model was completed to determine the potential COPC exposure when performing periodic dust monitoring (see Appendix C). Air monitoring procedures are discussed in Section 12, and action levels and associated controls are specified in Appendix D.

6.3 Physical Hazards

The specific physical hazards and associated controls for work on the Property are described in the JHAs provided in Appendix A.

7 Property-Control Measures

Control of access to the Property will be established before the work begins. Control measures may include fencing, gates, and signs limiting access to everyone except authorized personnel. A Property map is provided in Appendix E. The exclusion zone is defined as the area of known or suspected contamination (e.g., the area where a well is being installed), and the contaminant reduction zone is where support activities take place (e.g., packing sample coolers, decontamination activities).

MFA requires the buddy system if personnel conducting the work may potentially be exposed to chemical or physical hazards that would require immediate medical attention or rescue. The buddy system may involve working with non-MFA personnel.

8 Health and Safety Training

MFA personnel who could be exposed to COPCs while conducting work on the Property will have completed training consistent with the Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements in 29 Code of Federal Regulations (CFR) 1910.120(e) before beginning work on the Property. The training will include the following:

- Identification of an SSO, and other safety and health personnel, if applicable
- Identification of safety and health hazards specific to work being conducted
- Proper use of required PPE
- Safe work practices required (e.g., fall protection, confined-space entry procedures, hot-work permits, general safety rules)
- Safe use of engineering controls and equipment
- Medical surveillance requirements, including the recognition of signs and symptoms that might indicate overexposure to hazards
- The project-specific emergency response plan/spill containment plan

The HSC will oversee training for MFA personnel conducting fieldwork. Training records, including an outline, signoffs, and competency records, will be maintained by the HSC.

While the HSC is responsible for maintaining training records, the project manager is responsible for verifying that the training status of field personnel is current before these personnel deploy to the field.

9 Safety Equipment

9.1 Personal Protective Equipment

Individuals on the Property must wear PPE to protect against physical hazards. PPE required on the Property is typically modified Level D, which consists of the following:

- Hard hat
- High-visibility vest
- Work boots
- Safety glasses with side shields
- Nitrile gloves or equivalent if handling media potentially impacted or known to be impacted
- Work gloves (if handling materials that might have sharp edges, protrusions, or splinters)

Additional PPE may be necessary for specific tasks with additional hazards. The SSO will be responsible for designating additional PPE for specific tasks. Depending on the activity, additional PPE may include the following:

- Hearing protection (to be worn during high-noise tasks)
- Chemical-resistant clothing, (e.g., Tyvek coveralls)
- Chemical-resistant boots
- Chemical-resistant goggles

- Chemical-resistant gloves
- Faceshield
- Respiratory protection

Additional PPE may be required if workers discover unexpected contamination. Characteristics of unexpected contamination could include unusual odors, discolored media, or a visible sheen. MFA employees should contact the SSO and, if necessary, the project manager and/or the HSC as soon as possible after the discovery of unexpected contamination. The SSO and, if applicable, the project manager and/or HSC will determine any need for additional controls and/or training.

PPE used at the Property must meet the requirements of recognized consensus standards (e.g., American National Standards Institute, National Institute for Occupational Safety and Health), and respiratory protection will comply with the requirements set forth in 29 CFR 1910.134.

Project personnel are not permitted to reduce the specified level of required PPE without approval from the SSO or the project manager and/or HSC.

9.2 Safety Equipment

The SSO will be responsible for ensuring that the following safety equipment is available during fieldwork and is properly inspected and maintained:

- Soap (Liquinox®) and water for decontamination
- Caution tape, traffic cones, and/or barriers
- First aid kit
- Automated external defibrillator (AED)
- Fire extinguisher
- Fluids for hydration, (e.g., drinking water or sports drink)
- Canopy for shade
- Hand-washing station
- Eye-flushing station

9.3 Air Monitoring Equipment

The following air monitoring equipment will be available to identify conditions that may require additional controls. See Section 12 and Appendix D for specified action levels and follow-up response actions.

- Photoionization detector
- Colorimetric indicator tubes (e.g., Dräger tubes)
- Confined-space or combustible-gas monitor (e.g., for detecting oxygen, lower explosive limit, carbon monoxide, hydrogen sulfide)
- Dust meter (MiniRam or equivalent)

9.4 Communications Equipment

MFA personnel should have a mobile phone or a radio available in case of emergency.

10 Decontamination Procedures

10.1 Partial Decontamination Procedures

MFA employees will implement the following partial decontamination procedures when exiting the work/exclusion zone but remaining on the Property.

- Wash and rinse boots and outer gloves (if wearing two pairs) in containers in the contamination-reduction zone.
- Inspect Tyvek suit for stains, rips, or tears. If the suit is contaminated but is to be reused, full decontamination will be performed as described in Section 9.2. If the suit is damaged, it should not be reused; discard it in a container labeled for disposable items.
- Remove and inspect outer gloves. If they are ripped or otherwise damaged, discard them in a container labeled for disposable items.
- Remove respirator, if worn, and clean with premoistened alcohol wipes. Discard used cartridges at the frequency established by the SSO, project manager, or HSC.
- Wash hands and face with soap and water.

10.2 Full Decontamination Procedures

When exiting the exclusion zone and leaving the Property (e.g., at the end of the work shift), MFA employees will follow the full decontamination procedures listed below.

- Wash and rinse boots and outer gloves in containers in the contamination-reduction zone.
- Remove outer gloves and Tyvek suit and deposit in a container labeled for disposable items.
- Remove respirator and discard used cartridges at the frequency dictated by the SSO, project manager, or HSC.
- Wash and rinse respirator in decontamination container labeled “respirators only.”
- Remove work boots and put on street shoes. Place work boots in a plastic bag or container.
- Remove inner gloves and deposit in a container labeled for disposable items.
- Wash hands and face with soap and water.
- Shower as soon after the work shift as practicable.

11 Medical Surveillance

MFA will ensure that its employees who meet the following criteria are enrolled in a medical surveillance program consistent with 29 CFR 1910.120(f):

- The employees are, or may be, exposed to hazardous substances or health hazards at or above established permissible exposure limits for 30 or more days per year.
- The employees are required to wear a respirator for 30 or more days per year.

MFA employees who exhibit signs or symptoms consistent with overexposure to COPCs will be offered medical surveillance consistent with HAZWOPER requirements.

MFA will ensure that its employees who are authorized to wear respirators are medically evaluated and approved for respirator use, consistent with the respiratory protection standard (29 CFR 1910.134). The HSC or administrative designee (e.g., human resources manager) will maintain medical evaluation records, including respirator clearance documentation.

Personnel medically cleared for respirator use will undergo an annual qualitative fit test. The MFA HSC or administrative designee will conduct the annual qualitative fit tests and will manage the documentation.

If employees are required to wear a respirator on the Property, the project manager will verify that the employee has a current annual respirator fit test.

12 Air Monitoring

12.1 Initial Exposure Determination

An initial exposure assessment was performed to assess potential occupational/construction worker exposure to COPCs against Washington Department of Labor and Industries permissible exposure limits (PEL). An exposure model for arsenic, lead, and benzo(a)pyrene is provided in Appendix C, with the highest historical soil samples results measured at the Property. The results of the exposure model indicate that dust control will effectively manage COPC exposure. For example, maintaining dust concentrations below a dust action level (DAL) of 1.25 milligrams per cubic meter (mg/m^3) of air is expected to maintain worker exposure levels approximately 1 percent or less of applicable action levels. The DAL of 1.25 mg/m^3 of air was derived using the Occupational Safety and Health Administration PEL for respirable dust (5 mg/m^3), divided by a typical safety factor of 4. This approach is also consistent with the Washington State Department of Ecology's February 10, 2025, opinion letter for the Property.

MFA will conduct visual dust monitoring during soil-disturbing activities. If visible dust is observed leaving the exclusion zone, MFA will measure dust at the exclusion zone boundary with the real-time dust monitor and evaluate results consistent with the action levels and associated response actions in Appendix D. MFA will also periodically measure dust concentrations at the boundary of the

exclusion zone downwind of soil-disturbing activities to evaluate concentrations in the absence of visible dust.

12.2 Other Air Monitoring

Based on conditions, it is not anticipated that air monitoring will be necessary; however, air monitoring equipment (see Section 8.3) will be available in case workers encounter conditions, such as unusual odors, discolored media, or a visible sheen, that indicate the presence of unexpected contamination. If such conditions are discovered, workers will exit the area and contact the SSO and, as needed, the project manager or the HSC. If necessary, MFA will use the air monitoring equipment to evaluate the conditions and determine whether additional controls and/or training are required. Action levels and follow-up actions are provided in Appendix D.

A water truck or similar controls for minimizing dust generation may be used during project work. If controls do not prevent significant visible dust generation, MFA will take measurements with a real-time dust monitor and compare results to the action levels provided in Appendix D.

If air monitoring is necessary, it must be performed by individuals familiar with the calibration, use, and care of the required instruments. Measurements will be documented, and the records must include the following information:

- The name of the person conducting the measurements
- The identity of workers, if any, who have exposure indicated by the measurement results
- Information about the instrument (e.g., type, make, model, serial number)
- The location where the measurement was taken
- The measurement date and start/stop time
- Conditions represented by the measurement, including applicable activities, work practices, weather conditions, Property conditions, and controls in place
- Measurement results
- Other relevant observations or notes

A dust monitoring record is included as Appendix F.

12.3 Air Monitoring Action Levels

If air monitoring is conducted, the results will be compared to the action levels provided in Appendix D. These levels have been established to comply with Washington Department of Labor and Industries Division of Occupational Safety and Health PELs, American Conference of Governmental Industrial Hygienists threshold limit values, and National Institute for Occupational Safety and Health recommendations for the chemicals that may be encountered on the Property. The action levels have been adjusted for the relative response of common photoionization detection instruments to motor-fuel vapors.

12.4 Explosion Hazard Action Levels

MFA employees will take measurements when working near known or suspected sources of explosive gases or vapors. The instrument alarm should be set to sound at 10 percent of the lower explosive limit. When measurements exceed this level, MFA employees will:

1. Extinguish ignition sources and shut down powered equipment in the work area.
2. Move personnel at least 100 feet away from the work area.
3. Contact the SSO, the project manager, and/or the HSC as applicable.
4. At the instruction of the project manager and/or the HSC and after waiting 15 minutes for explosive gases to dissipate, the SSO may use the combustible-gas meter to safely approach the work site to measure combustible gases in the work area. The SSO will not enter (or allow any personnel to enter) any area where the combustible-gas meter readings exceed the explosivity action level, nor will the SSO approach if there is a potential for fire or explosion.
5. The SSO may authorize personnel to reenter the work area after the source of the combustible gases has been identified and controlled.

12.5 Instrument Calibrations

Instruments will be calibrated consistent with manufacturers' recommendations. Calibrations will be coordinated by the SSO and the project manager. Calibration and monitoring records will be maintained by the SSO and/or the project manager.

13 Emergency Response, Spill Containment, and Confined Space

MFA employees will follow the emergency response, spill response, and confined-space procedures described in the MFA Policies and Procedures Manual. Incidents will be documented on the incident report form included as Appendix G.

14 Pre-entry Briefing

MFA employees will conduct pre-entry briefings prior to beginning work on the Property (e.g., tailgate meetings; see the checklist provided as Appendix H). Additional briefings shall be conducted as the scope of work or conditions change throughout the project to ensure that employees are familiar with and are adhering to the appropriate safety and health protocol. Attendance and discussion topics will be documented on sign-in sheets that will be maintained by the SSO.

15 Periodic Evaluation

The project manager or designee will evaluate the effectiveness of this HASP by conducting periodic HASP audits. A HASP audit form is included as Appendix I. In addition, HASP effectiveness will be evaluated by tracking ongoing health and safety feedback from field personnel working on the project. This feedback will be reviewed and incorporated into either immediate or annual updates of this HASP, as appropriate. This HASP will be reviewed and updated at least annually. Updating this HASP as necessary ensures that it reflects the known hazards, conditions, and requirements associated with the project. MFA will maintain HASP audit or other periodic evaluation records and track all revisions to this HASP.

16 Safe Work Practices

The following safe work practices are provided to supplement the other information in this HASP.

1. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of materials is prohibited in areas with potentially contaminated materials.
2. Whenever practicable, field personnel will remain upwind of drilling rigs, open excavations, and other ground-disturbing activities.
3. Subsurface work will not be performed at any location until the area has been confirmed by a utility-locator firm to be free of underground utilities or other obstructions.

17 Acknowledgment

MFA cannot guarantee the health or safety of any person entering the Property. Because of the potentially hazardous nature of active sites, it is not possible to discover, evaluate, and provide protection against all possible hazards that may be encountered at the Property. Strict adherence to the health and safety guidelines set forth herein will reduce, but not eliminate, the potential for injury and illness. The health and safety guidelines in this HASP were prepared specifically for the Property and should not be used on any other site without prior evaluation by trained health and safety personnel.

MFA personnel who will work at the Property are to read, understand, and agree to comply with the specific practices and guidelines described in this HASP regarding field safety and health hazards.

This HASP has been developed for the exclusive use of MFA personnel. MFA may make this HASP available for review by contracted or subcontracted personnel for information only. This HASP does not cover the activities performed by employees of any other employer on the project. All contracted

or subcontracted personnel are responsible for implementing their own health and safety program, including generating and using their own HASP.

I have read and I understand this HASP and all attachments, and agree to comply with the requirements described herein:

Name	Title	Date

Appendix A

Job Hazard Analyses

MAUL FOSTER ALONGI

Job Hazard Analysis

Task/Operation: Conducting Fieldwork		
Project Number: M1882.01.009	**Location/ Property Where Task/Operation Performed:** 4302 Chambers Creek Road, Steilacoom, Washington 98388	
Date Prepared: 02/04/2026 **Date Reviewed:** 02/05/2026	**Employee Preparing this Job Hazard Analysis (JHA):** Justin Hansen **Employee Reviewing and Certifying this JHA:** Arthur Clauss	
Job/Task Description		
This JHA describes hazards and required safe-work practices that are common to most types of fieldwork. See the separate task-specific JHA for hazards and safe-work practices that are unique to certain tasks (e.g., sampling contaminated media, working in remote areas).		
Physical Hazards		
Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Heat/cold/sunburn	Weather.	Be aware of seasonal dangers, including frostbite, hypothermia, snow blindness, trench foot, and heat stress. Drink plenty of fluids, especially when perspiring. Wear sunscreen on exposed skin. Stop work if an employee feels symptoms of dehydration, overheating, or heat stroke. Move to a shaded area and drink water. During cold or wet conditions, wear adequate clothing to reduce the potential for hypothermia.
Lightning strike, violent storm	Weather	Lightning: Check NOAA weather reports before fieldwork and try to reschedule jobs if thunderstorms are expected. If thunder is heard within 30 seconds of seeing a lightning flash, seek shelter in a building and stay sheltered for at least 30 minutes after the last audible thunder. If a building is not available for shelter, use a vehicle for shelter. Avoid water, open fields, hilltops, and isolated tall trees.

Task/Operation: Conducting Fieldwork		
Eye injury	Debris (e.g., soil, water) coming into contact with eyes; working in areas with low, dense vegetation.	Wear eye protection with side shields. If there is a splash hazard, wear tight-fitting chemical goggles. If chemicals come into contact with eyes, immediately wash chemicals out with water. Identify the location of the eyewash station before beginning the work.
Head injury	Heavy equipment, tools, overhead hazards impacting the head.	Wear a hard hat. Do not work near moving or heavy equipment or under overhead hazards.
Foot injury	Sharp objects that could be stepped on; large objects falling on feet.	Wear protective boots (composite or steel-toe).
Hand injury	Pinch points, sharp objects, stress from pulling rope, dermal contact with chemicals and contaminated media.	Wear protective gloves. Appropriate gloves should be identified in the HASP. Avoid placing hands near operating equipment.
Hearing loss	Noise generated by heavy equipment/machinery.	Wear hearing protection such as earplugs or earmuffs.
Bodily harm, including to bystanders and the public and pedestrians in the locality of work	Heavy equipment, drilling rigs, support vehicles, traffic and public rights-of-way; potential to be struck, crushed, or impacted by moving objects.	Wear a safety vest for enhanced visibility. Use cones and caution tape to cordon off the immediate work area. Watch for and escort pedestrians away from the work area. Pause work if necessary. Ensure traffic control measures (e.g., traffic cones, signage) are in place. Do not work near moving or heavy equipment or under overhead hazards. Maintain eye contact with equipment operators. When working around vehicles or heavy equipment, know the locations of emergency equipment (e.g., fire extinguishers, emergency shutoff features).
	Potential to be struck by pressurized equipment and hoses	Install cable guards to prevent a suddenly disconnected hose from striking an individual or confirm with subcontractor that such safeguards are in place. Ensure pressurized tanks have safety relief valves. Do not work around pressurized equipment or within the radius of pressurized hoses.

Task/Operation: Conducting Fieldwork		
Physical stress	Lifting heavy equipment and objects; conducting strenuous activities; kneeling on hard or gravel surfaces.	Use proper lifting techniques, i.e., bending and lifting with the legs and not the back. Do not twist at the waist when turning. Use the buddy system for heavy objects. Use knee pads or a kneeling pad. Take breaks and rest as needed.
Accidents with equipment/tools	Sample-collection equipment/tools.	Verify that you have the appropriate equipment/tools for your tasks. Use equipment/tools as intended by the manufacturer. Only use open blades or sharp-edged tools for their intended purposes. Stow tools in the vehicle properly; use appropriate cases and bags. Secure equipment (including compressed-gas cylinders) in the vehicle with netting and straps; do not leave loose—it can cause property damage or serious injuries to others or yourself.
Slips, trips, and falls	Uneven or unstable ground.	Maintain good housekeeping in work areas to minimize or eliminate slip/trip/fall hazards from equipment and supplies. Walk around rather than over hazards on the ground. Use caution when walking on uneven ground or in snowy and/or icy conditions. Dense vegetation may obscure dangerous features, including biological hazards, riverbanks, cliffs, unstable/steep slopes, and excavations. Flagging or marking dangerous areas can help reduce the likelihood of injury. Be aware of surroundings and potential hazards from vacant structures, rubble and debris, and exposed building materials associated with the former mill operations. Discussing and identifying any hazards during the morning tailgate safety meeting can reduce the likelihood of injury and help establish procedural controls when working in areas of the Property with potential hazards.

Task/Operation: Conducting Fieldwork		
Biological/Chemical Hazards		
Biological/Chemical Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Biological—animals	Livestock, deer; biting or stinging insects, spiders, and snakes; animal feces.	Do not turn your back on animals even if they seem docile. Make sure you have an escape plan in case an animal becomes aggressive. Use bug repellent. Insect nests should never be disturbed. Use snake chaps or shin guards when grass is above the ankle. Employees who are allergic to stings should not work in areas where there is a high risk of encountering stinging insects. Use a bar to clear spiders and/or snakes from objects and/or vegetation. Check well vaults and security lids for insects; use caution when opening. Avoid contact with animal feces.
Biological—plants	Poisonous plants and other irritant vegetation (e.g., blackberry canes).	Do not touch or approach poisonous or irritant vegetation. Wear long pants and a long-sleeved shirt while on the Property if poisonous plants and other irritant vegetation is present.
Exposure to chemicals in environmental media	Chemicals or hazardous materials in soil, sediment, surface water, groundwater, NAPL, building materials, outdoor air, soil vapors, monitoring wells, borings, and excavations.	See the task-specific JHA.
Additional Control Measures and Guidance		
Engineering Controls: No engineering controls specified. The need for engineering controls should be discussed with the project manager, health and safety coordinator, and subcontractors, and identified in the HASP.		
General Safe-Work Practices and Guidance: • Employees should not eat or drink in the immediate area where sampling is being conducted. Employees should wash their hands and faces before eating or drinking. If used, nitrile gloves should be disposed of in a container labeled for disposable items. • Cones, barrier tape, or equivalent methods will be used to establish the work area, if feasible. • Tasks that must be conducted in the work area must be coordinated with equipment operators before work begins. Methods of communication, such as direct eye contact, hand signals, and/or verbal communication, will be established before work begins. • Employees should carry a cellular phone and/or a security radio.		
PPE: Hard hat (when working around heavy equipment, including drill rigs, or overhead hazards), work boots (protective composite or steel-toe boots when working around heavy equipment), high-visibility vest or outer garment, safety glasses with side shields, nitrile gloves (or other hand protection appropriate for the type of physical or chemical hazards present), hearing protection (earplugs or earmuffs) as needed. Use chemical goggles if there is a chemical splash hazard.		

Job Hazard Analysis

Task/Operation: Task-Specific Hazards	
Project Number: M1882.01.009	**Location/Property Where Task/Operation Performed:** 4302 Chambers Creek Road, Steilacoom, WA 98388
Date Prepared: 02/04/2026 **Date Reviewed:** 02/05/2026	**Employee Preparing this Job Hazard Analysis (JHA):** Justin Hansen **Employee Reviewing and Certifying this JHA:** Arthur Clauss

Job/Task Description
This JHA is specific to certain elements of fieldwork that have unique hazards and require specific safe-work practices to mitigate those hazards. See the separate General Fieldwork Hazards JHA for hazards and safe-work practices that are common to most types of fieldwork.

Sampling Contaminated Solid and Liquid Media		
Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Exposure to chemicals or hazardous substances (e.g., asbestos) via direct contact and inhalation	Chemicals or hazardous materials in soil, sediment, surface water, groundwater, NAPL, and building materials.	See the chemical hazards summary table for applicable chemical hazards.
		Consult the HASP to identify the required PPE for preventing direct contact with contaminated media. Chemical-resistant Tyvek (yellow/coated) is strongly recommended for projects that include potential exposure to NAPL.
		Consult the HASP to identify required air monitoring equipment, respiratory protection, and action for preventing inhalation of contaminated dust and vapors.
		When around monitoring wells, avoid working with your breathing zone directly above the opening of the well casing. When possible, work upwind of the well casing. Keep your face away from the monument when removing the well cap.
		Ensure field staff have up-to-date AHERA certifications for asbestos sampling.

Task/Operation: Task-Specific Hazards		
		Use plastic garbage bags or plastic sheeting to cover the work area. It is preferable to roll/berm the edges to catch any drips/spills. If it is raining, work under a rain canopy.
Sampling and/or Monitoring Vapors		
Exposure to chemicals via inhalation	Chemicals in outdoor air, soil vapors, monitoring wells, borings, and excavations.	See the chemical hazards summary table for applicable chemical hazards.
		Consult the HASP to identify required PPE for preventing inhalation of contaminated or hazardous vapors.
		The HASP identifies required air monitoring equipment, monitoring locations, respiratory protection, and action levels for preventing inhalation of vapors.
		If action levels are exceeded, cease activities, notify other site workers and subcontractors, move away from or upwind of the point of exceedance, and continue to monitor your breathing zone. Contact the health and safety coordinator and the project manager as soon as possible.
Working around or in Excavations		
Bodily harm or death	Confined-space entry.	Excavations may be considered confined spaces. Contact the health and safety coordinator and the project manager if work in excavations will be necessary.
	Falling into open excavation from heights; engulfment/burial from working in excavations.	Ensure the HASP identifies project-specific procedures and engineering controls to mitigate risk of fall, engulfment, and burial.
		Never enter an excavation deeper than 4 feet without first coordinating with the health and safety coordinator and the project manager. Ensure the excavation slope is appropriate for entry (i.e., 34 degrees), shoring/sheet pile is installed, and appropriate ingress and egress points are established.
		Use signs, cones, barrier tape, or equivalent methods to mark open excavations.

<table>
<tr><th colspan="3">Task/Operation: Task-Specific Hazards</th></tr>
<tr><td rowspan="5"></td><td rowspan="4"></td><td>When working in an excavation, minimize time spent working near the excavation sidewall.</td></tr>
<tr><td>Stay a safe distance from the excavation area—generally defined as a horizontal distance no less than the depth of the excavation.</td></tr>
<tr><td>If close observation of an excavation is required (e.g., for describing soil stratigraphy, taking photos), slope or bench one side of the excavation sidewall to minimize potential for collapse.</td></tr>
<tr><td>Backfill excavations as soon as work is complete; never leave excavations unattended or open overnight.</td></tr>
<tr><td>Exposure to chemicals in soil, groundwater, air.</td><td>See the “Sampling Contaminated Solid and Liquid Media” and “Sampling and/or Monitoring Vapors” task-specific hazards above.</td></tr>
<tr><th colspan="3">Additional Control Measures and Guidance</th></tr>
<tr><td colspan="3">Engineering Controls: No engineering controls specified. The need for engineering controls should be discussed with the project manager, health and safety coordinator, and subcontractors, and identified in the HASP or safe work plan.</td></tr>
<tr><td colspan="3">General Safe-Work Practices and Guidance:
See the General Fieldwork Hazards JHA for safe-work practices and guidance common to most types of fieldwork.
If additional safe-work practices are needed to address unique, task-specific hazards, these should be specified in the HASP.</td></tr>
</table>

Appendix B

Chemicals of Potential Concern

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Table
Chemical Hazards

Analyte	OSHA PEL (TWA)	ACGIH TLV (TWA)	NIOSH IDLH[1]	LEL (%)	IP (eV)	Other Hazard
TPH						
Gasoline-range organics	NA	300 ppm	NA	1.4	NA	C, E, F, P
Diesel-range organics	NA	100 mg/m^3	NA	NA	NA	E, F, P
Residual-range organics	NA	NA	NA	NA	NA	E, F, P
VOCs						
1,1-Dichloroethane	100 ppm	100 ppm	3,000 ppm	5.4	11.06	
1,2-Dichloroethane	50 ppm	NE	50 ppm	6.2	11.05	
cis-1,2-Dichloroethene	200 ppm	NE	1,000 ppm	5.6	9.32	P
Tetrachloroethene	100 ppm	25 ppm	150 ppm	NA	9.32	C
Trichloroethylene	100 ppm	300 ppm	1,000 ppm	NA	9.45	C, P
Vinyl chloride	1 ppm	5 ppm	NA	3.6	9.99	C, F
PAHs						
Anthracene	0.2 mg/m^3	0.2 mg/m^3	80 mg/m^3	0.6	NA	F, P
Acenaphthene	NE	NE	NE	0.6	NA	F, P
Acenaphthylene	NE	NE	NE	NA	NA	F, P
Benzo(a)anthracene	NE	NE	NE	NA	NA	C, P
Benzo(a)pyrene	0.2 mg/m^3	0.2 mg/m^3	80 mg/m^3	NA	NA	C, P
Benzo(b)fluoranthene	NE	NE	NE	NA	NA	C, P
Benzo(g,h,i)perylene	NE	NE	NE	NA	NA	P
Benzo(k)fluoranthene	NE	NE	NE	NA	NA	C, P
Chrysene	0.2 mg/m^3	0.2 mg/m^3	80 mg/m^3	NA	7.59	C, P
Dibenz(a,h)anthracene	NE	NE	NE	NA	NA	C, P
Fluoranthene	NE	NE	NE	NA	NA	SC, P
Fluorene	NE	NE	NE	NA	NA	
Indeno(1,2,3-cd)pyrene	NE	NE	NE	NA	NA	SC
Naphthalene	10 ppm	10 ppm	250 ppm	0.9	8.12	SC, E, F, P
Phenanthrene	0.2 mg/m^3	0.2 mg/m^3	80 mg/m^3	NA	NA	

Table
Chemical Hazards

Analyte	OSHA PEL (TWA)	ACGIH TLV (TWA)	NIOSH IDLH[1]	LEL (%)	IP (eV)	Other Hazard
Pyrene	0.2 mg/m^3	0.2 mg/m^3	80 mg/m^3	NA	NA	P
1-Methylnaphthalene	NE	0.5 ppm	NE	NA	NA	SC, E, F, P
2-Methylnaphthalene	NE	0.5 ppm	NE	NA	NA	SC, E, F, P
Remaining PAH constituents	NA	NA	NA	NA	NA	NA
Metals						
Arsenic	0.01 mg/m^3	0.01 mg/m^3	5 mg/m^3	NA	NA	C, P
Lead	0.05 mg/m^3	0.05 mg/m^3	100 mg/m^3	NA	NA	C, P
Additional						
Benzene	1 ppm	5 ppm	500 ppm	1.2	9.24	F, C, P, R
Ethylbenzene	100 ppm	125 ppm	800 ppm	0.8	8.76	F, P
Heptachlor epoxide	0.5 mg/m^3	0.5 mg/m^3	35 mg/m^3	NA	NA	SC, P
Toluene	100 ppm	150 ppm	500 ppm	1.1	8.82	E, F, P, R
Tributyltin	0.01 mg/m^3	NE	25 mg/m^3	NA	NA	P
Xylenes	100 ppm	150 ppm	900 ppm	0.9	8.44–8.56	F, P

Table
Chemical Hazards

Notes

ACGIH = American Conference of Governmental Industrial Hygienists.
C = carcinogen.
E = explosive.
F = flammable.
IDLH = immediately dangerous to life and health.
IP (eV) = ionization potential.
LEL = lower explosive limit.
mg/m^3 = milligrams per cubic meter.
NA = not available.
NE = not established.
NIOSH = National Institute for Occupational Safety and Health.
OSHA = Occupational Safety and Health Administration.
P = poison.
PAH = polycyclic aromatic hydrocarbon.
PEL = permissible exposure level.
ppm = parts per million.
R = reactive.
SC = suspected carcinogen.
TLV = threshold limit value.
TPH = total petroleum hydrocarbons.
TWA = time-weighted average.
VOC = volatile organic compound.

Reference

[1]CDC. 2019. "Immediately Dangerous to Life or Health (IDLH) Values." Centers for Disease Control and Prevention, The National Institute for Occupational Safety and Health (NIOSH). October 8. Accessed September 13, 2022. http://www.cdc.gov/niosh/idlh/intridl4.html.

Appendix C

Exposure Model

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Exposure Model

Selected Total Airborne Dust Concentration (mg/m^3)	1.25				
COPC		**Maximum Soil Concentration (mg/kg)**	**Estimated Airborne Concentration of Constituents Total Dust Concentration (mg/m^3)**	**L&I PEL (mg/m^3)**	**Ratio Maximum Concentration/PEL**
Arsenic		67	0.00008375	0.01	0.0084
Benzo(a)pyrene		0.76	0.00000095	0.2	0.0000
Lead		49.2	0.0000615	0.05	0.0012

NOTES:

Maximum soil concentration values were taken from all historical site data.

Benzo(a)pyrene exposure limits based on benzene extractable fraction. Model presumes that 100% of benzo(a)pyrene soil concentration is extractable.

COPC = contaminant of potential concern.

L&I = Washington Department of Labor and Industries.

mg/kg = milligrams per kilogram.

mg/m^3 = milligrams per cubic meter.

PEL = permissible exposure level.

Appendix D

Air Monitoring Action Levels

MAUL FOSTER ALONGI

Air Monitoring Procedures and Toxicity Action Levels

Monitoring Method	Action Level	Initial Action	Follow-Up Action
PID[a]	Detection of **1 ppm** (above ambient) or greater in breathing zone sustained for two minutes.	Dräger tube test for benzene. If 1 ppm benzene detected with Dräger tube, upgrade to level C.	Ventilate area; always work upwind.
Dräger tube test (benzene)	Over **1 ppm benzene** sustained in breathing zone.	After upgrade to Level C, continue to monitor breathing zone with Dräger tube. If benzene level is 10 ppm or greater, leave exclusion zone. Return only if levels decrease to below 10 ppm.	Ventilate area; always work upwind.
PID[a]	Detection of **10 ppm** (above ambient) in breathing zone and determined not to be benzene.	Upgrade to Level C and continue to monitor breathing zone with Dräger tube. If 50 ppm, leave exclusion zone. Return only if levels decrease to below 50 ppm.	Ventilate area; always work upwind.
Visual dust monitoring	Visible emissions leaving the exclusion zone.	Dust suppression, e.g., misting. Measure concentration with dust meter.	Adjust operations.
Dust meter (MiniRam or similar)	**1.25 mg/m³** of air.[b]	Dust suppression, e.g., misting.	Adjust operations.

Notes
Bold text indicates an action level.
COPC = chemical of potential concern.
DAL = dust action level
HSC = health and safety coordinator.
mg/m³ = milligrams per cubic meter.
OSHA = Occupational Safety and Health Administration.
PEL = permissible exposure level.
PID = photoionization detector.
ppm = parts per million.
[a]Some PIDs do not work in high (e.g., greater than 90%) humidity or rainy weather. Under these atmospheric conditions, only PIDs certified for use in high humidity should be used.
[b]A DAL of 1.25 mg/m³ of air is appropriate and protective of occupational workers based on the highest COPC concentrations historically observed in soil and OSHA PELs for each COPC. The DAL of 1.25 mg/m³ represents an OSHA PEL for respirable dust of 5 mg/m³ with a safety factor of 4. See Section 12 for more information.

Appendix E

Property Map

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Figure
Property Map

Abitibi Consolidated Sales Corp
Steilacoom, WA

North Warehouse
Parcel 0220294007 (2024)
Parcel 0220294007 (2006)
Onyx Dr SW
99th Ave SW
79th St SW
Chambers Bay
Shipping Warehouse
Garrison Creek
Chambers Creek Rd
Parcel 0220294025 (2024)
Parcel 0220294002 (2006)
Chambers Bay Ct
Chambers Bay Dr
Secondary Clarifier
Primary Clarifier
Parcel 0220321009 (2006)
Wetlands
Parcel 7615000022 (2024)
Parcel 7615000021 (2006)
1st Light St

Legend

- Mill Area
- Forested Area
- Aboveground Storage Tank
- Former Structure
- Remaining Structure
- Stream (approximate)
- Railroad Track
- Parcel (2006)
- Parcel (2024)
- Property Boundary (2006)

Notes

Parcels from 2006 are shown on this figure, consistent with the parcels reflected in the environmental covenant recorded for the Site in 2010 and reflected in Ecology's periodic review for the site in 2017.
On March 17, 2011, parcels 0220294002, 0220321009, and 7615000021 were merged and split to create two new parcels: 0220294025 and 7615000022.
Unnamed Creek is diverted through a 24-inch pipe and manholes beneath the Property before discharging to Chambers Bay.
Ecology = Washington State Department of Ecology.

0 200
Feet

Data Sources

Aerial photograph obtained from Esri; parcel data obtained from Pierce County.

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Appendix F

Dust Monitoring Record

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Dust Monitoring Record

Property Address: 4302 Chambers Creek Road, Steilacoom, WA 98388

Contractor: _____

Time	Date	Location (upwind/downwind)	Type (note visual monitoring or instrument used)	Duration of Sample	Concentration (if instrument used) (mg/m^3)	Recorded By	Dust Control Measures in Use	Work activities, weather conditions, or other applicable notes

Note
Supplemental recordkeeping forms may be required with certain permits and/or types of activities.

Appendix G

Incident Report Form

MAUL FOSTER ALONGI

Health and Safety Incident Report

PART 1: INCIDENT DESCRIPTION-

This report must be completed in full and submitted within 24 hours to the MFA health and safety coordinator. The project manager, affected coaches, and HR should also be notified.

Project Name: _____

Project Number: _____

Date and Time of Incident: _____

Location: _____

Person Documenting Incident: _____

Type of Incident (check all applicable items):

☐ Illness	☐ Health and safety infraction	☐ Vehicular accident
☐ Injury	☐ Fire, explosion, flash	☐ Electric shock
☐ Property damage or theft	☐ Chemical exposure	☐ Near miss
☐ Spill	☐ Other (describe):	

Description of Incident

Describe what happened and the possible cause of the incident. If reporting a spill, include the quantity or estimated quantity. Identify individual(s) involved, witnesses, and their affiliations. Describe emergency or corrective action taken. Attach additional sheets, drawings, or photographs as needed.

Vehicle Accidents

Refer to the vehicle accident procedures in each MFA vehicle and fill out a collision report, if applicable. (Links to Washington and Oregon report forms).

PART 2: INCIDENT INVESTIGATION

Date Investigation Began: _____

Investigation Team Members _____

Contributing Factors and Root Causes

Identify contributing factors and root causes of the incident. Examples include lack of training, inadequate procedures, lack of communication, etc.

Recommendations

Identify recommendations to address contributing factors and root causes:

1.
2.
3.

Identify the corrective actions taken to address the recommendations, including the date the actions were completed and the person or people who completed the actions. Attach supplemental records, if appropriate:

1.
2.
3.

Communication:

Describe the process used to communicate the results of the incident investigation, including the date(s) of communication.

Health and Safety Coordinator:

Sign this form when the investigation and follow-up actions are completed.

Name	Signature	Date

Appendix H

Tailgate Safety Meeting Checklist

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Tailgate Safety Meeting Checklist

Client Name:	
Project No.:	
Communicated By:	
Date:	

Yes	NA	Information Reviewed
☐	☐	Emergency Response Procedures and Site Evacuation Routes
☐	☐	Route to Hospital
☐	☐	HASP Review and Location
☐	☐	Key Project Personnel
☐	☐	Emergency Phone Numbers
☐	☐	Stop Work Authority
☐	☐	General Site Description/History and Chemical Hazards
☐	☐	For Active Sites—Site Activities and Vehicular/Equipment Traffic
☐	☐	Site-Specific Physical Hazards
☐	☐	Required Personal Protective Equipment
☐	☐	Available Safety Equipment and Location
☐	☐	Daily Scope of Work (reference JHAs as applicable)
☐	☐	Decontamination Procedures
☐	☐	Identify Work Zones, Exclusion Zones, and Decontamination Zones
☐	☐	Hazardous Atmospheres
☐	☐	Air Monitoring Equipment and Procedures
☐	☐	Identify Potential Site-Specific Slip, Trip, and Fall Hazards
☐	☐	Dust and Vapor Control
☐	☐	Confined Space(s)
☐	☐	Open Pits and Excavation
☐	☐	Extreme Temperatures
☐	☐	Incident Reporting
☐	☐	Other: _____

Additional Health and Safety Practices and Considerations

Attendees		
Name	Signature	Company
1)		
2)		
3)		
4)		
5)		
6)		
7)		
8)		

Appendix I

HASP Audit Checklist

MAUL FOSTER ALONGI

HASP Audit Checklist

Project Name: Chambers Bay
Project No.: M1882.01.009
Project Location: 4302 Chambers Creek Rd
Audit Date / Time:
Person / Persons Performing Audit:
MFA Personnel Interviewed or Conducting Fieldwork:

	Status			Comment	Recommendation	Assigned to:	Scheduled Completion Date:	Actions Completed:	Person Who Completed Actions:	Date Completed:	Current Status / Notes:
	Yes	No	N/A								
Audit Checklist Item											
1. Is there a written HASP for this project? If so, what is the revision date?											
2. Is the HASP available to project personnel?											
3. Does the HASP appear accurate and complete? For example, are the directions to the hospital and the emergency contact numbers accurate? Are the site contaminants listed?											
4. Do the JHAs appear accurate and complete? For example, do there appear to be risks addressed for all of the applicable activities?											
5. Do you observe violations of the HASP requirements?											
6. If applicable, are employees adhering to the respirator program (see SOP 03, Respiratory Protection)?											
Interview Questions											
7. Where do you keep the HASP for this project?											
8. Have you reviewed the HASP for this project? If so, what was your review process?											
9. Can you tell me how you conduct your site activities? Note to auditor—pick a JHA activity and identify major discrepancies between the answer and the JHA, if any.											
10. Do you have any health and safety questions or concerns? For example, have you observed things on this project that you thought were unsafe? Note to auditor—make sure we come up with a plan to promptly address any listed concerns.											

Signature of Person / Persons Conducting Audit			
Name	Signature	Date	

Signature of Project Manager and Principal in Charge Acknowledging Review of Completed HASP Audit Checklist			
Name	Signature	Date	

Appendix C

Inadvertent Discovery Plan

MAUL FOSTER ALONGI

INADVERTENT DISCOVERY PLAN

PLAN AND PROCEDURES FOR THE DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS

To request ADA accommodation, including materials in a format for the visually impaired, call Ecology at 360-407-6000 or visit https://ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with a speech disability may call TTY at 877-833-6341.

Site Name(s): Abitibi Consolidated Sales Corp. Location: 4302 Chambers Creek Road, Steilacoom, WA

Project Lead/Organization: Maul Foster & Alongi, Inc. County: Pierce

If this Inadvertent Discovery Plan (IDP) is for multiple (batched) projects, ensure the location information covers all project areas.

1. INTRODUCTION

The IDP outlines procedures to perform in the event of a discovery of archaeological materials or human remains, in accordance with applicable state and federal laws. An IDP is required, as part of Agency Terms and Conditions for all grants and loans, for any project that creates disturbance above or below the ground. An IDP is not a substitute for a formal cultural resource review (Executive 21-02 or Section 106).

Once completed, **the IDP should always be kept at the project site** during all project activities. All staff, contractors, and volunteers should be familiar with its contents and know where to find it.

2. CULTURAL RESOURCE DISCOVERIES

A cultural resource discovery could be prehistoric or historic. Examples include (see images for further examples):

- An accumulation of shell, burned rocks, or other food related materials.
- Bones, intact or in small pieces.
- An area of charcoal or very dark stained soil with artifacts.
- Stone tools or waste flakes (for example, an arrowhead or stone chips).
- Modified or stripped trees, often cedar or aspen, or other modified natural features, such as rock drawings.
- Agricultural or logging materials that appear older than 50 years. These could include equipment, fencing, canals, spillways, chutes, derelict sawmills, tools, and many other items.
- Clusters of tin cans or bottles, or other debris that appear older than 50 years.
- Old munitions casings. ***Always assume these are live and never touch or move.***
- Buried railroad tracks, decking, foundations, or other industrial materials.
- Remnants of homesteading. These could include bricks, nails, household items, toys, food containers, and other items associated with homes or farming sites.

The above list does not cover every possible cultural resource. When in doubt, assume the material is a cultural resource.

3. ON-SITE RESPONSIBILITIES

If any employee, contractor, or subcontractor believes that they have uncovered cultural resources or human remains at any point in the project, take the following steps to ***Stop-Protect-Notify***. **If you suspect that the discovery includes human remains, also follow Sections 5 and 6.**

STEP A: Stop Work.

All work must stop immediately in the vicinity of the discovery.

STEP B: Protect the Discovery.

Leave the discovery and the surrounding area untouched and create a clear, identifiable, and wide boundary (30 feet or larger) with temporary fencing, flagging, stakes, or other clear markings. Provide protection and ensure integrity of the discovery until cleared by the Department of Archaeological and Historical Preservation (DAHP) or a licensed, professional archaeologist.

Do not permit vehicles, equipment, or unauthorized personnel to traverse the discovery site. Do not allow work to resume within the boundary until the requirements of this IDP are met.

STEP C: Notify Project Archaeologist (if applicable).

If the project has an archaeologist, notify that person. If there is a monitoring plan in place, the archaeologist will follow the outlined procedure.

STEP D: Notify Project and Washington Department of Ecology (Ecology) contacts.

Project Lead Contacts

Primary Contact		Alternate Contact	
Name:	Audrey Hackett	Name:	Justin Lenahansen
Organization:	Maul Foster & Alongi, Inc.	Organization:	Maul Foster & Alongi, Inc.
Phone:	206-556-2015	Phone:	206-566-2022
Email:	ahackett@maulfoster.com	Email:	jlenahansen@maulfoster.com

Ecology Contacts (completed by Ecology Project Manager)

Ecology Project Manager		Alternate or Cultural Resource Contact	
Name:		Name:	
Program:		Program:	
Phone:		Phone:	
Email:		Email:	

STEP E: Ecology will notify DAHP.

Once notified, the Ecology Cultural Resource Contact or the Ecology Project Manager will contact DAHP to report and confirm the discovery. To avoid delay, the Project Lead/Organization will contact DAHP if they are not able to reach Ecology.

DAHP will provide the steps to assist with identification. DAHP, Ecology, and Tribal representatives may coordinate a site visit following any necessary safety protocols. DAHP may also inform the Project Lead/Organization and Ecology of additional steps to further protect the site.

Do not continue work until DAHP has issued an approval for work to proceed in the area of, or near, the discovery.

DAHP Contacts:

Name: Rob Whitlam, PhD
Title: State Archaeologist
Cell: 360-890-2615
Email: Rob.Whitlam@dahp.wa.gov
Main Office: 360-586-3065

Human Remains/Bones:

Name: Guy Tasa, PhD
Title: State Anthropologist
Cell: 360-790-1633 (24/7)
Email: Guy.Tasa@dahp.wa.gov

4. TRIBAL CONTACTS

In the event cultural resources are discovered, the following tribes will be contacted. See Section 10 for Additional Resources.

Tribe:	Puyallup Tribe of Indians	Tribe:	Confederated Tribes and Bands of the Yakama Nation
Name:	Bill Sterud	Name:	Delano Saluskin
Title:	Chair	Title:	Chairman
Phone:	253-573-7800	Phone:	509-865-5121
Email:	bill.sterud@puyalluptribe-nsn.gov	Email:	delano_saluskin@yakama.com
Tribe:	Suquamish Tribe	Tribe:	Squaxin Island Tribe
Name:	Leonard Forsman	Name:	Kristopher Peters
Title:	Chair	Title:	Chair
Phone:	360-598-3311	Phone:	N/A
Email:	lforsman@suquamish.nsn.us	Email:	kpeters@squaxin.us

Please provide contact information for additional tribes within your project area, if needed, in Section 11.

5. FURTHER CONTACTS (if applicable)

If the discovery is confirmed by DAHP as a cultural or archaeological resource, or as human remains, and there is a partnering federal or state agency, Ecology or the Project Lead/Organization will ensure the partnering agency is immediately notified.

Federal Agency:		State Agency:	
Agency:		Agency:	
Name:		Name:	
Title:		Title:	
Phone:		Phone:	
Email:		Email:	

6. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL MATERIAL

Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect. Follow the steps under ***Stop-Protect-Notify.*** For specific instructions on how to handle a human remains discovery, see: *RCW 68.50.645: Skeletal human remains—Duty to notify—Ground disturbing activities—Coroner determination—Definitions*.

Suggestion: If you are unsure whether the discovery is human bone or not, contact Guy Tasa with DAHP, for identification and next steps. Do not pick up the discovery.

Guy Tasa, PhD State Physical Anthropologist
Guy.Tasa@dahp.wa.gov
(360) 790-1633 (Cell/Office)

For discoveries that are confirmed or suspected human remains, follow these steps:

1. Notify law enforcement and the Medical Examiner/Coroner using the contacts below. **Do not call 911** unless it is the only number available to you.

   Enter contact information below (required):
   - Local Medical Examiner or Coroner name and phone: Pierce County Medical Examiner | 253-798-6494
   - Local Law Enforcement main name and phone: Pierce County Sheriff HQ | 253-798-7530
   - Local Non-Emergency phone number (911 if without a non-emergency number): Pierce County Non-Emergency | 253-287-4455
2. The Medical Examiner/Coroner (with assistance of law enforcement personnel) will determine if the remains are human or if the discovery site constitutes a crime scene and will notify DAHP.
3. **DO NOT speak with the media, allow photography or disturbance of the remains, or release any information about the discovery on social media.**
4. If the remains are determined to be non-forensic, Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection and to shield them from being photographed by others or disturbed.

Further activities:

- Per RCW 27.44.055, RCW 68.50, and RCW 68.60, DAHP will have jurisdiction over non-forensic human remains. Ecology staff will participate in consultation. Organizations may also participate in consultation.
- Documentation of human skeletal remains and funerary objects will be agreed upon through the consultation process described in RCW 27.44.055, RCW 68.50, and RCW 68.60.
- When consultation and documentation activities are complete, work in the discovery area may resume as described in Section 8.

If the project occurs on federal lands (such as a national forest or park or a military reservation) the provisions of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) apply and the responsible federal agency will follow its provisions. Note that state highways that cross federal lands are on an easement and are not owned by the state.

If the project occurs on non-federal lands, the Project Lead/Organization will comply with applicable state and federal laws, and the above protocol.

7. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

Archaeological resources discovered during construction are protected by state law RCW 27.53 and assumed eligible for inclusion in the National Register of Historic Places under Criterion D until a formal Determination of Eligibility is made.

The Project Lead/Organization must ensure that proper documentation and field assessment are made of all discovered cultural resources in cooperation with all parties: the federal agencies (if any), DAHP, Ecology, affected tribes, and the archaeologist.

The archaeologist will record all prehistoric and historic cultural material discovered during project construction on a standard DAHP archaeological site or isolate inventory form. They will photograph site overviews, features, and artifacts and prepare stratigraphic profiles and soil/sediment descriptions for minimal subsurface exposures. They will document discovery locations on scaled site plans and site location maps.

Cultural features, horizons, and artifacts detected in buried sediments may require the archaeologist to conduct further evaluation using hand-dug test units. They will excavate units in a controlled fashion to expose features, collect samples from undisturbed contexts, or to interpret complex stratigraphy. They may also use a test unit or trench excavation to determine if an intact occupation surface is present. They will only use test units when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. They will conduct excavations using standard archaeological techniques to precisely document the location of cultural deposits, artifacts, and features.

The archaeologist will record spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock for each unit on a standard form. They will complete test excavation unit level forms, which will include plan maps for each excavation level and artifact counts and material types, number, and vertical provenience (depth below

surface and stratum association where applicable) for all recovered artifacts. They will draw a stratigraphic profile for at least one wall of each test excavation unit.

The archaeologist will screen sediments excavated for purposes of cultural resources investigation through 1/8-inch mesh, unless soil conditions warrant 1/4-inch mesh.

The archaeologist will analyze, catalogue, and temporarily curate all prehistoric and historic artifacts collected from the surface and from probes and excavation units. The ultimate disposition of cultural materials will be determined in consultation with the federal agencies (if any), DAHP, Ecology, and the affected tribe(s).

Within 90 days of concluding fieldwork, the archaeologist will provide a technical report describing any and all monitoring and resultant archaeological excavations to the Project Lead/Organization, who will forward the report to Ecology, the federal agencies (if any), DAHP, and the affected tribe(s) for review and comment.

If assessment activities expose human remains (burials, isolated teeth, or bones), the archaeologist and Project Lead/Organization will follow the process described in **Section 6**.

8. PROCEEDING WITH WORK

The Project Lead/Organization shall work with the archaeologist, DAHP, and affected tribe(s) to determine the appropriate discovery boundary and where work can continue.

Work may continue at the discovery location only after the process outlined in this plan is followed and the Project Lead/Organization, DAHP, any affected tribe(s), Ecology, and the federal agencies (if any) determine that compliance with state and federal laws is complete.

9. ORGANIZATION RESPONSIBILITY

The Project Lead/Organization is responsible for ensuring:

- This IDP has complete and accurate information.
- This IDP is immediately available to all field staff at the sites and available by request to any party.
- This IDP is implemented to address any discovery at the site.
- That all field staff, contractors, and volunteers are instructed on how to implement this IDP.

10. ADDITIONAL RESOURCES

Informative Video

Ecology recommends that all project staff, contractors, and volunteers view this informative video explaining the value of IDP protocol and what to do in the event of a discovery. The target audience is anyone working on the project who could unexpectedly find cultural resources or human remains while excavating or digging. The video is also posted on DAHP's inadvertent discovery language website.

Ecology's IDP Video (https://www.youtube.com/watch?v=ioX-4cXfbDY)

Informational Resources

DAHP (https://dahp.wa.gov)

Washington State Archeology (DAHP 2003)
(https://dahp.wa.gov/sites/default/files/Field%20Guide%20to%20WA%20Arch_0.pdf)

Association of Washington Archaeologists (https://www.archaeologyinwashington.com)

Potentially Interested Tribes

Interactive Map of Tribes by Area
(https://dahp.wa.gov/archaeology/tribal-consultation-information)

WSDOT Tribal Contact Website
(https://wsdot.wa.gov/tribal/TribalContacts.htm)

11. ADDITIONAL INFORMATION

Please add any additional contact information or other information needed within this IDP.

Implement the IDP if you see…

Chipped stone artifacts.

Examples are:

- Glass-like material.
- Angular material.
- “Unusual” material or shape for the area.
- Regularity of flaking.
- Variability of size.

Stone artifacts from Oregon.

Stone artifacts from Washington.

Biface-knife, scraper, or pre-form found in NE Washington. Thought to be a well knapped object of great antiquity. Courtesy of Methow Salmon Rec. Foundation.

Implement the IDP if you see…

Ground stone artifacts.

Examples are:

- Unusual or unnatural shapes or unusual stone.
- Striations or scratching.
- Etching, perforations, or pecking.
- Regularity in modifications.
- Variability of size, function, or complexity.

Above: Fishing Weight - credit CRITFC Treaty Fishing Rights website.

Artifacts from unknown locations (left and right images).

Implement the IDP if you see…

Bone or shell artifacts, tools, or beads.

Examples are:

- Smooth or carved materials.
- Unusual shape.
- Pointed as if used as a tool.
- Wedge shaped like a “shoehorn”.
- Variability of size.
- Beads from shell (dentalium) or tusk.

Upper Left:*Bone Awls from Oregon.*

Upper Center: *Bone Wedge from California.*

Upper Right: *Plateau dentalium choker and bracelet, from Nez Perce National Historical Park, 19th century, made using Antalis pretiosa shells Credit: Nez Perce - Nez Perce National Historical Park, NEPE 8762, Public Domain.*

Above: *Tooth Pendants. Right: Bone Pendants. Both from Oregon and Washington.*

Implement the IDP if you see…

Culturally modified trees, fiber, or wood artifacts.

Examples are:

- Trees with bark stripped or peeled, carvings, axe cuts, de-limbing, wood removal, and other human modifications.
- Fiber or wood artifacts in a wet environment.
- Variability of size, function, and complexity.

Left and Below: *Culturally modified tree and an old carving on an aspen (Courtesy of DAHP).*

Right, Top to Bottom: *Artifacts from Mud Bay, Olympia: Toy war club, two strand cedar rope, wet basketry*.

Implement the IDP if you see…

Strange, different, or interesting looking dirt, rocks, or shells.

Human activities leave traces in the ground that may or may not have artifacts associated with them. Examples are:

- "Unusual" accumulations of rock (especially fire-cracked rock).
- "Unusual" shaped accumulations of rock (such as a shape similar to a fire ring).
- Charcoal or charcoal-stained soils, burnt-looking soils, or soil that has a "layer cake" appearance.
- Accumulations of shell, bones, or artifacts. Shells may be crushed.
- Look for the "unusual" or out of place (for example, rock piles in areas with otherwise few rocks).

Shell Midden pocket in modern fill discovered in sewer trench.

Underground oven. Courtesy of DAHP.

Shell midden with fire cracked rock.

Hearth excavated near Hamilton, WA.

Implement the IDP if you see…

Historic period artifacts (historic archaeology considered older than 50 years).

Examples are:

- Agricultural or logging equipment. May include equipment, fencing, canals, spillways, chutes, derelict sawmills, tools, etc.
- Domestic items including square or wire nails, amethyst colored glass, or painted stoneware.

Left: Top to Bottom: *Willow pattern serving bowl and slip joint pocket knife discovered during Seattle Smith Cove shantytown (45-KI-1200) excavation.*

Right: *Collections of historic artifacts discovered during excavations in eastern Washington cities.*

Implement the IDP if you see…

Historic period artifacts (historic archaeology considered older than 50 years).

Examples are:

- Railway tokens, coins, and buttons.
- Spectacles, toys, clothing, and personal items.
- Items helping to understand a culture or identity.
- Food containers and dishware.

Main Image: *Dishes, bottles, workboot found at the North Shore Japanese bath house (ofuro) site, Courtesy Bob Muckle, Archaeologist, Capilano University, B.C. This is an example of an above ground resource.*

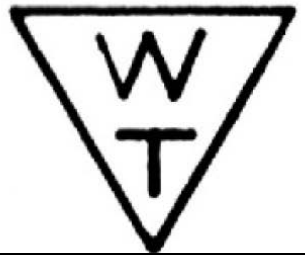
Right, from Top to Bottom: *Coins, token, spectacles and Montgomery Ward pitchfork toy discovered during Seattle Smith Cove shantytown (45-KI-1200) excavation.*

Implement the IDP if you see…

- Old munition casings – if you see ammunition of any type – ***always assume they are live and never touch or move!***
- Tin cans or glass bottles with an older manufacturer's technique – maker's mark, distinct colors such as turquoise, or an older method of opening the container.

Far Left: .303 British cartridge found by a WCC planting crew on Skagit River. Don't ever touch something like this!
Left: Maker's mark on bottom of old bottle.

Right: *Old beer can found in Oregon. ACME was owned by Olympia Brewery. Courtesy of Heather Simmons.*



Logo employed by Whithall Tatum & Co. between 1924 to 1938 (Lockhart et al. 2016).

Can opening dates, courtesy of W.M. Schroeder.

Implement the IDP if you see…

You see historic foundations or buried structures.

Examples are:

- Foundations.
- Railroad and trolley tracks.
- Remnants of structures.

Counter Clockwise, Left to Right: *Historic structure 45KI924, in WSDOT right of way for SR99 tunnel. Remnants of Smith Cove shantytown (45-KI-1200) discovered during Ecology CSO excavation, City of Spokane historic trolley tracks uncovered during stormwater project, intact foundation of historic home that survived the Great Ellensburg Fire of July 4, 1889, uncovered beneath parking lot in Ellensburg.*

Implement the IDP if you see...

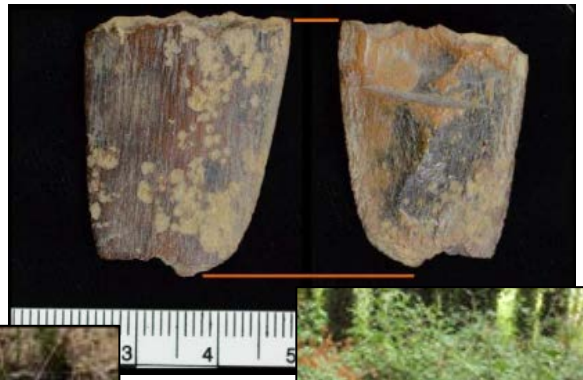
Potential human remains.

Examples are:

- Grave headstones that appear to be older than 50 years.
- Bones or bone tools--intact or in small pieces. It can be difficult to differentiate animal from human so they must be identified by an expert.
- These are all examples of animal bones and are not human.

Center: *Bone wedge tool, courtesy of Smith Cove Shantytown excavation (45KI1200).*

Other images (Top Right, Bottom Left, and Bottom) Center: Courtesy of DAHP.



Directly Above: This is a real discovery at an Ecology sewer project site.

What would you do if you found these items at a site? Who would be the first person you would call?

Hint: *Read the plan!*

Appendix D

Site-Specific Sampling and Analysis Plan

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Site-Specific Sampling and Analysis Plan
Project Area: Abitibi Consolidated Sales Corp Property, Steilacoom, Washington
HDG, LP

SSAP Number: 2026-01
SSAP Name: Abitibi SRI SSAP
Project Schedule: Anticipated Summer 2026
Site Background: The Property comprises approximately 58 acres and is divided into two physiographic areas: a relatively flat, flow-lying area (Mill Area) and a steep slope area (Forested Area). Historical pulp and paper mill operations on the Mill Area potentially generated and released COPCs which comprise the Site. Additionally, the Property is situated within a 1,000 square mile area known as the TSP, and surface soils may be impacted by aerially deposited TSP metals.
Problem Statement: Investigations have been completed in 2005-2008 and 2022, and additional soil and groundwater data are needed to further evaluate the surface and subsurface conditions on the Property to inform future redevelopment.
SSAP Objectives: Investigation has been designed to characterize TSP metals in Mill Area surface soils, dioxins/furans in Mill Area and Forested Area surface soils, and Site COPCs in subsurface soils and groundwater.
Field Investigation Contractor: Maul Foster & Alongi, Inc.
Field Task Manager: Justin Hansen **Email:** jhansen@maulfoster.com **Phone:** 206-556-2022
Field Team Leader: Fiona Bellows **Email:** fbellows@maulfoster.com **Phone:** 206-556-2020

Area	Location Type	Location ID	Sample Type	Field Measurements	Analysis	Location	Comments
Mill Area	ISM	• SRI-DU1	Surface soil	None	ISM surface soil samples will be collected from 0 to 6 inches bgs from 50 increments. Each DU will be processed at the laboratory using standard industry ISM techniques prior to analysis. Each DU will be analyzed for dioxins/furans. • The increments collected in the Mill Area SRI-DU1 will be shared with the TSP metals locations described below.	Proposed locations shown in Figure 3-1a. Locations may be altered based on conditions encountered in the field.	Laboratory ISM processing SOP is included as Appendix E. Field staff will indicate "ISM processing" as analysis on the sample chain-of-custody form. Forest duff (if present) will be removed from location prior to soil sampling.
Forested Area	ISM	• SRI-DU2 • SRI-DU3 • SRI-DU4	Surface soil	None	For each Forested Area DU, ISM surface soil samples will be collected from 0 to 6 inches bgs from 30 increments. Each DU will be processed at the laboratory using standard industry ISM techniques prior to analysis. Each DU will be analyzed for dioxins/furans. One DU will be collected in triplicate (three sets of 30 increments).	Proposed locations shown in Figure 3-2. Locations may be altered based on conditions encountered in the field.	Laboratory ISM processing SOP is included as Appendix E. Field staff will indicate "ISM processing" as analysis on the sample chain-of-custody form. Forest duff (if present) will be removed from location prior to soil sampling.
Mill Area	TSP metals	• SRI-SS-001 through SRI-SS-072	Surface soil	None	Soil samples will be collected from each TSP metals location and analyzed for arsenic and lead. • 72 surface soil samples will be collected from TSP metals locations from 0 to 6 inches bgs. • 18 of the 72 TSP locations will additionally be collected for subsurface soils from 6 to 12 inches bgs. • 50 of the 72 TSP metals locations will also be used as an ISM increment as part of SRI-DU1 (described above).	Proposed locations shown in Figure 3-1a. Locations may be altered based on conditions encountered in the field.	Forest duff (if present) will be removed from location prior to soil sampling.

Area	Location Type	Location ID	Sample Type	Field Measurements	Analysis	Location	Comments
Mill Area	Test Pit	• SRI-TP-01 through SRI-TP-16	Soil	PID Static sheen test	Test pits will be advanced near features of interest to a target depth of the groundwater table, depending on field conditions (i.e., sidewall sloughing, refusal). One soil sample will be collected from each excavator bucket lift from material that has not contacted the bucket walls. If field indications of contamination are present, additional samples of impacted material will be collected. Samples will be submitted for analysis on a tiered approach, starting with the shallowest sample from each location and any samples collected from areas with field indications of contamination. Samples will be analyzed for total RCRA 8 metals, TPH (DRO/ORO), PAHs, and VOCs. The remaining samples will be placed on hold at the laboratory, pending initial results.	Proposed locations shown in Figure 3-1b. Locations may be altered based on conditions encountered in the field.	Additional samples may be collected if field indications of contamination are present. Held samples may be analyzed pending the initial sample results.
Mill Area	Boring/Temporary Well	• SRI-B-01 through SRI-B-08	Subsurface soil	PID Static sheen test	Temporary borings will be advanced up to twenty feet bgs. At each boring location, soil samples will be collected approximately every 2.5 feet until groundwater is encountered or refusal is met. Where field indications of contamination exist, additional soil samples will be collected from above, within, and below the impacted material (as practicable). Samples will be submitted for analysis on a tiered approach, starting with the shallowest sample from each location and any samples collected from areas with field indications of contamination. Samples will be analyzed for total RCRA 8 metals, TPH (DRO/ORO), PAHs, and VOCs. The remaining samples will be placed on hold at the laboratory, pending initial results.	Proposed locations shown in Figure 3-1b. Locations may be altered based on conditions encountered in the field.	Additional samples may be collected if field indications of contamination are present. Held samples may be analyzed pending the initial sample results.
		• SRI-B-01 through SRI-B-05	Reconnaissance groundwater	• Depth to groundwater • Standard stabilization parameters (see FSDS in Appendix D)	One groundwater sample will be collected from up to five temporary wells and analyzed for total and dissolved RCRA 8 metals, TPH (DRO/ORO), PAHs, and VOCs.		Samples will only be collected if groundwater is encountered during drilling and sufficient groundwater is available for sample collection.
Mill Area	Existing Monitoring Well	• MW02 • MW03 • MW04	Groundwater	• Depth to groundwater • Standard stabilization parameters (see FSDS in Appendix D)	One groundwater sample will be collected from one of the existing Mill Area monitoring wells and analyzed for total and dissolved RCRA 8 metals, TPH (DRO/ORO), PAHs, and VOCs.	The existing Mill Area monitoring wells are shown in Figure 3-1b.	MFA has not confirmed the accessibility or condition of the existing monitoring wells at the Property. MFA will redevelop and sample a well, if possible.

Type	Frequency	Analysis
Trip Blanks	One per sample cooler containing VOC samples	VOCs
Equipment Rinsate Blanks	One per every 20 samples (or fewer) per sampling event when samples collected using nondedicated equipment	All analyses corresponding to the parent sample location
Field Duplicate Samples	One per every 20 samples (or fewer) per sample matrix and location type (except ISM)	All analyses corresponding to the parent sample location
ISM Field Triplicate	One DU collected in triplicate	Dioxins/furans

Samples will be hand-delivered or shipped to an Ecology-accredited laboratory	Sample Custody Notes: Samples will be analyzed on a standard turnaround time

Notes
This SSAP was designed to be used in conjunction with the Supplemental Remedial Investigation Work Plan, created by Maul Foster & Alongi, Inc. on behalf of HDG, LP.
Container, preservation, and holding time requirements per Table 4-1.
Analytical methods, performance criteria, and reporting limits per Table 4-2 and 4-3.
Quality control samples to be collected per Table 5-1.

bgs = below ground surface.
CUL = cleanup level.
DU = decision unit.
EPA = U.S. Environmental Protection Agency.
FSDS = field sampling data sheet.
COPC = contaminant of potential concern.
Dioxins/furans = polychlorinated dibenzo-p-dioxins and dibenzofurans by EPA Method 1613B.
DRO = diesel-range organics.
ISM = incremental sampling methodology.
NWTPH = Northwest Total Petroleum Hydrocarbon.
ORO = oil-range organics.
PAHs = polycyclic aromatic hydrocarbons by EPA 8270E-SIM.
PID = photoionization detector.
the Property = 4302 Chambers Creek Road, Steilacoom, Washington.
RCRA 8 = Resource Conservation and Recovery Act 8 Metals (As, Ba, Cd, Cr, Pb, Hg, Se, and Ag).
the Site = Abitibi Consolidated Sales Corp. Site.
SOP = standard operating procedure.
SRI = Supplemental Remedial Investigation.
SSAP = site-specific sampling and analysis plan.
TPH (DRO/ORO) = total petroleum hydrocarbons (DRO and ORO) by NWTPH-Dx.
TSP = Tacoma Smelter Plume.
TSP metals = arsenic and lead by EPA Method 6020B.
VOCs = volatile organic compounds by EPA 8260D.

_____ *Date:* _____

Justin Hansen
Maul Foster & Alongi, Inc., Project Manager

_____ *Date:* _____

Fiona Bellows
Maul Foster & Alongi, Inc., Quality Assurance Manager

Appendix E

Field Sampling Data Sheets

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Boring Log Form

Boring/Well No.:	
Site:	
Location:	
Project #:	

Drill Rig		MFA Staff:		Hole Dia:		Total Depth:	
Drilling Co.:				Water Level:		WLE Note:	
Start Date:		End Date:		Water Level:		WLE Note:	

Completion	Sample				Lithology							
	Top:		Time:	Depth:	Soil Type:				Color:			
	Length:				Top:		Fines:				Moisture:	
	Type:		Sample ID		Bottom:		Sand:				PID:	
	% Recov:				Soil Class:		Gravel:				Line Type:	
					Trace:				Impacts:			
					Notes:							
	Top:		Time:	Depth:	Soil Type:				Color:			
	Length:				Top:		Fines:				Moisture:	
	Type:		Sample ID		Bottom:		Sand:				PID:	
	% Recov:				Soil Class:		Gravel:				Line Type:	
					Trace:				Impacts:			
					Notes:							
	Top:		Time:	Depth:	Soil Type:				Color:			
	Length:				Top:		Fines:				Moisture:	
	Type:		Sample ID		Bottom:		Sand:				PID:	
	% Recov:				Soil Class:		Gravel:				Line Type:	
					Trace:				Impacts:			
					Notes:							
	Top:		Time:	Depth:	Soil Type:				Color:			
	Length:				Top:		Fines:				Moisture:	
	Type:		Sample ID		Bottom:		Sand:				PID:	
	% Recov:				Soil Class:		Gravel:				Line Type:	
					Trace:				Impacts:			
					Notes:							
	Top:		Time:	Depth:	Soil Type:				Color:			
	Length:				Top:		Fines:				Moisture:	
	Type:		Sample ID		Bottom:		Sand:				PID:	
	% Recov:				Soil Class:		Gravel:				Line Type:	
					Trace:				Impacts:			
					Notes:							
	Top:		Time:	Depth:	Soil Type:				Color:			
	Length:				Top:		Fines:				Moisture:	
	Type:		Sample ID		Bottom:		Sand:				PID:	
	% Recov:				Soil Class:		Gravel:				Line Type:	
					Trace:				Impacts:			
					Notes:							
	Top:		Time:	Depth:	Soil Type:				Color:			
	Length:				Top:		Fines:				Moisture:	
	Type:		Sample ID		Bottom:		Sand:				PID:	
	% Recov:				Soil Class:		Gravel:				Line Type:	
					Trace:				Impacts:			
					Notes:							
Borehole Notes:												

Soil Field Sampling Data Sheet

MAUL FOSTER ALONGI

Project Info	**Project No.**	**Client Name**	**Project Name**
	Sampling Event		**Sampler(s)**

Location Info	**Location ID**	**Location Type** *(e.g., stockpile, test pit)*	**GPS Collected (Y/N)**	**Depth Interval (ft bgs)**
Field Screening	**PID Reading (ppm)**	**Sheen Test**	**Odor (Y/N)**	**Stain (Y/N)**
	Soil Description *(e.g., color, grain size, odors, debris, organics, moisture):*			
Sample Info	**Grab or Composite**	**No. of Increments**	**Sampling Method** *(e.g., hand auger, ISM)*	
	Sample Date	**Sample Time**	**Sample Name**	
	Container Type	**Preservative**	**No. Containers**	**Total No. Containers**
	Clear glass jar	None		
Comments				

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	Clear glass jar	None		
Comments				

Well Development Field Form

MAUL FOSTER ALONGI

Project Information

Project No.	Client Name	Project Name	Field Staff

Well Information

Location ID	Monument Type	Depth Measuring Point	Well Diameter (in)	Screen Interval (ft)	Surge Method	Purge Method

Hydrology/Level Measurements

Date	Time	Initial Depth to Bottom (ft)	Initial Depth to Product (ft)	Initial Depth to Water (ft)	Initial Product Thickness (ft)	Initial Water Column (ft)	Well Casing Volume (gal)
		DTB	*DTP*	*DTW*	*DTP - DTW*	*DTB - DTW*	*gal/ft x water column*
Final Depth to Bottom (ft):			**Final Depth to Water (ft):**		**Total Water Purged (gal):**		

0.75" = 0.023 gal/ft
1" = 0.041 gal/ft
1.5" = 0.092 gal/ft
2" = 0.163 gal/ft
3" = 0.367 gal/ft
4" = 0.653 gal/ft
6" = 1.469 gal/ft
8" = 2.611 gal/ft

Surge Information

Well screen fully saturated? (Y/N)	Surge Interval(s) (range, feet bgs)	Total Surge Length (feet)	Total screen length surged? (Y/N)	Water volume removed during surging (gal, if applicable)	Turbidity (visual estimate or NTUs)

Well Development Water Quality Data

Time	Cumulative Purge Volume	Flowrate	Water Level	pH	Temperature	Conductivity	Dissolved Oxygen	ORP	Turbidity	Comments
	gal	*L/min*	*ft*	*SU*	*degrees C*	*uS/cm*	*mg/L*	*mV*	*NTU*	
Standard Stabilization Parameters (for 3 consecutive casing volume readings [after 5 casing volumes removed]):				*± 0.1*	*NA*	*± 3%*	*NA*	*NA*	*< 5 or ± 10% if > 5*	*If readings do not stabilize, well dev. complete after 10 casing volumes removed.*

General Comments:	

Groundwater Field Sampling Data Sheet

MAUL FOSTER ALONGI

Project Information

Project No.	Client Name	Project Name	Sampling Event	Sampler(s)

Well Information

Location ID	Well Type	Monument Type	Depth Measuring Point	Well Diameter (in)	Screen Interval (ft)	Sample Depth (ft)

Hydrology/Level Measurements

Date	Time	Depth to Bottom (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Column (ft)	Well Casing Volume (gal)
		DTB	*DTP*	*DTW*	*DTW - DTP*	*DTB - DTW*	*(gal/ft x water column)*

0.75" = 0.023 gal/ft
1" = 0.041 gal/ft
1.5" = 0.092 gal/ft
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Water Quality Data

Purge Method		*Purge/Sampling Methods: peristaltic pump, submersible pump, vacuum pump, inertia pump, dedicated pump, disposable bailer, bladder pump, other*							
Purge Start Time		*ideally < 0.3 ft drawdown*	*± 0.1*	*± 3%*	*± 3%*	*± 10% if > 0.5*	*± 10*	*< 5 or ± 10% if > 5*	
Time	**Cumulative Purge Volume**	**Flowrate**	**Water Level**	**pH**	**Temperature**	**Conductivity**	**Dissolved Oxygen**	**ORP**	**Turbidity**
	gal	*L/min*	*ft*	*SU*	*degrees C*	*uS/cm*	*mg/L*	*mV*	*NTU*

Last row of water quality data are considered final field parameters unless otherwise noted.

Water Quality Observations *(clarity, tint, odor, sheen, etc.)*

Sample Information

Sampling Method			
Sample Name			
Sample Date		Sample Time	
Container Type	**Preservative**	**Filtered (Y/N)**	**No. Containers**
VOA			
Amber glass			
Poly			
		Total No. Containers:	0

General Comments

Appendix F

Incremental Sampling Methodology Processing

MAUL FOSTER ALONGI

Laboratory Sample Analysis Plan (LSAP)
4302 Chambers Creek Road, Steilacoom, WA. (Property)
ISM Soil Processing following Apex Laboratories, LLC RSM Methodology
Maul Foster & Alongi, Inc. (MFA)

Due to differences in contaminants of concern, local environmental conditions and project objectives a site specific RSM LSAP should be developed for each project where ISM field sampling and RSM laboratory processing is being used.

For the 2026 sampling at the Chambers Creek Rd property, the contaminants of concern in all decision units (DUs) at defined depths are, dioxins and furans. The mean concentration of the contamination at 0 to 6"bgs, at four DUs of concern at the site. DU1 will consist of 50 increments and DU2, DU3 and DU4 will consist of 30 increments. The typical mass of sample collected for each increment should be volume of soil of 50 grams. Typically, soil is defined as particles < 2 mm in diameter. Rocks, bark, sticks and trash are not included in ISM sample.

Apex Sample Control provides the MFA sampling team with precleaned 1 gallon glass jars for ISM sample collection. All increments are placed in common jar from the same decision unit (DU). An additional two additional one gallon glass jars will be provided for collect of a DU duplicate and DU triplicate from a single DU.

Apex RSM Sample Processing Outline for Dioxins and Furans

When processing the samples from the Chambers Creek Rd. Property, the entire sample volume collected from each gallon jar representing the DU is processed to generate representative test aliquots. The procedures used in this LSAP are also documented in the proprietary and confidential Apex Laboratories' SOP G-105: *Representative Sampling Methodology (RSM)*. The SOP is consistent with the best practices outlined in ITRC ISM Update October 2020 and Multi Increment Sampling (MIS) developed by Charles Ramsey of EnviroStat. Ramsey has reviewed both Apex SOP and has conducted onsite review of equipment and process to ensure Apex processes soils consistently with MIS expectations. The steps followed to process ISM:

- The DU ISM sample including any interstitial water will be air-dried at room temperature inside a low humidity-controlled room that is kept dark and supplied with filtered air. The samples will be dried on baking sheets covered with Teflon sheeting to protect the sample from both metals and phthalate contamination

- Wet soil will be worked and turned following Apex SOP G-105 RSM during drying to prevent sediments from hardening into "bricks." This processing will also decrease the sample drying time. To speed drying, soil should be turned regularly during business hours.

- Below is an example of a typical soil sample after drying:

- If trash or unique non-soil material is observed in a sample, photographs will be taken for archival. (purple arrows in photo marks trash (foil, cigarette butts, ceramic, etc.)
- Once air dried, all of the united sample from the lined tray will be disaggregated with a stainless-steel flail mill, reducing agglomerations of caked soil to individual grains while preserving true grain size. All particles will be run through #10 sieve (<2 mm dia.). Under ITRC guidelines, soil is defined as particles <2mm. All soil particles will be loaded into the hopper of a rotary sectorial splitter for representative mass reduction. The difference in mass between the eight splits is generally 1-2 %. This method is statistically preferred by ITRC and MIS because it results in the least sample heterogeneity of all ITRC methods. (pictured below)

- Approximately 300 grams split will be of soil <2mm dia. Particles of soil will be ground using a cool grinding technique until soil is a fine powder (50 to 70-micron diameter). Since metals are not targets of concern, cold milling can be accomplished in tungsten puck mill, if metals were requested less dense zirconia puck mill would be employed so that wear metals do not add trace metal contaminant to soil.

- Entire ground sample is placed in 16 oz jar and placed in Paul Schatz Inversina powder mixer and thoroughly re-mixed. Due to the small uniform size of particles, sampling and segregation errors are significantly reduced while maintaining standard sample masses for the dioxin/furan method proposed.

- The blank matrix is borosilicate 2 mm glass beads that are processed with samples from time of drying through grinding.

- Laboratory processing blanks will be placed on hold until analytical data is reviewed and accepted.

Site-Specific Quality Control information:

Apex performs the same processing for all samples, including replicate and triplicate samples.

Questions regarding Processing can be addressed to Kent Patton, Director of Technical Services, Apex Laboratories, LLC kpatton@apex-labs.com