REMEDIAL INVESTIGATION WORK PLAN

NORTHERN STATE MULTI SERVICE CENTER

SEDRO-WOOLLEY, WASHINGTON

AGREED ORDER NO. DE 16309
CLEANUP SITE ID: 10048

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CONTENTS

TABLES AND ILLUSTRATIONS IV

ACRONYMS AND ABBREVIATIONS V

1 INTRODUCTION 1
1.1 REGULATORY FRAMEWORK 1
1.2 PURPOSE AND OBJECTIVES 2
1.3 WORK PLAN ORGANIZATION 2

2 BACKGROUND AND PHYSICAL SETTING 3
2.1 PROPERTY DESCRIPTION 3
2.2 PROPERTY HISTORY 3
2.3 PHYSICAL SETTING 4
2.4 AREAS OF CONCERN 5

3 PROPOSED CLEANUP STANDARDS 9
3.1 PROPOSED CLEANUP LEVELS 9
3.2 PROPOSED POINTS OF COMPLIANCE 10

4 SCOPE OF WORK 11
4.1 INVESTIGATION APPROACH 11
4.2 FIELD ACTIVITIES 18
4.3 LABORATORY ANALYSIS AND QUALITY ASSURANCE AND QUALITY CONTROL 21
4.4 INADVERTENT DISCOVERY PLAN AND CULTURAL RESOURCE OVERSIGHT 22
4.5 REPORTING 22

5 PROJECT MANAGEMENT PLAN 22
5.1 KEY PERSONNEL 22
5.2 SCHEDULE 23

LIMITATIONS

REFERENCES

TABLES

FIGURES

APPENDIX A
SAMPLING AND ANALYSIS PLAN/
QUALITY ASSURANCE PROJECT PLAN

APPENDIX B
HEALTH AND SAFETY PLAN

APPENDIX C
PLIA CROSS SECTION

APPENDIX D
INADVERTANT DISCOVERY PLAN

TABLES AND ILLUSTRATIONS

FOLLOWING REPORT:

TABLES

2-1 WATER LEVELS

2-2 HISTORICAL SAMPLE AND ANALYSES SUMMARY

2-3 ANALYTICAL RESULTS – DISCRETE AND ISM SOIL

2-4 ANALYTICAL RESULTS – GROUNDWATER

2-5 ANALYTICAL RESULTS – SUB-SLAB GAS

2-6 ANALYTICAL RESULTS – BACKGROUND SOIL

4-1 PROPOSED SAMPLING AND ANALYSES SUMMARY

4-2 EVALUATION OF DATA NEEDS FOR TEE

4-3 AOC 7: LEAD AND ARSENIC IN GROUNDWATER

4-4 AOC 7: LEAD AND ARSENIC IN SOIL

FIGURES

1-1 PROPERTY VICINITY

1-2 PROPERTY FEATURES

2-1 AOC 7: LEAD AND ARSENIC IN GROUNDWATER HISTORICAL RESULTS

4-1 FORMER LAUNDRY BUILDING AOC LOCATIONS

4-2 TIER I SAMPLE LOCATIONS

4-3 TIER II SAMPLE LOCATIONS

4-4 CROSS SECTION TRANSECT

4-5 GEOLOGIC CROSS SECTION

ACRONYMS AND ABBREVIATIONS

ABCA	Analysis of Brownfield Cleanup Alternatives
AO	agreed order
AOC	area of concern
ARARs	applicable or relevant and appropriate requirements
bgs	below ground surface
cis-1,2-DCE	cis-1,2-dichloroethene
the City	City of Sedro-Woolley
COI	contaminant of interest
cPAHs	carcinogenic polycyclic aromatic hydrocarbons
CSM	conceptual site model
CULs	cleanup levels
cVOCs	chlorinated volatile organic compounds
DES	Washington State Department of Enterprise Services
Ecology	Washington State Department of Ecology
ESA	environmental site assessment
ESL	ecological screening level
HASP	health and safety plan
IDW	investigation-derived waste
ISM	incremental sampling methodology
MFA	Maul Foster & Alongi, Inc.
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
ORO	heavy-oil-range organics
PCE	tetrachloroethene
POCs	points of compliance
the Port	Port of Skagit
the Property	2070 Northern State Road in Sedro-Woolley, Washington
QA/QC	quality assurance and quality control
RI	remedial investigation
RI/FS	remedial investigation and feasibility study
SAP/QAPP	sampling and analysis plan/quality assurance project plan
SES	SoundEarth Strategies, Inc.
Site	Northern State Multi Service Center
TCE	trichloroethene
TEE	terrestrial ecological evaluation
UCLs	upper confidence limits
ug/L	micrograms per liter
USEPA	U.S. Environmental Protection Agency
USTs	underground storage tanks
WAC	Washington Administrative Code

1 INTRODUCTION

On behalf of the Port of Skagit (Port), Maul Foster & Alongi, Inc. (MFA) has prepared this remedial investigation (RI) work plan for the Northern State Multi Service Center (former Northern State Hospital) site (Site). This Site is generally located at the Sedro-Woolley Innovation for Tomorrow Center (SWIFT Center) property at 2070 Northern State Road in Sedro-Woolley, Washington (the Property, see Figures 1-1 and 1-2). On July 1, 2018, the Port took title to the Property from the Washington State Department of Enterprise Services (DES). The Property is currently owned and managed by the Port, with buildings leased to multiple tenants, including the Cascade Job Corps, for on-site housing and educational services; and Pioneer Center North, as a drug and alcohol treatment facility with on-site housing. A portion of the original 220-acre campus located to the south the Property is owned by Port and leased to the Washington Military Department, for a vehicle storage, maintenance, and fueling facility. Historically, the Property was used as a self-sustaining treatment and residence facility for people with mental illness, and included on-site patient and staff housing, a power house, maintenance shops, a laundry, and a fueling station.

1.1 Regulatory Framework

The Port received a U.S. Environmental Protection Agency (USEPA) Cleanup Grant to support interim actions at two areas of concern (AOCs) at the Property, AOC 1 and AOC 4 as described in Sections 2.4 and 4.1 below.

As of July 16, 2019, the Port entered into Agreed Order No. DE 16309 (AO) with the Washington State Department of Ecology (Ecology) for remedial actions at the Site. Those actions include conducting the RI and a feasibility study, developing a draft Cleanup Action Plan, and performing the interim actions at AOC 1 and AOC 4 referenced above. The scope of this RI work plan was prepared consistent with the requirements outlined in Exhibit B of the AO.

The Northern State Multi Service Center Site, as defined under the AO, is where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located. This Site is listed in Ecology's contaminated sites database as Facility Site ID No. 65415931 and Cleanup Site ID No. 10048.

The Washington State Pollution Liability Insurance Agency (PLIA) is currently overseeing assessment and cleanup activities associated with petroleum hydrocarbon releases at AOC 2 on the Site. The Site is listed in PLIA's Petroleum Technical Assistance Program database as PNW087.

This RI work plan provides a scope of work for further assessment of environmental impacts associated with areas of concern (AOCs) identified during previous environmental assessments at the Property (MFA, 2014, 2015, and 2018a; SES, 2017). RI activities will be conducted in general accordance with guidance put forth in the Model Toxics Control Act (MTCA) (Washington Administrative Code [WAC] 173-340).

1.2 Purpose and Objectives

The purpose of this work plan is to generate data for further evaluation of environmental contamination associated with AOCs identified on the Property to gain characterization information sufficient for developing and evaluating potential cleanup actions for the Site. The activities outlined in this work plan are also intended to support the following specific project objectives:

- Develop data quality objectives for site characterization.
- Refine the conceptual site model (CSM) developed for the Site.
- Investigate hazardous substances in environmental media to identify potential sources of contamination and contaminant concentrations above MTCA cleanup levels (CULs).
- Evaluate potential risks to current and reasonably likely future human and ecological receptors.
- Obtain characterization data to support a feasibility study for the Site.
- Evaluate potential cleanup options for impacted environmental media at the Site.

1.3 Work Plan Organization

This document is organized as follows:

- ***Section 2*** discusses background information, including the Property history, previous investigations, the physical setting, and the AOCs identified at the Property during previous investigations.
- ***Section 3*** discusses proposed cleanup standards, based on the CSM developed as part of the 2018 phase II environmental site assessment (ESA) (MFA, 2018a).
- ***Section 4*** discusses the scope of work.
- ***Section 5*** discusses the project management plan.

This work plan defines the environmental investigation approach for meeting the project purpose and objectives defined in Section 1.2. The investigation will include collection and analysis of soil and groundwater samples from temporary sampling locations and/or monitoring wells at depths specific to known impacts and/or historical Property uses that may have resulted in releases of hazardous substances.

Standard field operating procedures for collecting soil and groundwater samples, scheduling analyses, decontaminating equipment, and managing investigation-derived waste (IDW) are described in the sampling and analysis plan/quality assurance project plan (SAP/QAPP) (Appendix A). The SAP/QAPP also defines the laboratory and field analytical quality procedures and the quality assurance and quality control (QA/QC) requirements for sampling and analysis. A health and safety plan (HASP) specific to the activities described in this work plan is provided as Appendix B. A cross section prepared by SoundEarth Strategies, Inc. (SES) is provided in Appendix C.

2 BACKGROUND AND PHYSICAL SETTING

2.1 Property Description

The Property is in the northeast corner of Sedro-Woolley (see Figure 1-1). The approximately 220-acre Property includes twelve tax parcels based upon the boundary line adjustment completed on June 29, 2018 (see Figure 1-1). The Property was annexed by the City of Sedro-Woolley (City) on September 19, 2015. The Property is bordered on the north, east, and south by the Northern State Recreation Area, a public open space owned and managed by Skagit County and historically associated with the Northern State Hospital. The Property is bordered by Fruitdale Road and residential properties to the west.

The Property is in sections 7, 8, 17, and 18 of township 35 north and range 5 east of the Willamette Meridian, on a small plateau with a slight downward topographic slope toward the east, south, and southwest in the direction of Hansen Creek and Brickyard Creek. The Property currently comprises over 80 buildings and structures. Tenants occupy some of the buildings, but many buildings are currently vacant.

In 1998, as part of its comprehensive plan amendments, the City established a land use designation for the Property in anticipation of potential future annexation. The City Comprehensive Plan Land Use Map designates the Property as Public. The Public zoning designation continues with annexation and allows for a range of potential uses in the public interest, not restricted to only open-space use. The Port, in partnership with the City and Skagit County, is currently leading an effort to transform the Property into a center for innovation and technology that incorporates research, high-tech manufacturing, education, and recreational uses, in accordance with the Subarea Plan (City, 2015) and the Planned Action Final Environmental Impact Statement (City and Port, 2015).

2.2 Property History

The Property was developed in 1909 and operated as a treatment and residence facility and hospital for people with mental illness until its closure in 1973. After the facility's closure, the 220-acre treatment and residential campus was transferred from the Washington State Department of Social and Health Services to the Washington State General Services Administration, which later became the DES. The adjacent farmland was transferred to the Department of Natural Resources, which later transferred ownership to Skagit County. On July 1, 2018, the Property was transferred from DES to the Port.

The Northern State Hospital was designed to be self-sustaining and included on-site patient and staff housing, dedicated water supply reservoirs and an associated potable water treatment facility, a fueling station for on-site vehicles, maintenance and paint shops, and a laundry facility. During the construction of the hospital, much of the Property was logged, graded, drained, and terraced to provide a suitable ground surface the campus (Artifacts Consulting, 2008).

Several buildings have been demolished and based on interviews with maintenance staff, the debris from a few of those buildings has been buried and/or disposed of on the Property (MFA, 2014, 2015, 2018a). Many of the remaining buildings and structures associated with the former facility, as well as the campus landscape, are listed on the National Registry of Historic Places.

2.3 Physical Setting

The Property is located on a slight topographic plateau to the north of the Skagit Valley and is in the Lower Skagit-Samish watershed. In general, the Property slopes south and southeast toward the Skagit Valley and the Skagit River (Water Resource Inventory Area No. 3).

According to the Geologic Map of the Sedro-Woolley North and Lyman 7.5-minute quadrangles, the Property and vicinity are underlain by Quaternary glaciomarine drift (Dragovich et al., 1999). The glaciomarine deposits typically consist of "poorly sorted, poorly compacted diamicton consisting of silty, sandy, gravelly clay to clayey gravel; moderately well- to well-sorted sandy silt, sandy clay, clayey silt, and clay" (Dragovich et al., 1999). Geologic cross sections developed through interpretation of well log, geotechnical boring, and field information show approximately horizontally oriented, 100- to 130-foot-thick deposits of Quaternary glaciomarine drift in the vicinity of the Property (Dragovich et al., 1999).

Soil observations recorded during previous investigation indicate relatively consistent geology throughout the Property, except at locations near Hansen Creek and north of the Power House (MFA, 2015, 2018a; SES, 2017). Thick units of soft to hard, nonplastic silt and clay with varying amounts of fine sand to depths of approximately 9 to 15 feet below ground surface (bgs) were encountered in most boring locations. Underlying the silt unit, thick deposits of bluish gray silty clay to clay were observed to approximately 25 feet bgs. Silty sand was observed underlying the silt unit to the maximum depth of 30 feet bgs. Minor lenses of silty sand and silty or sandy gravel were encountered intermittently in silt and clay units between 10 and 30 feet bgs. Soils near Hansen Creek, north of the Power House, consisted of sandy and gravelly soils below the silt at approximately 6 feet bgs. Fill containing brick pieces and woody debris was observed up to 15 feet bgs in the area to the north of the Power House (MFA, 2015; SES, 2017).

Water levels measured on May 1, 2018, from nine monitoring wells on the Property indicated that groundwater was present between approximately 5 and 18 feet bgs (see Table 2-1) (MFA, 2014, 2015, 2018a; SES, 2017). During previous investigations, groundwater across the northern portion of the Property was determined to flow east toward Hansen Creek (MFA, 2015 and 2018a; SES, 2017). Because of the large size of the Property and the limited area represented by the monitoring wells, it is possible that the groundwater flow direction varies throughout the Property. It is inferred that groundwater in other areas of the Property flows either southeast, because of the gradual topographic slope of the area toward the Skagit River Valley; west toward Brickyard Creek; or east toward Hansen Creek, depending on the location at the Property (see Figure 1-1).

Two creeks, Hansen and Brickyard, intersect the Property (see Figure 1-1). Hansen Creek bounds the north, east, and southeast portions of the Property. Brickyard Creek is located along the western perimeter of the Property. Both creeks discharge to the Skagit River, south of the Property.

2.4 Areas of Concern

During previous investigations, several features of environmental concern were identified and assessed (MFA, 2014, 2015, 2018a; SES, 2017). Potential impacts to soil, groundwater, and/or soil vapor were identified in association with the seven AOCs described below. Additional details on each AOC are provided below. A summary of previous sampling locations and analyses is included as Table 2-2. Previous soil, groundwater, and soil vapor results are provided in Tables 2-3, 2-4, and 2-5, respectively.

2.4.1 AOC 1: Former Laundry Building

Chlorinated solvents (chlorinated volatile organic compounds [cVOCs]), including tetrachloroethene (PCE), trichloroethene (TCE), and cis-1,2-dichloroethene (cis-1,2-DCE), were detected in soil, groundwater, and/or soil vapor in the northeast area of the former laundry building (see Figure 1-1) (MFA, 2018a). Historical use of chlorinated solvents in potential dry-cleaning operations was identified as a potential source of cVOC impacts in the former laundry building AOC.

Based on the concentrations of PCE in soil gas vapor below the former laundry building, there appear to be no immediate risks of exposure, however additional evaluation of vapor intrusion is recommended to assess seasonal variations of vapor concentrations in the former laundry building.

Soil vapor impacts associated with this AOC within the former laundry building will be further assessed as part of this RI work plan, as discussed in Section 4.

2.4.2 AOC 2: Power House Building

Concentrations of heavy-oil-range organics (ORO) and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) were detected above the MTCA Method A CULs (for unrestricted land use) in shallow soil (less than 3 feet bgs) north of the Power House (see Figure 1-1) (MFA, 2018a). Historical fill material containing coal/asphalt debris was determined to be a potential source of the ORO and cPAH impacts to shallow soil and appear localized to a small area underlying the existing asphalt immediately north of the Power House. Data collected for this area indicate that no data gaps remain and an evaluation to develop a protective remedy can be completed. Therefore, no additional characterization of this AOC is proposed in this work plan.

As described in Analysis of Brownfield Cleanup Alternatives (ABCA) report, the proposed remedy of this AOC includes preparation of a site management plan describing the existing asphalt surface to act as a protective cap against direct contact and outlining procedures for management of the contaminated soils associated with the AOC during construction activities in the vicinity (MFA, 2018b).

2.4.3 AOC 3: Lead in Soil

Elevated concentrations of lead were identified in shallow soil immediately adjacent to historical buildings (i.e., Coleman, Trevennen, and Denny buildings) and at one location in the athletic field (MFA, 2018a). It appears that lead-containing paint has flaked or peeled off the historical building surfaces and has been deposited in adjacent shallow soil. Therefore, the elevated concentrations of lead identified in these soil samples suggests that lead paint is/was present in the exterior paint of the historical buildings and is the source of elevated lead concentrations in shallow soil at the Property. The elevated detections of lead in the athletic field are currently proposed for excavation as part of an interim action for the Site under a USEPA Cleanup grant in 2020-2021. Therefore, no additional characterization within the athletic field is proposed in this work plan.

Elevated concentrations appeared to be localized in both vertical and lateral extent, with concentrations decreasing with depth and distance from the historical buildings (MFA, 2018a). Exceedances above the MTCA Method A CUL generally extended laterally up to 5 feet from the building footprint and vertically up to 1.5 feet bgs within topsoil around the historical buildings. During the Phase II ESA investigation, concentrations of lead in soil above ecological screening levels were periodically observed at depths slightly deeper and further laterally from historical buildings (see Figures 3-3 to 3-5 of the Phase II ESA [MFA, 2018a]). However, given the tight clays present below the topsoil at the Site and the low mobility of lead in soil, it is unlikely that the lateral and vertical extent of lead concentrations above ecological screening levels is significant and sufficient data is available to develop a protective remedy. Cleanup of lead concentrations above the ecological screening level may be required in this AOC.

The Phase II ESA investigation of lead adjacent to historical buildings focused on buildings anticipated to have significant renovation efforts that could integrate remediation (e.g., soil excavation) with renovations. Currently, the Cascade Job Corps utilizes several of the historic buildings that have been already renovated on the Property. Therefore, additional renovation efforts to these buildings are not anticipated.

Soil lead impacts associated with this AOC adjacent to previously renovated buildings will be further assessed as part of this RI work plan, as discussed in Section 4.

2.4.4 AOC 4: Arsenic in Soil

Localized, elevated concentrations of arsenic in soil have been identified in the athletic field and former Ward building area at the Property (MFA, 2018a). There are a few potential sources for elevated arsenic concentrations in soil that may be present at the Property, including naturally occurring arsenic, historical pesticide use, and arsenic-containing wood-treatment chemicals associated with wood used in building construction and/or in building demolition debris (MFA, 2018a). However, an exact source for these two areas on the Property is unknown.

Elevated concentrations of arsenic in the athletic field and former Ward building area will be excavated as part of an interim action for the Site under a USEPA Cleanup grant. Final limits of the excavations will include confirmation samples documenting the removal of elevated arsenic (and lead in the athletic field) concentrations. Therefore, additional characterization of this AOC is not proposed in this work plan.

On November 26, 2019, Ecology approved the supplemental sampling of soil for arsenic near the former Ward building area to further inform engineering design of the soil excavation interim remedial action described above. Soil results from this supplemental investigation will be incorporated into the final RI and feasibility study for the Site.

2.4.5 AOC 5: Property-Wide Metals in Soil

Aside from arsenic and lead in AOCs 3 and 4, as discussed above, which have been detected at concentrations above MTCA Method A CULs, other metals, including barium, cadmium, chromium, copper, mercury, selenium, silver, and zinc, have been detected in surface and subsurface soil throughout the Property. Some metals were detected at concentrations exceeding Washington State default background values for the region ("Region W") and/or above default MTCA criteria protective of ecological receptors (MFA, 2018a). Given the relatively consistent concentration distribution of many of these metals, they were suspected of being related to site-specific natural background conditions.

To further investigate site-specific conditions and potential for adverse effects to ecological receptors, eighteen decision units were defined to evaluate the distribution of metals in shallow soil (i.e., up to 0.5 feet bgs) across the entire Property as part of the Phase II ESA using the incremental sampling methodology (ISM), which better represents the average conditions an ecological receptor may be exposed to (see Table 2-3 and Figure 4-3). Site-specific ecological screening levels were developed for the Site and shallow discrete soil data from decision units representative of surface background conditions (i.e., decision unit 16 and 17) were used to determine site-specific natural background (see Table 2-6) (MFA, 2018a).

The ISM results showed exceedances of site-specific ecological screening levels and/or natural background in four decision units (DU02, -04, -11, and -14). To further delineate the metals distribution discrete samples were analyzed in these decision units, showing that in some cases elevated concentrations were localized (e.g., in DU02, -04) and in other cases were relatively homogenous throughout the decision unit (e.g., in DU11, -14) (see Table 2-3). Subsurface soil data collected as part of prior investigations were also screened relative to ecological criteria as shown in Table 2-3 and show some exceedances within the soil point of compliance (up to 15 feet bgs); the data also show that concentrations in some cases increase at deeper depths indicating it is possible that the underlying geology at the Property contains naturally elevated concentrations of metals. Additional assessment of the potential for metals at the Property to adversely impact ecological receptors, and evaluation of subsurface background metals conditions is therefore needed.

Therefore, this AOC will be further assessed as part of this work plan, as discussed in Section 4.

2.4.6 AOC 6: Maintenance Building

Benzene, toluene, ethylbenzene, total xylenes, and gasoline were identified in subsurface soil (between 7 and 12 feet bgs) and groundwater adjacent to the maintenance building (see Figure 1-1) at concentrations above MTCA Method A CULs (SES, 2017).

Additional assessment and cleanup of this AOC is being conducted by SES via PLIA; therefore, this AOC was not further assessed as part of this work plan.

2.4.7 AOC 7: Lead and Arsenic in Groundwater

During previous investigations, total and dissolved arsenic and lead were detected in samples from reconnaissance groundwater borings and monitoring wells, installed across the northeastern portion of the Property, at concentrations above MTCA Method A CULs and surface water applicable or relevant and appropriate requirements (ARARs) (MFA, 2015) (see Figure 2-1). Given the proximity of elevated arsenic and/or lead concentrations to Hansen Creek, there is potential for groundwater with metals concentrations above surface water ARARs to discharge to the creek.

Previous borings across the Property showed indications of consistent, and in some cases elevated, concentrations of metals in subsurface soil with depth. This suggests the possibility that the underlying geology at the Property may contain naturally elevated concentrations of metals resulting in elevated concentrations to the groundwater. Therefore, assessment of metals concentrations in areas representative of background conditions (DU16 and -17) will be conducted to determine if groundwater concentrations in the AOC are associated with natural conditions.

This AOC will be further assessed during this work plan, as discussed in Section 4.

2.4.8 Additional Features of Concern

In 1993, Lone Rock Resources, Inc, evaluated soil contamination associated with four underground storage tanks (USTs) at the Property; three of the USTs were removed and one was decommissioned in place (Lone Rock Resources, 1993). Two of the USTs (1,000- and 2,000-gallon gasoline USTs) were located south and west of the maintenance building (see Figure 1-1); they were removed as part of decommissioning activities. Characterization and cleanup of these USTs is being conducted by PLIA as described above in Section 2.4.6.

The remaining two USTs identified the Lone Rock Resources, Inc. report were located near the Douglas and Denny buildings. One former 250-gallon heating oil UST was removed and decommissioned near the Denny building. Soil samples collected from the sidewalls and base of the excavation did not identify heavy oil concentrations above 25 milligrams per kilogram (mg/kg), well below the current MTCA Method A soil CUL for diesel and heavy oil of 2,000 mg/kg.

A former 300- to 500-gallon (varying amounts in report) No. 2 diesel fuel UST used to store fuel for an emergency generator was filled with inert material and decommissioned in place near the Douglas building. Concentrations of diesel in soil adjacent to the UST ranged between 460 and 860 mg/kg, below the current MTCA Method A CUL of 2,000 mg/kg. However, groundwater was determined to be in contact with the bottom of the UST at approximately 14 feet bgs and was not analyzed during the UST removal. Therefore, it is possible there are concentrations of diesel in groundwater adjacent to the closed-in-place UST above applicable MTCA CULs.

Because of the age of the facility, there is the potential for additional, unknown USTs on the Property. Some of the larger buildings (i.e., Denny and Douglas) had heating oil and diesel fuel USTs associated with emergency generators and heating sources. For example, Ecology removed a 250-gallon UST in 2001; however, its location on the Property is unknown. There may be additional buildings that have or had similar heating or generator fuel storage associated USTs that are unknown.

PLIA is currently overseeing the characterization and removal of contamination associated with the USTs near the maintenance building. Currently, the Douglas building is occupied by a restricted access rehabilitation facility (Pioneer Center North). However, the building is planned for demolition to restore the historic entrance to the facility. Therefore, it is suggested that any additional investigation of this UST occur at that time and no additional characterization of USTs is proposed in this work plan.

3 PROPOSED CLEANUP STANDARDS

Cleanup standards for the Property were developed based on the CSM presented in the phase II ESA (MFA, 2018a). The CSM and cleanup standards will be reevaluated following additional data collected under the scope of this work plan.

According to MTCA, the cleanup standards for a site have two primary components: chemical-specific CULs and points of compliance (POCs). The CUL is the concentration of a chemical in a specific environmental medium that will not pose unacceptable risks to human health or the environment. The POC is the location where the CUL must be met.

3.1 Proposed Cleanup Levels

3.1.1 Soil

For human health screening, soil will be screened against MTCA Method A CULs for unrestricted land use. The Method A values are for protection of human health via the direct-contact or ingestion pathways and protection of groundwater via the soil-leaching-to-groundwater pathway. For certain constituents, MTCA Method A CULs are not available and Method B CULs will be applied. Method B CULs may be used at any site. This is consistent with the approach used in the preliminary remedial investigation and feasibility study (RI/FS) (MFA, 2015).

Based on the findings of the surface soil natural background and the site-specific ecological screening level development conducted during the Phase II ESA, as well as evaluations proposed as part of this work plan, site-specific cleanup levels protective of ecological receptors will be developed for the Property. For instance, natural background will be considered the cleanup level if the site-specific ecological screening level is less than site-specific natural background conditions. The site-specific ecological screening levels previously established (MFA, 2018a) may be further refined or potential for adverse effects evaluated using one or a combination of the following methods, as outlined in WAC 173-340-7493 including:

- Literature survey (e.g., review of recent criteria such as USEPA ecological soil screening level values [USEPA, 2018])
- Soil bioassays

- Wildlife exposure model parameters
- Site-specific field studies (e.g., sampling conducted in areas of the Property representative of natural background conditions)
- Weight of evidence approaches combining the application of literature, field, and laboratory data

Soil CULs for the protection of potable groundwater (leaching-to-groundwater pathway) will be evaluated for locations where groundwater data are not available to determine the potential for chemically impacted soil to affect groundwater resources. Potable water for the Property is provided by the Skagit Public Utility District.

3.1.2 Groundwater

Groundwater will be screened to MTCA Method A CULs and ARARs for freshwater surface water. For certain constituents, MTCA Method A CULs are not available and Method B CULs will be applied. This is consistent with the approach used in the preliminary RI/FS and phase II ESA (MFA, 2015 and 2018a). The minimum concentration of the state and federal aquatic life and human health freshwater water quality standards will be selected as the surface water ARAR.

Potable water for the Property is provided by the Skagit Public Utility District. There are no known drinking water supply wells on the Property and groundwater beneath the Property will be assessed for potability following evaluation of background metals concentrations in groundwater.

3.2 Proposed Points of Compliance

3.2.1 Soil

The soil POC is the depth at which soil CULs shall be attained. The standard POC in soil for human direct contact and for ecological receptors is 15 feet bgs throughout an entire site and the standard POC is all depths throughout a site for protection of groundwater. The standard POC for protection of groundwater is preliminarily applied to soil on the Site. Additional assessment of soil and groundwater on the Site will inform final POCs on the Site. It is anticipated that the determination of whether soil is protective of groundwater will be assessed using a POC established for groundwater. Note that a conditional point of compliance of up to 6 feet bgs may be established for ecological receptors, as this represents the interval that receptors are most likely to directly contact in the absence of anthropogenic or other disturbances (e.g., excavation bringing deeper soils to the surface).

3.2.2 Groundwater

For groundwater, the POC is the point or points where the groundwater CULs must be attained for a site to comply with the cleanup standards. Groundwater CULs shall be attained in all groundwater from the POC to the outer boundary of the hazardous-substance plume. A conditional POC may be established if it is not practicable to meet the CULs throughout the site within a reasonable restoration time frame (WAC 173-340-720(8)(c)). A conditional POC for groundwater is not proposed at this time.

4 SCOPE OF WORK

This section outlines MFA's proposed scope of work to further evaluate environmental conditions in the AOCs identified in Section 2.

4.1 Investigation Approach

MFA's proposed sampling locations are shown in Figures 4-1 through 4-4, and sampling and analytical details are summarized in Table 4-1. Investigation details and supporting documentation for each AOC are discussed below.

4.1.1 AOC 1: Former Laundry Building

Detections of cVOCs were identified in soil, groundwater, and sub-slab soil gas in and adjacent to the northern portion of the building during previous investigations (see Figure 4-1) (MFA, 2018). Concentrations of cVOCs were identified below applicable vapor intrusion screening criteria in the sub-slab sample; however, additional assessment is proposed to evaluate seasonal variations of vapor intrusion in the former laundry building. The former laundry building is a currently in use by the Cascade Job Corps for students learning computer-based skills (i.e., IT).

The following vapor intrusion sampling approach is proposed for two seasonal events (one event during a seasonally low-water table and one event during a high-water table).

Indoor air and sub-slab soil gas samples will be collected in areas with previously identified VOC contamination (specifically, PCE and its breakdown products, see table in Section 4.3 below) in soil, groundwater, and/or soil gas (see Figure 4-1 and Table 4-1). Two indoor air samples will be collected for one 8-hour period. This approach is intended to provide samples representative of enclosed areas in the building.

One ambient (outdoor) air sampler will be deployed outside and upwind of the building to capture other potential VOC sources for one 8-hour period during collection of the indoor air samples. Sample locations will be upwind of and outside the footprint of the building and the areas of VOC impacts previously identified in ambient air, soil, and/or groundwater at the Site (see Figure 4-1 and Table 4-1). MFA will attempt to deploy the sampler in a location that is free of discernible ambient sources of VOCs. Wind direction data from the day on which the sample will be collected will be reviewed to assess where to position the ambient sample(s) to be upwind of the building.

During the collection of indoor air samples, MFA will collect two sub-slab soil gas samples from the space immediately below building slabs in the vicinity of the indoor air samples (see Figure 4-1 and Table 4-1).

4.1.2 AOC 3: Lead in Soil

Additional assessment will be conducted in soil adjacent to selected historical buildings that have since been renovated to further evaluate the presence of lead exceedances in shallow soil associated with lead-based paint. Previous investigations focused on buildings slated for renovation (i.e., Denny, Coleman, and Trevennen buildings), however a few of the historic buildings on the Property have already been renovated and have no immediate plans for renovation. Therefore, it is possible that prior use of lead paint on these already renovated buildings has impacted the surrounding soil.

The following buildings were selected for additional assessment based on their documented construction dates provided in the cultural resources report (prior to the lead paint ban in 1978) (Artifacts Consulting, 2008), adjacent exposed soil surfaces, and renovation status (see Figure 1-1 for building locations on Property):

- Smith Hall (constructed in 1922)
- Thompson Hall (constructed in 1918)
- Valdez Hall (constructed in 1928)
- Wilkes Hall (constructed in 1933)

Based on the data obtained during the Phase II ESA, lead impacts above MTCA Method A CULs surrounding historical buildings appear to be localized in both vertical and lateral extent, with concentrations decreasing with depth and distance from the buildings (MFA, 2018a). This suggests that lead exceedances in shallow soil are largely restricted to locations immediately adjacent to historical buildings with the highest concentrations in the top 0.5-foot of soil immediately adjacent to the buildings. Therefore, this investigation will focus on collecting soil immediately adjacent to these buildings within the top 0.5-foot of soil.

In order to get a representative concentration of lead in shallow soil surrounding the four buildings outlined above, a five-point composite sample will be collected around the perimeter of each building. If soil composited around a building has lead concentrations above the ecological indicator concentration of 118 mg/kg, the same assumptions of vertical and lateral extent of contamination as observed around the buildings during the Phase II ESA will be applied to define nature and extent. The number of samples selected for the composite assumes, based on previous sample results, that up to 500 cubic yards of soil would need to be excavated adjacent to the building if the soil contained concentrations above the ecological indicator concentration of 118 mg/kg. This generally follows the same guidance to the number of samples recommended to characterize a stockpile between 101 and 500 cubic yards (Ecology, 2016b). In addition to the composite sample from each building, discrete soil samples will be collected at each composite location and archived for potential future analysis. Composite samples will be prepared by collecting additional volume of equal amount (i.e., filling a 4-ounce jar) at each discrete location and placing that additional volume in a plastic bag for homogenization by field staff. Once all the discrete sample locations have been collected and the composite sample homogenized, composited soil will be placed in sample containers provided by the analytical laboratory.

During composite and discrete sampling, a handheld x-ray fluorescence meter will be used to field screen concentrations of lead. Results from the x-ray fluorescence meter will be used to inform sampling and determine if modifications to the sampling approach are needed, in coordination with Ecology. For example, multiple composite or discrete samples may be analyzed per building if concentrations vary significantly along specific building sides. During sampling activities, at least one discrete soil sample will be submitted for analysis for direct comparison of field lead results obtained from the x-ray fluorescence meter. This will help inform field sampling using the x-ray fluorescence meter.

4.1.3 AOC 5: Property-Wide Metals in Soil

Additional investigation is proposed to evaluate the potential for impacts to ecological receptors and to determine if previously identified site-specific ecological screening level (ESL) exceedances are associated with anthropogenic or natural sources. The investigation will support development of a site-specific terrestrial ecological evaluation (TEE) weight-of-evidence evaluation consistent with WAC 173-340-7493.

As described in Section 2.4.5, ISM soil data were collected at 16 decision units to evaluate whether soil concentrations meet ESLs or natural background specifically to support the TEE. These data best represent soil conditions to which ecological receptors may be exposed, as samples locations were identified in areas with suitable habitat (e.g., surface soil/vegetation was present). Other surface soil data collected as part of prior investigations were collected in highly trafficked and/or disturbed areas (e.g., directly adjacent to buildings, adjacent to the Power House, directly beneath asphalted areas, etc.) as part of targeted non-TEE investigations, and are not considered representative of suitable habitat.

Based on the TEE investigation ISM results, surface conditions at 12 decision units meet the ESLs or natural background and no further surface soil investigation is needed at these areas.[1] Four decision units (DU02, -04, -11, and -14) exceed the higher of the ESLs and natural background as shown by the ISM results and follow-up discrete analysis.[2] To evaluate whether ESLs or natural background is met Property-wide the 95 percent upper confidence limits (UCLs) were calculated using MTCAStat. 95 percent UCLs for all metals are lower than ESLs or natural background. However, it appears other requirements for demonstrating compliance are not met, consistent with MTCA 173-340-740(7): one single sample concentration is greater than two times the higher of the ESL or natural background (copper in DU02 is 2.7 times greater) and greater than ten percent of sample concentrations exceed the higher of the ESL or natural background for chromium (12.5 percent). Data needs were therefore further evaluated as summarized in Table 4-2 to support a site-specific TEE for the Property.

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[1] Discrete surface soil data collected as part of previous non-TEE investigations were also reviewed as shown in Table 4-2 but are not considered representative as discussed in this section.

[2] The TEE investigation discrete samples were collected to further delineate elevated concentrations within decision units, however the ISM data are considered the primary results for determining compliance with ecological cleanup levels and potential for adverse effects to receptors.

A two-tiered approach is proposed to further evaluate natural background concentrations and inform additional characterization needs for this AOC. The Tier I investigation will inform the need for the Tier II investigation. The following two-tiered approach is proposed to evaluate this AOC:

<u>Tier I – Initial Investigation</u>

Site reconnaissance to determine the need for surface impact delineation samples near locations SS-38 and SS-40 will be conducted in DU02; these discrete samples showed highly elevated but localized concentrations. Additional samples will be collected if the surrounding exposed ground (i.e., soil/vegetated) area exceeds approximately 400 square feet.[3][4] If greater than 400 square feet, one additional sample per 400 square feet will be collected and analyzed for copper and zinc. If less than 400 square feet, no additional samples will be collected.

The prior discrete samples show concentrations are relatively homogenous throughout the area at DU11 and-14 along the eastern boundary of Hansen Creek. Although concentrations of chromium exceed the site-specific background value, given their consistent concentrations and distribution along Hansen Creek, it is possible that the geology associated with the alluvium deposits along the creek have naturally elevated chromium concentrations. Therefore, ten additional surface soil sampling along the northern perimeter of Hansen Creek is recommended to evaluate chromium natural background concentrations along a portion of Hansen Creek with known minimal anthropogenic activity. Proposed surface soil samples are shown in Figure 4-2. Based on historical aerials, this portion of Hansen Creek has been relatively undisturbed in comparison to the development to the south where the main campus of the former Northern State Hospital is located. Surface soil samples would be collected in areas of established vegetation along the creek to reduce the likelihood of anthropogenic sources or influences. Data obtained from this area would be used to supplement the previous site-specific natural background value developed for the Property. Based on the updated natural background evaluation chromium concentrations DU11 and -14 will be reevaluated to determine the need for additional assessment, as discussed below in the Tier II sampling approach.

As described in Section 4.1.3, natural background subsurface conditions will also be further investigated. These results will be obtained prior to determining the need for additional subsurface investigation in the decision units as described in Table 4-2. The subsurface background data will support a refined evaluation of background conditions and this information will inform the need, if any, for additional subsurface investigation within the standard point of compliance for ecological receptors (0 to 15 feet bgs). Additional subsurface sampling would be documented in an RI work plan addendum, or similar, and included in a Tier II sampling effort.

At the other decision unit (DU04) with concentrations of metals that exceed the higher of the ESLs and natural background no additional surface sampling is proposed. At DU04, surface soil conditions will be addressed as part of human health remedy for lead impacts, as described in Section 2.4.3, recognizing that the final cleanup level will account for ecological receptors.

3 The extent of exposed ground could not be determined using aerial photography.

4 The area of 400 square feet was selected using the suggested characterization guidance in Ecology's Guidance for Remediation of Petroleum Contaminated Sites, Publication Number 10-09-057.

Tier II – Follow-Up Investigation

Soil bioassays within decision units DU11 and DU14 are proposed to further investigate the potential for chromium toxicity to plants and soil biota. As noted above, chromium concentrations south of GP19[5] in DU14 and throughout DU11 are consistent but exceed all ESLs and natural background, and represent the highest documented surface concentrations at the Property. The test described in Early Seedling Growth Protocol for Soil Toxicity Screening (Ecology Publication No. 96-324) and test described in Earthworm Bioassay Protocol for Soil Toxicity Screening (Ecology Publication No. 96-327) will be conducted. Preparation of test soils and dilution factors will be done consistent with procedures listed in Protocols for Short Term Toxicity Screening of Hazardous Waste Sites (USEPA Publication No. 600/3-88/029). To support development of a site-specific earthworm bioaccumulation and/or plant uptake factor, for use in a refined wildlife exposure model, bioaccumulation tests consistent with methods outline in Ecology (2016c) and ASTM E 1676-12 method (Standard Guide for Conducting Laboratory Soil Toxicity or Bioaccumulation Tests with the Lumbricid Earthworm *Eisenia Fetida* and the Enchytraeid Potworm *Enchytraeus albidus*) may be run. The bioaccumulation tests would be run if it is determined appropriate literature-based values for wildlife factors including uptake factors and toxicity reference values cannot be identified.

Three five-point composite samples will be collected for the bioassays and analytical testing. Two of the composite samples will be collected from the investigation areas shown in Figure 4-3 (one from each area). The third composite sample will be collected from the background area shown on Figure 4-3 for comparison to the investigation samples. Each of the three composite samples will be analyzed for metals (RCRA 8 plus zinc and copper) for comparison with bioassay results. A laboratory reference sample will also be run consistent with the test procedures. Based on discussions with the testing laboratory (EcoAnalysts, Inc.), soil bioassays can often be run to determine a site-specific effects level and this typically requires a gradient of soil concentrations. Chromium at the Property shows fairly consistent concentrations and areas with dramatically more elevated concentrations are not known to be present. At a minimum, the testing results will be used to determine potential for impacts to plants and soil biota at the portions of the Property with the most elevated chromium concentrations. The testing results may also be used to develop a site-specific earthworm bioaccumulation and/or plant uptake factor for use in a refined wildlife exposure model used to determine potential effects to wildlife (MTCA Table 749-4). As described above, literature-based uptake factors as well as toxicity reference values will first be reviewed for potential application to the wildlife exposure model.

To further support a weight-of-evidence evaluation for the TEE, a field survey will also be completed for the bioassay areas (including the background area) to assess plants and soil biota at the Property. The survey will include the following:

- Small test pits (up to 1-foot bgs) at each of the bioassay sample locations using a shovel to visually observe presence of soil biota presence/depth and plant rooting depth.
- Visual observation of plants for signs of stress (e.g., chlorosis, wilting, etc.).

[5] Discrete samples collected north of GP19 are below natural background.

- Identification of plant and soil biota species present and species density, including comparison between the Property and background areas.
- Photos documenting observations.

The bioassay results and field survey, along with chemical data and refined wildlife exposure model, will inform the weight-of-evidence assessment of ecological impacts at the Property and will be documented in the site-specific TEE.

4.1.4 AOC 7: Lead and Arsenic in Groundwater

Additional investigation is recommended to determine if previously identified lead and arsenic concentrations in groundwater are associated with anthropogenic or natural sources and to evaluate the potential for impacts to Hansen Creek.

Lead and arsenic were previously detected in groundwater from reconnaissance borings and monitoring wells at concentrations above MTCA Method A cleanup levels and surface water applicable or relevant and appropriate requirements (ARARs) (see Figure 2-1). Metals were analyzed for both total and dissolved fractions. In samples where both total and dissolved fractions were detected, the total concentrations were significantly greater than the dissolved concentrations in reconnaissance groundwater samples, but only slightly greater in samples from monitoring wells. Total arsenic concentrations ranged from 167 to 1,173 percent more than dissolved concentrations in reconnaissance groundwater samples and from 0 to 10 percent more in samples from monitoring wells (see Table 4-4). Similar results were observed for lead. These differences may be attributed to the significantly higher turbidity of the reconnaissance groundwater samples, which was in some cases too high to measure; measured values ranged from 100 to 964 nephelometric turbidity units (NTUs). Conversely, the maximum turbidity measurement collected during sampling from monitoring wells was 17.59. These results suggest that suspended sediment in groundwater samples is a significant source of lead and arsenic.

Dissolved-phase metals have the potential to migrate with groundwater transport and discharge to Hansen Creek. Suspended sediments are not expected to migrate with groundwater transport in the aquifer materials present at the Property; therefore, total metal concentrations—which are significantly influenced by suspended sediments—are not representative of potential impacts to Hansen Creek. Dissolved arsenic was detected above MTCA Method A in multiple locations (see Figure 2-1). Dissolved lead was detected in only one location—MW02 at 1 microgram per liter (ug/L)—below the MTCA Method A cleanup level of 15 ug/L, but above the surface water ARAR identified in the preliminary RI/FS of 0.57 ug/L (MFA, 2015).

Elevated lead and arsenic concentrations in groundwater, which are influenced by the presence of suspended sediment, may be associated with naturally occurring geologic deposits. The Washington State Department of Natural Resources (DNR) geologic map of the Sedro-Woolley North and Lyman 7.5-minute quadrangles, western Skagit County, Washington report (Dragovich et al., 1999) ("DNR report"), identify the former Northern State Hospital and Hansen Creek locations in a cross section (see Plate 4, cross section G of that report). In those areas, geologic deposits to depths of approximately 100 to 200 feet are comprised of glaciomarine drift ($Qgdm_{ec}$, $Qgdm_{ed}$, and $Qgdm_{e}$ [types of Everson age glaciomarine drift]). Exploratory borings in the northeastern portion of the Property conducted as part of previous environmental assessment activities were completed to a maximum depth of approximately 30 feet (MFA, 2015; MFA, 2018a). In that portion of the Property, the ground surface includes areas of asphalt and concrete paving, gravel, and vegetated cover. Unconsolidated materials present in the subsurface are shown in geologic cross sections—one prepared as part of a preliminary planning assessment conducted by SES (2017) (included in Appendix C) and one prepared for this work plan (see Figures 4-4 and 4-5). Surficial and shallow subsurface materials encountered may be associated with base course material under paved areas, non-native fill, and alluvial deposits from Hansen Creek. Those surficial and near surface materials are underlain by silt and clay units which are inferred to be associated with the glaciomarine drift units identified in the DNR report.

As described in the DNR report, the glaciomarine drift deposits identified in the vicinity of the Property are underlain by metamorphic bedrock containing metabasaltic to meta-andesitic greenstone and metagabbro (unit $Jhmc_h$ [Jurassic age meta-andesitic greenstone and metagabbro]; Dragovich et al., 1999). There are also metavolcanic rocks (unit Jmv_h) in the area—most notably Goat Hill, located in the northwest corner of the Property. These bedrock units are possible sources of unconsolidated materials that comprise the glaciomarine drift present at the Property and may contain naturally occurring lead and arsenic, which, along with other heavy metals, are associated with some metamorphic and volcanic rocks.

Groundwater redox conditions and pH can influence the solubility and mobility of arsenic. Under reducing conditions, arsenic mobility and total arsenic concentrations in groundwater can increase (American Petroleum Institute [API], 2011). Naturally occurring lead and arsenic, if present, in glaciomarine drift—which largely comprises the saturated materials with elevated arsenic and lead detections—may be mobilized by reducing conditions. Geochemical testing at the Property during previous events was limited, but observations of gray blue clay (see Table 4-3) indicate that conditions may be reducing in the glaciomarine drift. As shown in Figure 2-1, the highest arsenic concentration detected in groundwater was from a temporary boring screened in the clay unit (GP30).

Biodegradation of organic carbon compounds can contribute to reducing conditions that mobilize arsenic (API, 2011). Anthropogenic sources of organic carbon in the northeastern portion of the Property include petroleum hydrocarbons associated with the underground storage tank releases near the former Maintenance building and chlorinated VOCs (CVOCs) associated with former dry-cleaning operations in the Laundry building. Those releases are not expected to be contributing to conditions that would result in arsenic mobilization from soil because petroleum hydrocarbon and CVOC were generally not detected in soil or groundwater samples with elevated concentrations of lead and arsenic (see Tables 4-3 and 4-4).

Lead-arsenate pesticides are a common anthropogenic source of elevated lead and arsenic in the environment. Lead and arsenic impacts associated with historical pesticide use, if present, would be expected to be widespread in soil throughout the Property and primarily present in shallow soil. Incremental sampling of shallow soil conducted as part of a Phase II ESA on the Property did not identify evidence of widespread anthropogenic lead or arsenic impacts (MFA, 2018a). Therefore, lead and arsenic concentrations in groundwater may be attributable to naturally occurring mineral sources and geochemical conditions on the Property.

Further investigation is recommended to evaluate the potential for naturally occurring mineral sources and geochemical conditions to be contributing to lead and arsenic concentrations in groundwater. Seven borings will be advanced in areas of the property with no to minimal anthropogenic impacts for collection of soil and reconnaissance groundwater (see Figure 4-2). These locations will be collocated for collection of subsurface soil to support the site-specific TEE discussed in Section 4.1.3. Temporary screens at these locations will be set within the blue clay, if present, to observe concentrations and reducing conditions within the glaciomarine deposit underlying the Property. If two water-bearing zones of alluvial and glaciomarine deposits are present at a location, an attempt will be made to collect two reconnaissance groundwater samples from screened intervals at each respective water-bearing zone and lithology to further evaluate concentrations of lead and arsenic in groundwater. Collected reconnaissance groundwater and boring observations at these boring locations will assess lead and arsenic concentrations in groundwater and geologic materials in background areas, and evaluate geochemistry to determine if reducing conditions may be contributing to the release of metals from naturally occurring deposits. During reconnaissance groundwater sample collection, additional purging will be conducted, if needed, to reduce turbidity values below at least 50 NTUs prior to sampling. Soil and groundwater at these locations will be analyzed as outlined in Table 4-1.

In addition to reconnaissance groundwater samples, groundwater will be collected from five existing monitoring wells (MW01 to MW04 and MW09) on the Property in order to compare current concentrations within the anthropogenically influenced area to those collected in the background areas during this investigation.

4.2 Field Activities

MFA will coordinate with subcontractors, including a subsurface utility locator, driller, and analytical laboratory, to complete this scope of work. A SAP/QAPP (see Appendix A) will guide environmental field sampling methods. A site-specific HASP for field activities specific to this scope of work is provided in Appendix B.

Nondedicated sampling equipment will be decontaminated using industry-standard techniques. All downhole drilling equipment will be pressure-washed with hot, potable water before and after each use. All IDW will be containerized in Washington State Department of Transportation-approved containers and properly labeled. MFA will coordinate IDW disposal with an approved subcontractor to transport and dispose of the IDW after proper characterization.

4.2.1 Temporary Borings

Before field activities begin, boring locations will be cleared for subsurface utilities by public utility locators (i.e., Underground Utility Notification Center). MFA will also coordinate with a private subsurface utility locator to locate subsurface utilities and structures (e.g., pipes).

MFA will coordinate with a licensed driller to provide direct-push drilling services; it is assumed that a drilling rig will be able to access each proposed boring location. Seven temporary borings will be advanced up to approximately 30 feet bgs for the collection and analysis of two soil samples per boring (see Table 4-1). Reconnaissance groundwater samples will be collected from temporary borings. Boring locations are shown on Figure 4-2.

During drilling, a description of soil conditions and visual and olfactory observations will be recorded on boring logs by a geologist or hydrogeologist licensed in the State of Washington, or by a person working under the direct supervision of a Washington-State-licensed geologist or hydrogeologist. The soil from temporary borings will be field screened for organic vapors, using a photoionization detector. Soil and groundwater observations and sample parameters will be recorded on field sampling data sheets. Based on previous investigations, an east-northeast direction of groundwater flow is anticipated.

Temporary borings will be abandoned by filling with hydrated bentonite chips or with bentonite grout to the surround grade, in accordance with the WAC for Minimum Standards for Construction and Maintenance of Wells (WAC 173-160).

Temporary boring locations will be determined using a handheld global positioning system device with submeter accuracy or by measurement from existing Property features.

4.2.2 Monitoring Well Sampling

Water levels will be collected prior to sampling monitoring wells at all existing monitoring wells on the Property (MW01 through MW11) to evaluate groundwater flow direction (see Figure 4-2). As outlined in Table 4-1, groundwater samples will be collected from five existing monitoring wells (MW01 through MW04, and MW09) on the Property to evaluate concentrations of metals in groundwater within the anthropogenically influenced area of the Property at the time of sampling in areas of no anthropogenic activity.

Monitoring wells will be redeveloped prior to collection of groundwater samples as it has been over a year since groundwater samples were lasted collected (spring 2018). Redevelopment of the wells will ensure a good connection between the water-bearing zone and sand pack around the well screen for collection of representative groundwater samples, in accordance with the procedures outlined in the SAP/QAPP (see Appendix A).

4.2.3 Surface Soil Screening and Sampling for Lead

MFA field personnel will collect soil samples from discrete surface soil locations for either compositing or discrete analysis as outlined in Table 4-1. Surface soil samples will be collected with a thin-walled tube sampler and decontaminated between locations at four buildings (Smith Hall Thompson Hall, Valdez Hall, and Wilkes Hall). These buildings are shown on Figure 4-2. Composite and discrete surface soil samples adjacent to buildings associated with AOC 3 will be determined in the field. Samples will be selected based on accessibility and distance from the previous sample to ensure sufficient coverage of the building perimeter.

Soil sample locations will be determined using a handheld global positioning system device with submeter accuracy or by measurement from existing Property features.

4.2.4 Sub-slab Vapor and Air Sampling

4.2.4.1 Ambient (Outdoor) Air

The ambient air sampling will be started approximately one to two hours before the start of indoor air sampling. MFA will place a 6-liter, stainless steel canister (Summa canister), with an 8-hour flow controller, outside the perimeter of the building and VOC-impacted areas. The sampler will be placed 3 to 5 feet above the ground. Atmospheric data (including wind direction) data will be collected from the nearest U.S. weather station for the two days prior to, during, and the two days after sample collection events and the data will be reviewed to identify the upwind ambient air sample location. Sampling will be conducted on days with minimal precipitation, as feasible.

MFA will record field data before and after the sampling, including the sampling start and stop times, the initial and final canister vacuum readings, temperature, relative humidity, barometric pressure, wind speed and direction, and observations of conditions that may influence sampling results (e.g., industrial activities and presence or use of chemicals in the vicinity). The sample will be rejected if the initial canister pressure is not at least -25 inch of mercury or if the final canister pressure is greater than -0.1 inch of mercury. The final canister pressure is recommended at or near -5 inch of mercury for data QA/QC purposes.

4.2.4.2 Indoor Air

Indoor air sampling will be conducted by MFA field staff, with oversight provided by an MFA certified industrial hygienist. The samples will be collected in 6-liter, stainless steel canisters (Summa© canisters) with an 8-hour flow controller. Indoor air samples will be placed 3 to 5 feet above the floor.

MFA will record field data before and after the sampling, including the sampling start and stop times, the initial and final canister vacuum readings, temperature, relative humidity, and observations of conditions that may influence sampling results (e.g., presence or use of petroleum products, open windows/doors). The sample will be rejected if the initial canister pressure is not at least -25 inches of mercury or if the final canister pressure is greater than -0.1 inches of mercury. The final canister pressure is recommended at or near -5 inch of mercury for data QA/QC purposes.

4.2.4.3 Sub-Slab Soil Gas

MFA will collect two sub-slab soil gas samples collocated with the indoor air samples from the space immediately below building slabs. The samples will be collected in 1-liter, stainless steel canisters (Summa© canisters). Detailed sampling procedures are provided in the SAP/QAPP (see Appendix A). Temporary sub-slab sampling points will not be installed in places where the slab appears to be in contact with groundwater.

MFA will record field data before and after the sampling, including the sampling start and stop times, the initial and final canister vacuum readings, temperature, relative humidity, barometric pressure, wind speed and direction, and observations of conditions that may influence sampling results (e.g., industrial activities and presence or use of chemicals in the vicinity). The sample will be rejected if the initial canister pressure is not at least -25 inch of mercury or if the final canister pressure is greater than -0.1 inch of mercury. The final canister pressure is recommended at or near -5 inch of mercury for data QA/QC purposes.

4.3 Laboratory Analysis and Quality Assurance and Quality Control

Laboratory analyses will be completed consistent with the protocols described in the SAP/QAPP (Appendix A). The SAP/QAPP was designed to guide aspects of laboratory and field analytical quality procedures and QA/QC requirements for analytical sampling and analysis.

Soil and groundwater samples collected by MFA will be submitted under standard chain-of-custody procedures and will be analyzed for one or more of the following (see Table 4-1):

- Metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc) by USEPA Method 6020A
- Total organic carbon by USEPA Method 415.1
- Nitrate by USEPA Method 353.2
- Sulfate by ASTM D516-11
- Dissolved manganese by USEPA Method 6020A
- Ferrous iron using Hach test kit in the field

Indoor air, sub-slab soil gas, and ambient air samples will be analyzed for the following:

- cVOCs by USEPA TO-15 Method
- Helium by ASTM International Method D-1946 (for quality assurance)

Groundwater samples will be field filtered and analyzed for dissolved metals as outlined in Table 4-1. Groundwater samples analyzed for total metals will not be field filtered.

If a bioassay is conducted the following tests will be completed on three composite soil samples:

- Early Seedling Growth Protocol for Soil Toxicity Screening (Ecology Publication No. 96-324)
- Earthworm Bioassay Protocol for Soil Toxicity Screening (Ecology Publication No. 96-327)

Sample analysis will be performed by OnSite Environmental, Inc. in Redmond, Washington, Friedman & Bruya, Inc. of Seattle, Washington, and EcoAnalyst, Inc. of Moscow, Idaho. A field duplicate groundwater sample will be collected from one of the sampled monitoring wells and analyzed.

4.4 Inadvertent Discovery Plan and Cultural Resource Oversight

Under the Washington State Governor's Executive Order 05-05, archaeological and cultural resources must be evaluated to satisfy federal regulations 36 CFR 800. RCW 27.44 (Indian Graves and Records) addresses the need to protect graves, cairns, and glyptic marks, and provides associated penalties, civil actions, and procedures. RCW 27.5 (Archaeological Sites and Resources) lays out the State of Washington's interest in protecting archaeological resources and establishes and empowers the Washington State Department of Archaeology and Historic Preservation to complete an inventory, conduct studies, make National Register of Historic Places nominations, and identify and excavate the "state's archaeological resources" (RCW 27.53.020). WAC 25-48 establishes procedures for implementing the permit sections of RCW 27.53. WAC 25-46 establishes regulation procedures for historic archaeological resources on, in, or under aquatic lands owned by the state; RCW 79.105.600 deals with "archaeological activities" on state aquatic lands and addresses shoreline management (via RCW 79.105). RCW 42.56.300 exempts disclosure of the location of archaeological sites.

An IDP detailing procedures to ensure that cultural resources are identified if encountered during soil disturbing activity, and appropriate procedures in such an event, has been provided as Appendix D.

An experienced archaeological monitor will be present during the advancement of the seven temporary borings proposed in the background areas of the Property to assess and document the presence of any cultural resources.

4.5 Reporting

MFA will prepare and submit a draft RI report to Ecology describing the work completed in accordance with the AO. Following preparation of the draft RI report, MFA will prepare a public review draft RI report after incorporating Ecology's comments on the draft RI report. Following public review and comment on the public review version, MFA will prepare the final RI report that incorporates any additional comments from Ecology and the public. MFA will provide documentation of the fieldwork, data validation and QA/QC, and evaluation of the analytical results, and will include recommendations for further assessment, if applicable.

5 PROJECT MANAGEMENT PLAN

5.1 Key Personnel

Heather Rogerson will be the project manager for the Port. Ms. Rogerson will be kept informed of the status of the project and of project activities. She will be provided with data, reports, and other project-related documents prepared by MFA before their submittal to Ecology. Ms. Rogerson will be responsible for communicating with the Property owner, will participate in discussions with Ecology, and will coordinate on-site activities with the Property owner and MFA.

Jim Maul will be the program manager for MFA and will be responsible for managing the overall completion of the site assessment and for communication of project status to the Port and Ecology project managers. Mr. Maul will review data, reports, and other project-related documents prepared by MFA before their submittal to the Port or Ecology. Mr. Maul will also assist project staff with technical issues.

Carolyn Wise will be the project manager for MFA. Ms. Wise will coordinate with project task leaders and will communicate with Ms. Rogerson. She will be responsible for allocating the resources necessary to ensure that the objectives of the site assessment are met. Ms. Wise will also be responsible for technical assistance to assigned staff, as appropriate; assist with resolution of technical or logistical challenges that may be encountered during the investigation; assist with field activities and write and review reports; and participate in discussions with Ecology at the request of the Port.

Amanda Bixby will be the field team leader for MFA. Ms. Wise will oversee and assist with field activities and will write and review reports.

Phil Wiescher will review the baseline human health and ecological risk screening. Mr. Wiescher will participate in discussions with Ecology at the request of the Port.

Mary Benzinger will be the quality assurance manager, database manager, and project chemist for MFA. Ms. Benzinger and will be involved with the overall data management and data quality assurance oversight.

5.2 Schedule

The following is the anticipated schedule:

Task	Start Date	Weeks to Complete
Port work plan review	Week of December 2, 2019	1
Ecology work plan review	December 16, 2020 – July 16, 2020	26
Prepare revised work plan	July 16, 2020 – November 2, 2020	20
Ecology work plan review	November 2, 2020 – February 4, 2021	12
Prepare final work plan	Within 45 days of receipt of comments from Ecology.	6
Fieldwork	After receipt of Ecology’s comments and approval on the final work plan. Timeframe includes fieldwork and laboratory analyses and appropriate follow-up analyses.	12

Task	Start Date	Weeks to Complete
Draft remedial investigation report	After completion of fieldwork and receipt of final data packages	12
Draft public review remedial investigation report	Within 45 days of receipt of comments from Ecology on the draft remedial investigation report.	6
Final remedial investigation report	Within 45 days of receipt of Ecology and public comments on draft site assessment report.	6

The timeframes for the work to be performed may change, based on changes to the scope of work, and subject to subcontractor availability and Ecology approval.

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.

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TABLES

Table 2-1
Water Level Measurements
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Well ID	MP Elevation (feet NGVD29)	Date	Time	DTW (feet)	DTB (feet)	Groundwater Elevation (feet)
MW01	133.81	06/10/2015	2:29 PM	14.34	24.55	119.47
		09/01/2017	--	16.05	24.55	117.76
		05/01/2018	9:30 AM	13.41	24.55	120.40
MW02	131.03	06/10/2015	11:14 AM	17.78	19.45	113.25
		09/01/2017	--	18.88	19.45	112.15
		05/01/2018	10:15 AM	16.35	19.45	114.68
MW03	125.86	06/10/2015	4:30 PM	10.40	19.00	115.46
		09/01/2017	--	11.82	19.00	114.04
		05/01/2018	10:05 AM	9.28	19.00	116.58
MW04	117.39	06/10/2015	8:37 AM	12.94	19.43	104.45
		09/01/2017	--	12.40	19.43	104.99
		05/01/2018	10:20 AM	9.32	19.43	108.07
MW05	117.6163	09/01/2017	--	7.51	17.10	110.11
		05/01/2018	10:30 AM	6.55	17.10	111.07
MW06	129.7132	09/01/2017	--	7.99	--	121.72
		05/01/2018	9:45 AM	--[a]	--[a]	--[a]
MW07	127.0996	09/01/2017	--	10.16	16.95	116.94
		05/01/2018	9:58 AM	7.75	16.95	119.35
MW08	128.0230	09/01/2017	--	12.62	--	115.40
		05/01/2018	9:55 AM	--[a]	--[a]	--[a]
MW09	131.1042	05/01/2018	9:25 AM	5.95	28.92	125.15
MW10	130.4096	05/01/2018	9:15 AM	5.20	29.34	125.21
MW11	130.1546	05/01/2018	9:20 AM	6.30	26.55	123.85

NOTES:
DTW and DTB are measured from top of well casing.
-- = not available.
DTB = depth to bottom.
DTW = depth to water.
MP = measuring point (i.e., top of well casing).
NGVD29 = National Geodetic Vertical Datum of 1929.
[a]Unable to remove well cap to measure water level.

Table 2-2
Historical Sample and Analyses Summary
Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

MAUL FOSTER ALONGI

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
GP1	MFA, 2014	Geoprobe™	16	Soil	08/19/2014	1.4	X	--	--	--	--	--	X	--	--	--	--	--	--	--
GP2	MFA, 2014	Geoprobe™	12	Soil	08/19/2014	3	X	--	--	--	--	--	X	--	--	--	X	X	--	--
				GW	08/19/2014	10	X	X	--	X	--	--	--	--	--	X	X	--	--	--
GP3	MFA, 2014	Geoprobe™	16	Soil	08/19/2014	7	X	--	--	--	--	--	X	--	--	--	X	X	--	--
GP4	MFA, 2014	Geoprobe™	16	Soil	08/19/2014	5.4	X	--	--	--	X	--	X	--	--	--	X	--	--	--
GP5	MFA, 2014	Geoprobe™	16	Soil	08/19/2014	14.5	X	--	--	--	X	--	X	--	--	--	X	--	--	--
GP6	MFA, 2014	Geoprobe™	16	GW	08/19/2014	12.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP7	MFA, 2014	Geoprobe™	16	Soil	08/19/2014	0.8	--	--	X	X	--	--	--	--	--	--	--	--	--	--
GP8	MFA, 2014	Geoprobe™	19	GW	08/19/2014	12.5	X	--	--	--	X	--	--	--	--	--	--	--	--	--
GP9	MFA, 2014	Geoprobe™	8	Soil	08/19/2014	0.5	X	X	--	X	--	--	X	--	--	--	X	X	--	--
GP10	MFA, 2014	Geoprobe™	8	Soil	08/19/2014	0.5	X	X	--	X	--	--	--	--	--	--	--	--	--	--
GP11	MFA, 2015	Geoprobe™	20	GW	04/20/2015	18	--	--	X	--	X	X	--	--	--	--	X	--	--	--
GP12	MFA, 2015	Geoprobe™	20	Soil	04/20/2015	15	--	--	X	--	X	X	--	--	--	--	--	--	--	--
				GW	04/20/2015	15	--	--	X	--	X	X	--	--	--	--	X	--	--	--
GP13	MFA, 2015	Geoprobe™	15	GW	04/20/2015	13	--	--	X	--	X	--	--	--	--	--	--	--	--	--
GP14	MFA, 2015	Geoprobe™	10	Soil	04/20/2015	0.5 4.0 9.0	--	--	--	--	--	--	X	--	--	--	--	--	--	--
GP15	MFA, 2015	Geoprobe™	20	GW	04/20/2015	18	--	X	--	--	--	--	X	--	--	X	--	--	--	--
GP16	MFA, 2015	Geoprobe™	10	Soil	04/20/2015	0.5 6.0 9.0	--	--	--	--	--	--	X	--	--	--	--	--	--	--
GP17	MFA, 2015	Geoprobe™	25	GW	04/20/2015	13.5	--	X	--	--	--	--	X	--	--	X	--	--	--	--
GP18	MFA, 2015	Geoprobe™	20	GW	04/21/2015	13	--	X	--	--	--	--	X	--	--	X	--	--	--	--

Table 2-2
Historical Sample and Analyses Summary
Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

MAUL FOSTER ALONGI

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
GP19	MFA, 2015	Geoprobe™	10	Soil	04/21/2015	0.5 3.0 7.0	--	--	--	--	--	--	X	--	--	--	--	--	--	--
GP20	MFA, 2015	Geoprobe™	15	GW	04/21/2015	13	--	X	--	--	--	--	X	--	--	X	--	--	--	--
GP21	MFA, 2015	Geoprobe™	20	GW	04/21/2015	19	--	--	X	--	X	X	X	--	--	X	X	--	--	--
GP22[d]	MFA, 2015	Geoprobe™	25	NA	04/21/2015	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP23	MFA, 2015	Geoprobe™	15	Soil	04/21/2015	5 15	--	--	--	--	X	--	--	--	--	--	--	--	--	--
GP24	MFA, 2015	Geoprobe™	20	GW	04/21/2015	18	--	--	--	--	X	--	--	--	--	--	--	--	--	X
GP25	MFA, 2015	Geoprobe™	20	GW	04/21/2015	15	--	--	--	--	X	--	--	--	--	--	--	--	--	--
GP26	MFA, 2015	Geoprobe™	15	GW	04/21/2015	12.5	--	--	--	--	X	--	--	--	--	--	--	--	--	X
GP27	MFA, 2015	Geoprobe™	15	GW	04/22/2015	10	--	--	--	--	X	--	--	--	--	--	--	--	--	X
GP28	MFA, 2015	Geoprobe™	15	GW	04/22/2015	13	--	--	--	--	X	--	--	--	--	--	--	--	--	--
GP29	MFA, 2015	Geoprobe™	20	GW	04/22/2015	15	--	--	X	--	X	X	X	--	--	X	X	--	--	--
GP30	MFA, 2015	Geoprobe™	25	GW	04/22/2015	20	X	--	--	--	X	X	X	--	--	X	X	--	--	--
GP31	MFA, 2015	Geoprobe™	0.5	Soil Vapor	04/22/2015	0.5	--	--	--	--	X[e]	--	--	--	--	--	--	--	--	--
GP32	MFA, 2015	Geoprobe™	20	Soil	04/22/2015	2.1 9.8	--	X	--	--	--	--	--	--	--	--	X	--	--	--
				GW	04/22/2015	15	--	X	--	--	--	--	--	--	--	--	--	--	--	--
GP33	MFA, 2015	Geoprobe™	15.5	Soil	04/22/2015	5.0 14.5	--	X	--	--	--	--	--	--	--	--	X	--	--	--
				GW	04/22/2015	12	--	X	--	--	--	--	--	--	--	--	--	--	--	--
GP34	MFA, 2015	Geoprobe™	13	Soil	04/22/2015	4.0 12.0	--	X	--	--	--	--	--	--	--	--	X	--	--	--

Table 2-2
Historical Sample and Analyses Summary
Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
GP35	MFA, 2015	Geoprobe™	10	Soil	04/23/2015	0.5 3.0 7.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
GP36	MFA, 2015	Geoprobe™	10	Soil	04/23/2015	0.5 3.5 8.0	--	--	--	--	--	--	X	--	--	--	--	--	--	--
GP37	MFA, 2015	Geoprobe™	10	Soil	04/23/2015	0.5 4.5 7.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
GP38	MFA, 2015	Geoprobe™	10	Soil	04/23/2015	0.5 4.0 8.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
GP39	MFA, 2015	Geoprobe™	10	Soil	04/23/2015	3.5	--	--	--	--	X	--	X	--	--	--	--	--	--	--
GP40[f]	MFA, 2015	Geoprobe™	10	NA	04/23/2015	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP41	MFA, 2015	Geoprobe™	10	Soil	04/23/2015	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP42	MFA, 2015	Geoprobe™	10	Soil	04/23/2015	0.5 4.0 6.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
GP43[f]	MFA, 2015	Geoprobe™	10	NA	04/23/2015	NA	*not analyzed*													
GP44[f]	MFA, 2015	Geoprobe™	5	NA	04/23/2015	NA	*not analyzed*													
GP45	MFA, 2015	Geoprobe™	10	Soil	06/09/2015	0.2 - 0.7 1.8 - 2.2 8.7 - 9.3	--	--	--	--	--	--	--	X X --	-- -- X	--	--	--	--	--
GP46	MFA, 2015	Geoprobe™	10	Soil	06/09/2015	0.2 - 0.6 1.7 - 2.1 8.7 - 9.2	--	--	--	--	--	--	--	X X --	-- -- X	--	--	--	--	--

Table 2-2
Historical Sample and Analyses Summary
Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

MAUL FOSTER ALONGI

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
GP47	MFA, 2015	Geoprobe™	10	Soil	06/09/2015	0.3 - 0.7 1.8 - 2.3 8.6 - 9.2	--	--	--	--	--	--	--	X X --	-- -- X	--	--	--	--	--
GP48	MFA, 2015	Geoprobe™	20	Soil	06/09/2015	0.6 - 2.3 2.3 - 14.8 15.6 - 19.7	--	--	--	--	--	--	--	--	X X X	--	--	--	--	--
GP49	MFA, 2015	Geoprobe™	15	Soil	04/23/2018	0.2 - 1 6.8 - 7.4 10 - 10.5	--	--	--	--	--	--	--	--	--	--	X[g] X[g] X[g]	--	X -- --	--
GP50	MFA, 2015	Geoprobe™	5	Soil	04/24/2018	0.3 - 0.7 1.1 - 1.7	--	--	--	--	--	--	--	--	--	--	X[g] X[g]	--	--	--
GP51	MFA, 2015	Geoprobe™	5	Soil	04/25/2018	0.2 - 0.9 0.9 - 1.3	--	--	--	--	--	--	--	--	--	--	X[g] X[g]	--	--	--
GP52	MFA, 2015	Geoprobe™	10	Soil	04/26/2018	0.3 - 0.8 5.5 - 6.1 7.2 - 7.8	--	--	--	--	--	--	--	--	--	--	X[g] X[g] X[g]	--	X -- --	--
GP53	MFA, 2015	Geoprobe™	5	Soil	04/27/2018	0.3 - 0.8 0.8 - 1.2 1.5 - 2.2	--	--	--	--	--	--	--	--	--	--	X[g] X[g] X[g]	--	X -- --	--
GP54	MFA, 2015	Geoprobe™	10	Soil	04/28/2018	0.4 - 0.9 5.3 - 6	--	--	--	--	--	--	--	--	--	--	X[g] X[g]	--	--	--

Table 2-2
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Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

MAUL FOSTER ALONGI

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
MW01	MFA, 2015	Geoprobe™	25	GW	06/10/2015	20 - 25	--	--	--	--	X[h]	--	X	--	--	X	X[g]	--	--	--
	SES, 2017			GW	09/01/2017		--	X	X	X	--	--	--	--	--	--	--	--	--	--
MW02	MFA, 2015	Geoprobe™	20	GW	06/10/2015	15 - 20	--	--	--	--	X[h]	--	X	--	--	X	X[g]	--	--	--
MW03	MFA, 2015	Geoprobe™	20	GW	06/10/2015	15 - 20	--	--	--	--	--	--	X	--	--	X	--	--	--	--
	SES, 2017			GW	09/01/2017		--	X	X	X	--	--	--	--	--	--	--	--	--	--
MW04	MFA, 2015	Geoprobe™	20	GW	06/10/2015	10 - 20	--	--	--	--	--	--	X	--	--	X	--	--	--	--
	SES, 2017			GW	09/01/2017		--	X	X	X	--	--	--	--	--	--	--	--	--	--
MW05	SES, 2017	Geoprobe™	20	Soil	08/28/2017	0.5	--	X	--	--	--	--	--	--	--	--	--	--	--	--
					08/28/2017	4	--	X	--	--	--	--	--	--	--	--	--	--	--	--
				GW	09/01/2017	10 - 20	--	X	X	X	--	--	--	--	--	--	X[g]	--	--	--
MW06	SES, 2017	Geoprobe™	20	GW	09/01/2017	10 - 20	--	X	X	X	X	--	--	--	--	--	--	--	--	--
MW07	SES, 2017	Geoprobe™	20	GW	09/20/2017	10 - 20	--	X	X	X	--	--	--	--	--	--	--	--	--	--
MW08	SES, 2017	Geoprobe™	20	GW	09/20/2017	10 - 20	--	X	X	X	--	--	--	--	--	--	--	--	--	--
MW09	MFA, 2018a	Geoprobe™	30	Soil	04/23/2018	0.2 - 0.7	--	--	--	--	--	X	--	--	--	--	--	--	--	--
					04/23/2018	5.8 - 6.2	--	--	--	--	--	X	--	--	--	--	--	--	--	--
					04/23/2018	18.7 - 19.3	--	--	--	--	--	X	--	--	--	--	--	--	--	--
				GW	05/01/2018	19.2 - 29.2	--	--	--	--	--	X	--	--	--	--	--	--	--	--
MW10	MFA, 2018a	Geoprobe™	30	Soil	04/23/2018	0.4 - 1.2	--	--	--	--	--	X	--	--	--	--	--	--	--	--
					04/24/2018	13 - 13.5	--	--	--	--	--	X	--	--	--	--	--	--	--	--
					04/25/2018	24 - 25	--	--	--	--	--	X	--	--	--	--	--	--	--	--
				GW	05/01/2018	24.4 - 29.4	--	--	--	--	--	X	--	--	--	--	--	--	--	--
MW11	MFA, 2018a	Geoprobe™	30	GW	05/01/2018	17 - 27	--	--	--	--	--	X	--	--	--	--	--	--	--	--
HA1	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	X		--	--	--	X	--	--

Table 2-2
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Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

MAUL FOSTER ALONGI

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
HA2	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA3	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA4	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA5	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA6	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA7	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA8	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA9	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA10	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	X	--	--	--	--	X	--	--
HA11	MFA, 2015	Hand Auger	0.5	Soil	04/23/2015	0.5	--	--	--	--	--	--	X	--	--	--	--	X	--	--
HA12	MFA, 2015	Hand Auger	1	Soil	06/10/2015	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	--	X	--	--	--	--	--
HA13	MFA, 2015	Hand Auger	1	Soil	06/10/2015	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	--	X	--	--	--	--	--
HA14	MFA, 2015	Hand Auger	1	Soil	06/10/2015	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	--	X	--	--	--	--	--
HA15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HA16	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA17	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA18	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA19	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--

Table 2-2
Historical Sample and Analyses Summary
Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

MAUL FOSTER ALONGI

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
HA20	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA21	MFA, 2018a	Hand Auger	1.5	Soil	04/23/2018	0 - 0.5 0.5 - 1.0 1.0 - 1.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA22	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA23	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA24	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA25	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA26	MFA, 2018a	Hand Auger	1.5	Soil	04/23/2018	0 - 0.5 0.5 - 1.0 1.0 - 1.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA27	MFA, 2018a	Hand Auger	1	Soil	04/23/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA28	MFA, 2018a	Hand Auger	1.5	Soil	04/23/2018	0 - 0.5 0.5 - 1.0 1.0 - 1.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA29	MFA, 2018a	Composite	1	Soil	04/23/2018	0 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA30	MFA, 2018a	Hand Auger	1	Soil	04/30/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA31	MFA, 2018a	Hand Auger	1	Soil	04/30/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--

Table 2-2
Historical Sample and Analyses Summary
Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
HA32	MFA, 2018a	Hand Auger	1	Soil	04/30/2018	0 - 0.5 0.5 - 1.0	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA33	MFA, 2018a	Hand Auger	1	Soil	04/30/2018	0 - 0.5 0.5 - 1.0 1.0 - 1.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA34	MFA, 2018a	Hand Auger	1.5	Soil	04/30/2018	0 - 0.5 0.5 - 1.0 1.0 - 1.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
HA35	MFA, 2018a	Hand Auger	1.5	Soil	04/30/2018	0 - 0.5 0.5 - 1.0 1.0 - 1.5	--	--	--	--	--	--	--	X	--	--	--	--	--	--
DU01	MFA, 2018a	Composite	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU02	MFA, 2018a	Composite	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU03	MFA, 2018a	Composite	0.5	Soil	04/27/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU04	MFA, 2018a	Composite	0.5	Soil	04/24/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU05	MFA, 2018a	Composite	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU06	MFA, 2018a	Composite	0.5	Soil	04/24/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU07	MFA, 2018a	Composite	0.5	Soil	04/24/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU08	MFA, 2018a	Composite	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU09	MFA, 2018a	Composite	0.5	Soil	04/30/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU10	MFA, 2018a	Composite	0.5	Soil	04/27/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU11	MFA, 2018a	Composite	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU12	MFA, 2018a	Composite	0.5	Soil	04/27/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU13	MFA, 2018a	Composite	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU14	MFA, 2018a	Composite	0.5	Soil	04/27/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU15	MFA, 2018a	Composite	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--

Table 2-2
Historical Sample and Analyses Summary
Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
DU16	MFA, 2018a	Composite	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU17	MFA, 2018a	Composite	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
DU18	MFA, 2018a	Composite	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS06	MFA, 2018a	Surface Soil	0.5	Soil	04/24/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS07	MFA, 2018a	Surface Soil	0.5	Soil	04/24/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS08	MFA, 2018a	Surface Soil	0.5	Soil	04/24/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS09	MFA, 2018a	Surface Soil	0.5	Soil	04/24/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS10	MFA, 2018a	Surface Soil	0.5	Soil	04/24/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS16	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS17	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS18	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS19	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS20	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS36	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS37	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS38	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS39	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS40	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS46	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS47	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS48	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS49	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS50	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS51	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS52	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS53	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--

Table 2-2
Historical Sample and Analyses Summary
Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

MAUL FOSTER ALONGI

Location ID	Consulting Firm and Report Reference[a]	Drilling Method	Totalc Depth (feet bgs)	Sample Matrix	Sample Date	Sample Depth (feet bgs)	HCID	Diesel	Gasoline[b]	BTEX	VOCs	SVOCs	Eco Metals	Pb	As	Dissolved Metals	PAHs	PCBs	Dioxin/ Furans	Redox Chemicals[c]
SS54	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS55	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS56	MFA, 2018a	Surface Soil	0.5	Soil	04/23/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS57	MFA, 2018a	Surface Soil	0.5	Soil	04/24/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS58	MFA, 2018a	Surface Soil	0.5	Soil	04/25/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS59	MFA, 2018a	Surface Soil	0.5	Soil	04/26/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--
SS60	MFA, 2018a	Surface Soil	0.5	Soil	04/27/2018	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--	--

Table 2-2
Sample and Analysis Summary
Former Northern State Hospital Property
Port of Skagit
Sedro-Woolley, WA

MAUL FOSTER ALONGI

NOTES:

-- = not analyzed.

As = arsenic.

bgs = below ground surface.

BTEX = benzene, toluene, ethylbenzene, and xylenes; analysis by USEPA Method 8021B.

Eco metals = arsenic, barium, cadmium, copper, lead, mercury, selenium, silver, and zinc.

GW = groundwater.

HCID = Hydrocarbon Identification method.

MFA = Maul Foster & Alongi, Inc.

NA = not available; no sample collected.

NWTPH-Gx = Northwest Total Petroleum Hydrocarbon method for analysis of gasoline-range organics.

PAHs = polycyclic aromatic hydrocarbons; analysis by USEPA Method 8270.

Pb = lead.

PCBs = polychlorinated biphenyls; analysis by USEPA Method 8082A.

SES = Sound Earth Strategies, Inc.

SVOCs = semivolatile organic compounds; analysis by USEPA Method 8270C.

USEPA = U.S. Environmental Protection Agency.

UST = underground storage tank.

VOCs = volatile organic compounds, analysis by USEPA Method 8260B.

X = analyzed.

[a]Only monitoring wells completed by SES were included. Temporary borings completed by SES were not included.

[b]Soil samples analyzed by NWTPH-Gx and USEPA 8260B were collected using the USEPA 5035 method.

[c]Redox Chemicals include one or more of the following: total organic carbon by USEPA Method 415.1; nitrate as nitrogen, chloride, and sulfate by USEPA Method 300.0; dissolved calcium, magnesium, manganese, and iron by USEPA Method 200.7; and ferrous iron, using a Hach test kit in the field.

[d]A groundwater sample was planned for this location but was not collected because of lack of available water in the boring.

[e]Soil vapor was analyzed for tetrachloroethene, trichloroethene, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride, using TO-15 low-level method.

[f]No soil samples were collected because no evidence of debris was observed in the borings; groundwater was not encountered in the borings.

[g]Analyzed only for carcinogenic polycyclic aromatic hydrocarbons.

[h]Analyzed only for tetrachloroethene.

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP1	GP2	GP3	GP4	GP5	GP7
Sample Name:				Plants	Soil Biota	Wildlife	GP1-S-1.4	GP2-S-3.0	GP3-S-7.0	GP4-S-5.4	GP5-S-14.5	GP7-S-0.8
Collection Date:							08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014
Collection Depth (ft bgs):							1.4	3	7	5.4	14.5	0.8
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	**7.4**	**13**	**4**	**6.2**	**6.1**	--
Barium	NV	83	345	500	330[b]	102	**162**	**180**	**388**	**141**	**58.4**	--
Cadmium	2	0.035	1[c]	4	20	14	**0.1**	**0.2**	0.1 U	**0.2**	**0.2**	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	**106**	**107**	**38.4**	**108**	**170**	--
Copper	NV	3,200	76.1	100	50	217	**42.7**	**55.1**	**52.2**	**28.4**	**53.6**	--
Lead	250	14	53	120[b]	500	118	**13.1**	**19.9**	**15.3**	**28.3**	**10**	--
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	**0.07**	**0.09**	**0.06**	**0.08**	**0.09**	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	0.7 U	0.7 U	0.7 U	0.7 U	**0.7**	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	0.3 U	0.3 U	0.3 U	**0.4**	0.3 U	--
Zinc	NV	300	179	86	200	360	**107**	**122**	**66**	**143**	**96**	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	0.032 U	0.033 U	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	0.032 U	0.033 U	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	0.032 U	0.033 U	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	0.032 U	0.033 U	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	0.032 U	0.033 U	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	0.032 U	0.033 U	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	0.032 U	0.033 U	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	0.032 U	0.033 U	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	0.0087 U	0.0074 U	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	0.0035 U	0.003 U	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	0.0087 U	0.0074 U	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	0.0017 U	0.0015 U	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP1	GP2	GP3	GP4	GP5	GP7
Sample Name:				Plants	Soil Biota	Wildlife	GP1-S-1.4	GP2-S-3.0	GP3-S-7.0	GP4-S-5.4	GP5-S-14.5	GP7-S-0.8
Collection Date:							08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014
Collection Depth (ft bgs):							1.4	3	7	5.4	14.5	0.8
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	0.0017 U	0.0015 U	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	**0.16**	**0.055**	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	0.087 U	0.074 U	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	0.014 U
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	0.0035 U	0.003 U	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	0.0017 U	0.0015 U	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	0.014 U
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	0.0035 U	0.003 U	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	0.027 U
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	0.0099 U	0.0071 U	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP1	GP2	GP3	GP4	GP5	GP7
Sample Name:				Plants	Soil Biota	Wildlife	GP1-S-1.4	GP2-S-3.0	GP3-S-7.0	GP4-S-5.4	GP5-S-14.5	GP7-S-0.8
Collection Date:							08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014
Collection Depth (ft bgs):							1.4	3	7	5.4	14.5	0.8
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	0.014 U
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	0.0017 U	0.0015 U	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	0.0017 U	0.0015 U	0.014 U
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	0.0087 U	0.0074 U	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	0.027 U
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP1	GP2	GP3	GP4	GP5	GP7
Sample Name:				Plants	Soil Biota	Wildlife	GP1-S-1.4	GP2-S-3.0	GP3-S-7.0	GP4-S-5.4	GP5-S-14.5	GP7-S-0.8
Collection Date:							08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014
Collection Depth (ft bgs):							1.4	3	7	5.4	14.5	0.8
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	**0.013**	**0.56**	**0.0076**	0.0046 U	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	**0.018**	**0.6**	**0.0091**	0.0046 U	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP1	GP2	GP3	GP4	GP5	GP7
Sample Name:				Plants	Soil Biota	Wildlife	GP1-S-1.4	GP2-S-3.0	GP3-S-7.0	GP4-S-5.4	GP5-S-14.5	GP7-S-0.8
Collection Date:							08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014
Collection Depth (ft bgs):							1.4	3	7	5.4	14.5	0.8
Acenaphthene	NV	5	NV	20	NV	NV	--	0.0049 U	**0.086**	0.0048 U	0.0046 U	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	**0.0065**	**0.052**	0.0048 U	0.0046 U	--
Anthracene	NV	110	NV	NV	NV	NV	--	**0.014**	**0.052**	**0.0058**	0.0046 U	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	**0.041**	**0.051**	**0.0099**	0.0046 U	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	**0.046**	**0.03**	**0.011**	0.0046 U	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	**0.051**	**0.019**	**0.0091**	0.0046 U	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	**0.07**	**0.057**	**0.014**	0.0046 U	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	**0.007**	**0.0074**	0.0048 U	0.0046 U	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	**0.011**	**0.11**	**0.0088**	0.0046 U	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	**0.097**	**0.068**	**0.028**	0.0046 U	--
Fluorene	NV	3,200	NV	NV	30	NV	--	**0.0089**	**0.023**	0.0048 U	0.0046 U	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	**0.028**	**0.012**	**0.0064**	0.0046 U	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	**0.06**	**0.38**	**0.019**	0.0046 U	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	**0.079**	**0.21**	**0.021**	0.0046 U	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	**0.089**	**0.071**	**0.024**	0.0046 U	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	**0.087**	**0.062**	**0.017**	0.0046 U	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	**0.091**	**1.54**	**0.0357**	0.0046 U	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	**0.063**	**0.044**	**0.015**	ND	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP1	GP2	GP3	GP4	GP5	GP7
Sample Name:				Plants	Soil Biota	Wildlife	GP1-S-1.4	GP2-S-3.0	GP3-S-7.0	GP4-S-5.4	GP5-S-14.5	GP7-S-0.8
Collection Date:							08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014
Collection Depth (ft bgs):							1.4	3	7	5.4	14.5	0.8
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	ND	20 U	20 U	ND	ND	--
Diesel	NV	NV	NV	NV	NV	NV	ND	50 U	50 U	ND	ND	--
Lube Oil	NV	NV	NV	NV	NV	NV	ND	100 U	100 U	ND	ND	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	5.4 U
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: Sample Name: Collection Date: Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP9 GP9-S-0.5 08/19/2014 0.5	GP10 GP10-S-0.5 08/19/2014 0.5	GP12 GP12-S-15.0 04/20/2015 15	GP14 GP14-S-0.5 04/20/2015 0.5	GP14 GP14-S-4.0 04/20/2015 4	GP14 GP14-S-9.0 04/20/2015 9
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	**9.1**	--	--	**14**	**8.2**	**12**
Barium	NV	83	345	500	330[b]	102	**178**	--	--	**100**	**110**	**130**
Cadmium	2	0.035	1[c]	4	20	14	**0.2**	--	--	0.67 U	0.65 U	0.74 U
Chromium	2,000[d]	24,000[d]	101	42	42	67	**62**	--	--	**100**	**92**	**120**
Copper	NV	3,200	76.1	100	50	217	**59.4**	--	--	**27**	**60**	**69**
Lead	250	14	53	120[b]	500	118	**43.9**	--	--	**11**	**8**	**11**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	**0.05**	--	--	0.33 U	0.32 U	0.37 U
Selenium	NV	0.26	0.78[c]	1	70	0.3	0.6 U	--	--	**0.63**	**0.29**	0.3 U
Silver	NV	0.69	0.7	2	50[f]	14[b]	0.2 U	--	--	1.3 U	1.3 U	1.5 U
Zinc	NV	300	179	86	200	360	**121**	--	--	**90**	**100**	**130**
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	0.032 U	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	0.032 U	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	0.032 U	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	0.032 U	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	0.032 U	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	0.032 U	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	0.032 U	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	0.032 U	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	0.001 U	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	0.001 U	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	0.001 U	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP9 / GP9-S-0.5 / 08/19/2014 / 0.5	GP10 / GP10-S-0.5 / 08/19/2014 / 0.5	GP12 / GP12-S-15.0 / 04/20/2015 / 15	GP14 / GP14-S-0.5 / 04/20/2015 / 0.5	GP14 / GP14-S-4.0 / 04/20/2015 / 4	GP14 / GP14-S-9.0 / 04/20/2015 / 9
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	0.001 U	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	0.001 U	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	0.001 U	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	0.001 U	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	**0.01**	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	0.016 U	0.021 U	0.001 U	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	0.001 U	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	0.001 U	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	0.016 U	0.021 U	0.001 U	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	0.001 U	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	0.032 U	0.042 U	0.0021 U	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	0.001 U	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP9	GP10	GP12	GP14	GP14	GP14
Sample Name:				Plants	Soil Biota	Wildlife	GP9-S-0.5	GP10-S-0.5	GP12-S-15.0	GP14-S-0.5	GP14-S-4.0	GP14-S-9.0
Collection Date:							08/19/2014	08/19/2014	04/20/2015	04/20/2015	04/20/2015	04/20/2015
Collection Depth (ft bgs):							0.5	0.5	15	0.5	4	9
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	0.001 U	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	0.016 U	0.021 U	0.001 U	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	0.001 U	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Toluene	7	6,400	NV	200	NV	NV	0.016 U	0.021 U	0.0052 U	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	0.001 U	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	0.001 U	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	0.0052 U	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	0.001 U	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	0.032 U	0.042 U	0.0021 U	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	0.044 U	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	0.044 U	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	0.044 U	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	0.044 U	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	0.044 U	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	0.044 U	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	0.044 U	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	0.22 U	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	0.044 U	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	0.22 U	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP9 / GP9-S-0.5 / 08/19/2014 / 0.5	GP10 / GP10-S-0.5 / 08/19/2014 / 0.5	GP12 / GP12-S-15.0 / 04/20/2015 / 15	GP14 / GP14-S-0.5 / 04/20/2015 / 0.5	GP14 / GP14-S-4.0 / 04/20/2015 / 4	GP14 / GP14-S-9.0 / 04/20/2015 / 9
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	0.22 U	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	0.22 U	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	0.044 U	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	0.22 U	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	0.44 U	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	0.22 U	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	0.22 U	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	0.044 U	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	0.044 U	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	0.044 U	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	0.044 U	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	0.044 U	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	0.044 U	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	0.044 U	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	0.22 U	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	0.044 U	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	0.44 U	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	0.06 UJ	--	0.0088 U	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	0.06 UJ	--	0.0088 U	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP9	GP10	GP12	GP14	GP14	GP14
Sample Name:				Plants	Soil Biota	Wildlife	GP9-S-0.5	GP10-S-0.5	GP12-S-15.0	GP14-S-0.5	GP14-S-4.0	GP14-S-9.0
Collection Date:							08/19/2014	08/19/2014	04/20/2015	04/20/2015	04/20/2015	04/20/2015
Collection Depth (ft bgs):							0.5	0.5	15	0.5	4	9
Acenaphthene	NV	5	NV	20	NV	NV	0.06 UJ	--	0.0088 U	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	**0.12** J	--	0.0088 U	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	**0.11** J	--	0.0088 U	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	**0.26** J	--	0.0088 U	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	**0.39** J	--	0.0088 U	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	0.0088 U	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	**0.25** J	--	0.0088 U	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	0.0088 U	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	**0.35** J	--	0.0088 U	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	**0.069** J	--	0.0088 U	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	0.06 UJ	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	**0.26** J	--	0.0088 U	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	0.06 UJ	--	0.0088 U	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	**0.2** J	--	0.0088 U	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	0.06 UJ	--	0.0088 U	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	**0.12** J	--	0.0088 U	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	**0.29** J	--	0.0088 U	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	**0.68** J	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	0.06 UJ	--	0.0088 U	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	**0.51** J	--	ND	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP9	GP10	GP12	GP14	GP14	GP14
Sample Name:				Plants	Soil Biota	Wildlife	GP9-S-0.5	GP10-S-0.5	GP12-S-15.0	GP14-S-0.5	GP14-S-4.0	GP14-S-9.0
Collection Date:							08/19/2014	08/19/2014	04/20/2015	04/20/2015	04/20/2015	04/20/2015
Collection Depth (ft bgs):							0.5	0.5	15	0.5	4	9
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	ND	ND	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	**DETECT**	**DETECT**	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	**DETECT**	**DETECT**	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	8 U	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	**220**	**220**	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	**2700**	**2300**	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	**2920**	**2520**	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP16	GP16	GP16	GP19	GP19	GP19
Sample Name:				Plants	Soil Biota	Wildlife	GP16-S-0.5	GP16-S-6.0	GP16-S-9.0	GP19-S-0.5	GP19-S-3.0	GP19-S-7.0
Collection Date:							04/20/2015	04/20/2015	04/20/2015	04/21/2015	04/21/2015	04/21/2015
Collection Depth (ft bgs):							0.5	6	9	0.5	3	7
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	**11**	**12**	**22**	**11**	**7.9**	**8.9**
Barium	NV	83	345	500	330[b]	102	**220**	**130**	**190**	**150**	**47**	**75**
Cadmium	2	0.035	1[c]	4	20	14	0.65 U	0.65 U	0.75 U	0.71 U	0.64 U	0.74 U
Chromium	2,000[d]	24,000[d]	101	42	42	67	**130**	**120**	**110**	**98**	**220**	**230**
Copper	NV	3,200	76.1	100	50	217	**43**	**68**	**86**	**47**	**38**	**61**
Lead	250	14	53	120[b]	500	118	**900**	**10**	**11**	**13**	**11**	**15**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	0.33 U	0.33 U	0.37 U	0.35 U	0.32 U	0.37 U
Selenium	NV	0.26	0.78[c]	1	70	0.3	**0.6**	0.26 U	**0.29**	**0.43**	**0.62**	**0.5**
Silver	NV	0.69	0.7	2	50[f]	14[b]	1.3 U	1.3 U	1.5 U	1.4 U	1.3 U	1.5 U
Zinc	NV	300	179	86	200	360	**180**	**110**	**150**	**160**	**120**	**120**
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP16	GP16	GP16	GP19	GP19	GP19
Sample Name:				Plants	Soil Biota	Wildlife	GP16-S-0.5	GP16-S-6.0	GP16-S-9.0	GP19-S-0.5	GP19-S-3.0	GP19-S-7.0
Collection Date:							04/20/2015	04/20/2015	04/20/2015	04/21/2015	04/21/2015	04/21/2015
Collection Depth (ft bgs):							0.5	6	9	0.5	3	7
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP16 / GP16-S-0.5 / 04/20/2015 / 0.5	GP16 / GP16-S-6.0 / 04/20/2015 / 6	GP16 / GP16-S-9.0 / 04/20/2015 / 9	GP19 / GP19-S-0.5 / 04/21/2015 / 0.5	GP19 / GP19-S-3.0 / 04/21/2015 / 3	GP19 / GP19-S-7.0 / 04/21/2015 / 7
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP16 / GP16-S-0.5 / 04/20/2015 / 0.5	GP16 / GP16-S-6.0 / 04/20/2015 / 6	GP16 / GP16-S-9.0 / 04/20/2015 / 9	GP19 / GP19-S-0.5 / 04/21/2015 / 0.5	GP19 / GP19-S-3.0 / 04/21/2015 / 3	GP19 / GP19-S-7.0 / 04/21/2015 / 7
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP16	GP16	GP16	GP19	GP19	GP19
Sample Name:				Plants	Soil Biota	Wildlife	GP16-S-0.5	GP16-S-6.0	GP16-S-9.0	GP19-S-0.5	GP19-S-3.0	GP19-S-7.0
Collection Date:							04/20/2015	04/20/2015	04/20/2015	04/21/2015	04/21/2015	04/21/2015
Collection Depth (ft bgs):							0.5	6	9	0.5	3	7
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP16	GP16	GP16	GP19	GP19	GP19
Sample Name:				Plants	Soil Biota	Wildlife	GP16-S-0.5	GP16-S-6.0	GP16-S-9.0	GP19-S-0.5	GP19-S-3.0	GP19-S-7.0
Collection Date:							04/20/2015	04/20/2015	04/20/2015	04/21/2015	04/21/2015	04/21/2015
Collection Depth (ft bgs):							0.5	6	9	0.5	3	7
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP23	GP23	GP32	GP32	GP33	GP33
Sample Name:				Plants	Soil Biota	Wildlife	GP23-S-5.0	GP23-S-15.0	GP32-S-2.1	GP32-S-9.8	GP33-S-5.0	GP33-S-14.5
Collection Date:							04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015	04/22/2015
Collection Depth (ft bgs):							5	15	2.1	9.8	5	14.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	--	--	--	--	--	--
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	0.0013 U	0.0011 U	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	0.0013 U	0.0011 U	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	0.0013 U	0.0011 U	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP23	GP23	GP32	GP32	GP33	GP33
Sample Name:				Plants	Soil Biota	Wildlife	GP23-S-5.0	GP23-S-15.0	GP32-S-2.1	GP32-S-9.8	GP33-S-5.0	GP33-S-14.5
Collection Date:							04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015	04/22/2015
Collection Depth (ft bgs):							5	15	2.1	9.8	5	14.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	0.0013 U	0.0011 U	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	0.0066 U	**0.013**	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	0.0013 U	0.0011 U	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	0.0026 U	0.0022 U	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP23	GP23	GP32	GP32	GP33	GP33
Sample Name:				Plants	Soil Biota	Wildlife	GP23-S-5.0	GP23-S-15.0	GP32-S-2.1	GP32-S-9.8	GP33-S-5.0	GP33-S-14.5
Collection Date:							04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015	04/22/2015
Collection Depth (ft bgs):							5	15	2.1	9.8	5	14.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	0.0013 U	0.0011 U	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	**0.011**	0.0011 U	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	0.0066 U	0.0054 U	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	**0.0035**	0.0011 U	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	0.0066 U	0.0054 U	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	0.0013 U	0.0011 U	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	0.0026 U	0.0022 U	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP23	GP23	GP32	GP32	GP33	GP33
Sample Name:							GP23-S-5.0	GP23-S-15.0	GP32-S-2.1	GP32-S-9.8	GP33-S-5.0	GP33-S-14.5
Collection Date:							04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015	04/22/2015
Collection Depth (ft bgs):							5	15	2.1	9.8	5	14.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP23	GP23	GP32	GP32	GP33	GP33
Sample Name:				Plants	Soil Biota	Wildlife	GP23-S-5.0	GP23-S-15.0	GP32-S-2.1	GP32-S-9.8	GP33-S-5.0	GP33-S-14.5
Collection Date:							04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015	04/22/2015
Collection Depth (ft bgs):							5	15	2.1	9.8	5	14.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Anthracene	NV	110	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	0.0087 U	0.012 UJ	0.0092 U	0.0098 U
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	**0.015**	0.012 UJ	0.0092 U	0.0098 U
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	0.0087 U	0.012 UJ	0.0092 U	0.0098 U
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	0.0087 U	0.012 UJ	0.0092 U	0.0098 U
Chrysene	NV	137	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Fluorene	NV	3,200	NV	NV	30	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	0.0087 U	0.012 UJ	0.0092 U	0.0098 U
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	**0.0088**	0.012 U	0.0092 U	0.0098 U
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	0.0087 U	0.012 U	0.0092 U	0.0098 U
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	**0.0015**	ND	ND	ND
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP23	GP23	GP32	GP32	GP33	GP33
Sample Name:				Plants	Soil Biota	Wildlife	GP23-S-5.0	GP23-S-15.0	GP32-S-2.1	GP32-S-9.8	GP33-S-5.0	GP33-S-14.5
Collection Date:							04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015	04/22/2015
Collection Depth (ft bgs):							5	15	2.1	9.8	5	14.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	33 U	45 U	34 U	37 U
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	66 U	**140**	69 U	73 U
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	66 U	**162.5**	69 U	73 U

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP34	GP34	GP35	GP35	GP35	GP36
				Plants	Soil Biota	Wildlife	GP34-S-4.0	GP34-S-12.0	GP35-S-0.5	GP35-S-3.0	GP35-S-7.5	GP36-S-0.5
							04/22/2015	04/22/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
							4	12	0.5	3	7.5	0.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	**5.5**	6.5 U	6.5 U	**71**
Barium	NV	83	345	500	330[b]	102	--	--	**140**	**120**	**110**	**200**
Cadmium	2	0.035	1[c]	4	20	14	--	--	0.79 U	0.65 U	0.65 U	0.74 U
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	**82**	**72**	**140**	**90**
Copper	NV	3,200	76.1	100	50	217	--	--	**33**	**38**	**53**	**37**
Lead	250	14	53	120[b]	500	118	--	--	7.9 U	6.5 U	**6.8**	**15**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	0.39 U	0.33 U	0.32 U	0.37 U
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	**0.83**	**0.23**	**0.18**	**0.62**
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	1.6 U	1.3 U	1.3 U	1.5 U
Zinc	NV	300	179	86	200	360	--	--	**150**	**70**	**99**	**140**
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location: Sample Name: Collection Date: Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP34 GP34-S-4.0 04/22/2015 4	GP34 GP34-S-12.0 04/22/2015 12	GP35 GP35-S-0.5 04/23/2015 0.5	GP35 GP35-S-3.0 04/23/2015 3	GP35 GP35-S-7.5 04/23/2015 7.5	GP36 GP36-S-0.5 04/23/2015 0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP34 / GP34-S-4.0 / 04/22/2015 / 4	GP34 / GP34-S-12.0 / 04/22/2015 / 12	GP35 / GP35-S-0.5 / 04/23/2015 / 0.5	GP35 / GP35-S-3.0 / 04/23/2015 / 3	GP35 / GP35-S-7.5 / 04/23/2015 / 7.5	GP36 / GP36-S-0.5 / 04/23/2015 / 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP34 / GP34-S-4.0 / 04/22/2015 / 4	GP34 / GP34-S-12.0 / 04/22/2015 / 12	GP35 / GP35-S-0.5 / 04/23/2015 / 0.5	GP35 / GP35-S-3.0 / 04/23/2015 / 3	GP35 / GP35-S-7.5 / 04/23/2015 / 7.5	GP36 / GP36-S-0.5 / 04/23/2015 / 0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	**0.038**	0.011 U	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	**0.038**	0.011 U	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP34	GP34	GP35	GP35	GP35	GP36
Sample Name:				Plants	Soil Biota	Wildlife	GP34-S-4.0	GP34-S-12.0	GP35-S-0.5	GP35-S-3.0	GP35-S-7.5	GP36-S-0.5
Collection Date:							04/22/2015	04/22/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							4	12	0.5	3	7.5	0.5
Acenaphthene	NV	5	NV	20	NV	NV	0.0074 U	0.011 U	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	0.0074 U	0.011 U	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	**0.008**	0.011 U	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	**0.023**	0.011 U	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	**0.029**	0.011 U	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	**0.034**	0.011 U	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	**0.027**	0.011 U	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	**0.012**	0.011 U	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	**0.034**	0.011 U	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	0.0074 U	0.011 U	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	0.022	0.011 U	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	0.0074 U	0.011 U	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	**0.016**	0.011 U	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	**0.018**	0.011 U	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	**0.041**	0.011 U	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	**0.026**	0.011 U	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	**0.094**	0.011 U	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	**0.038**	ND	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP34	GP34	GP35	GP35	GP35	GP36
Sample Name:				Plants	Soil Biota	Wildlife	GP34-S-4.0	GP34-S-12.0	GP35-S-0.5	GP35-S-3.0	GP35-S-7.5	GP36-S-0.5
Collection Date:							04/22/2015	04/22/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							4	12	0.5	3	7.5	0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	55 U	40 U	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	**450**	**130**	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	**477.5**	**150**	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP36 / GP36-S-3.5 / 04/23/2015 / 3.5	GP36 / GP36-S-8.0 / 04/23/2015 / 8	GP37 / GP37-S-0.5 / 04/23/2015 / 0.5	GP37 / GP37-S-4.5 / 04/23/2015 / 4.5	GP37 / GP37-S-7.5 / 04/23/2015 / 7.5	GP38 / GP38-S-0.5 / 04/23/2015 / 0.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	**10**	**6.7**	**9.5**	**9.9**	**17**	6.5 U
Barium	NV	83	345	500	330[b]	102	**180**	**48**	**130**	**170**	**120**	**76**
Cadmium	2	0.035	1[c]	4	20	14	0.67 U	0.63 U	0.68 U	**0.82**	0.66 U	0.65 U
Chromium	2,000[d]	24,000[d]	101	42	42	67	**93**	**36**	**94**	**120**	**120**	**86**
Copper	NV	3,200	76.1	100	50	217	**53**	**28**	**44**	**39**	**53**	**14**
Lead	250	14	53	120[b]	500	118	**6.9**	6.3 U	**17**	**46**	**11**	6.5 U
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	0.34 U	0.32 U	0.34 U	0.4 U	0.33 U	0.33 U
Selenium	NV	0.26	0.78[c]	1	70	0.3	**0.18**	**0.19**	**0.59**	**0.53**	**0.17**	**0.69**
Silver	NV	0.69	0.7	2	50[f]	14[b]	1.3 U	1.3 U	1.4 U	1.6 U	1.3 U	1.3 U
Zinc	NV	300	179	86	200	360	**89**	**50**	**260**	**460**	**120**	**100**
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP36	GP36	GP37	GP37	GP37	GP38
Sample Name:				Plants	Soil Biota	Wildlife	GP36-S-3.5	GP36-S-8.0	GP37-S-0.5	GP37-S-4.5	GP37-S-7.5	GP38-S-0.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							3.5	8	0.5	4.5	7.5	0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location: Sample Name: Collection Date: Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP36 GP36-S-3.5 04/23/2015 3.5	GP36 GP36-S-8.0 04/23/2015 8	GP37 GP37-S-0.5 04/23/2015 0.5	GP37 GP37-S-4.5 04/23/2015 4.5	GP37 GP37-S-7.5 04/23/2015 7.5	GP38 GP38-S-0.5 04/23/2015 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP36	GP36	GP37	GP37	GP37	GP38
Sample Name:				Plants	Soil Biota	Wildlife	GP36-S-3.5	GP36-S-8.0	GP37-S-0.5	GP37-S-4.5	GP37-S-7.5	GP38-S-0.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							3.5	8	0.5	4.5	7.5	0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP36	GP36	GP37	GP37	GP37	GP38
Sample Name:				Plants	Soil Biota	Wildlife	GP36-S-3.5	GP36-S-8.0	GP37-S-0.5	GP37-S-4.5	GP37-S-7.5	GP38-S-0.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							3.5	8	0.5	4.5	7.5	0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP36	GP36	GP37	GP37	GP37	GP38
Sample Name:				Plants	Soil Biota	Wildlife	GP36-S-3.5	GP36-S-8.0	GP37-S-0.5	GP37-S-4.5	GP37-S-7.5	GP38-S-0.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							3.5	8	0.5	4.5	7.5	0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP38 / GP38-S-4.0 / 04/23/2015 / 4	GP38 / GP38-S-8.5 / 04/23/2015 / 8.5	GP39 / GP39-S-3.5 / 04/23/2015 / 3.5	GP42 / GP42-S-0.5 / 04/23/2015 / 0.5	GP42 / GP42-S-4.0 / 04/23/2015 / 4	GP42 / GP42-S-6.5 / 04/23/2015 / 6.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	**8.1**	**16**	16 U	**16**	**9.2**	**8.9**
Barium	NV	83	345	500	330[b]	102	**110**	**120**	**210**	**190**	**150**	**130**
Cadmium	2	0.035	1[c]	4	20	14	0.66 U	0.7 U	0.78 U	0.61 U	0.66 U	0.68 U
Chromium	2,000[d]	24,000[d]	101	42	42	67	**90**	**98**	**97**	**80**	**99**	**86**
Copper	NV	3,200	76.1	100	50	217	**59**	**69**	--	**19**	**60**	**56**
Lead	250	14	53	120[b]	500	118	**8.6**	**7.3**	**20**	6.1 U	**9.2**	**8.3**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	0.33 U	0.35 U	0.39 U	0.31 U	0.33 U	0.34 U
Selenium	NV	0.26	0.78[c]	1	70	0.3	**0.19**	**0.2**	16 U	0.15 U	0.17 U	**0.22**
Silver	NV	0.69	0.7	2	50[f]	14[b]	1.3 U	1.4 U	1.6 U	1.2 U	1.3 U	1.4 U
Zinc	NV	300	179	86	200	360	**110**	**120**	--	**70**	**100**	**96**
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	0.0016 U	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	0.0016 U	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	0.0016 U	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP38	GP38	GP39	GP42	GP42	GP42
Sample Name:				Plants	Soil Biota	Wildlife	GP38-S-4.0	GP38-S-8.5	GP39-S-3.5	GP42-S-0.5	GP42-S-4.0	GP42-S-6.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							4	8.5	3.5	0.5	4	6.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	0.0016 U	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	0.0016 U	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	0.0033 U	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	0.0016 U	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP38	GP38	GP39	GP42	GP42	GP42
Sample Name:				Plants	Soil Biota	Wildlife	GP38-S-4.0	GP38-S-8.5	GP39-S-3.5	GP42-S-0.5	GP42-S-4.0	GP42-S-6.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							4	8.5	3.5	0.5	4	6.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	0.0016 U	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	0.0082 U	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	0.0082 U	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	0.0016 U	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	0.0033 U	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP38	GP38	GP39	GP42	GP42	GP42
				Plants	Soil Biota	Wildlife	GP38-S-4.0	GP38-S-8.5	GP39-S-3.5	GP42-S-0.5	GP42-S-4.0	GP42-S-6.5
							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
							4	8.5	3.5	0.5	4	6.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP38 / GP38-S-4.0 / 04/23/2015 / 4	GP38 / GP38-S-8.5 / 04/23/2015 / 8.5	GP39 / GP39-S-3.5 / 04/23/2015 / 3.5	GP42 / GP42-S-0.5 / 04/23/2015 / 0.5	GP42 / GP42-S-4.0 / 04/23/2015 / 4	GP42 / GP42-S-6.5 / 04/23/2015 / 6.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP38	GP38	GP39	GP42	GP42	GP42
Sample Name:				Plants	Soil Biota	Wildlife	GP38-S-4.0	GP38-S-8.5	GP39-S-3.5	GP42-S-0.5	GP42-S-4.0	GP42-S-6.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							4	8.5	3.5	0.5	4	6.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP45	GP45	GP45	GP46	GP46	GP46
Sample Name:				Plants	Soil Biota	Wildlife	GP45-S-0.5	GP45-S-2.0	GP45-S-9.0	GP46-S-0.5	GP46-S-2.0	GP46-S-9.0
Collection Date:							06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015
Collection Depth (ft bgs):							0.2 - 0.7	1.8 - 2.2	8.7 - 9.3	0.2 - 0.6	1.7 - 2.1	8.7 - 9.2
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	**8.5**	--	--	**9.8**
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**75**	**9.7**	--	**29**	**8.7**	--
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP45	GP45	GP45	GP46	GP46	GP46
Sample Name:				Plants	Soil Biota	Wildlife	GP45-S-0.5	GP45-S-2.0	GP45-S-9.0	GP46-S-0.5	GP46-S-2.0	GP46-S-9.0
Collection Date:							06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015
Collection Depth (ft bgs):							0.2 - 0.7	1.8 - 2.2	8.7 - 9.3	0.2 - 0.6	1.7 - 2.1	8.7 - 9.2
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP45 / GP45-S-0.5 / 06/09/2015 / 0.2 - 0.7	GP45 / GP45-S-2.0 / 06/09/2015 / 1.8 - 2.2	GP45 / GP45-S-9.0 / 06/09/2015 / 8.7 - 9.3	GP46 / GP46-S-0.5 / 06/09/2015 / 0.2 - 0.6	GP46 / GP46-S-2.0 / 06/09/2015 / 1.7 - 2.1	GP46 / GP46-S-9.0 / 06/09/2015 / 8.7 - 9.2
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: Sample Name: Collection Date: Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP45 GP45-S-0.5 06/09/2015 0.2 - 0.7	GP45 GP45-S-2.0 06/09/2015 1.8 - 2.2	GP45 GP45-S-9.0 06/09/2015 8.7 - 9.3	GP46 GP46-S-0.5 06/09/2015 0.2 - 0.6	GP46 GP46-S-2.0 06/09/2015 1.7 - 2.1	GP46 GP46-S-9.0 06/09/2015 8.7 - 9.2
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP45	GP45	GP45	GP46	GP46	GP46
Sample Name:				Plants	Soil Biota	Wildlife	GP45-S-0.5	GP45-S-2.0	GP45-S-9.0	GP46-S-0.5	GP46-S-2.0	GP46-S-9.0
Collection Date:							06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015
Collection Depth (ft bgs):							0.2 - 0.7	1.8 - 2.2	8.7 - 9.3	0.2 - 0.6	1.7 - 2.1	8.7 - 9.2
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP45	GP45	GP45	GP46	GP46	GP46
Sample Name:				Plants	Soil Biota	Wildlife	GP45-S-0.5	GP45-S-2.0	GP45-S-9.0	GP46-S-0.5	GP46-S-2.0	GP46-S-9.0
Collection Date:							06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015
Collection Depth (ft bgs):							0.2 - 0.7	1.8 - 2.2	8.7 - 9.3	0.2 - 0.6	1.7 - 2.1	8.7 - 9.2
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP47	GP47	GP47	GP48	GP48	GP48
Sample Name:				Plants	Soil Biota	Wildlife	GP47-S-0.5	GP47-S-2.0	GP47-S-9.0	GP48-S-1.5	GP48-S-10.0	GP48-S-17.0
Collection Date:							06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015
Collection Depth (ft bgs):							0.3 - 0.7	1.8 - 2.3	8.6 - 9.2	0.6 - 2.3	2.3 - 14.8	15.6-19.7
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	**14**	**3.1**	**10**	**13**
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**18**	**8.8**	--	--	--	--
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP47	GP47	GP47	GP48	GP48	GP48
Sample Name:				Plants	Soil Biota	Wildlife	GP47-S-0.5	GP47-S-2.0	GP47-S-9.0	GP48-S-1.5	GP48-S-10.0	GP48-S-17.0
Collection Date:							06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015
Collection Depth (ft bgs):							0.3 - 0.7	1.8 - 2.3	8.6 - 9.2	0.6 - 2.3	2.3 - 14.8	15.6-19.7
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP47	GP47	GP47	GP48	GP48	GP48
Sample Name:				Plants	Soil Biota	Wildlife	GP47-S-0.5	GP47-S-2.0	GP47-S-9.0	GP48-S-1.5	GP48-S-10.0	GP48-S-17.0
Collection Date:							06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015
Collection Depth (ft bgs):							0.3 - 0.7	1.8 - 2.3	8.6 - 9.2	0.6 - 2.3	2.3 - 14.8	15.6-19.7
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP47	GP47	GP47	GP48	GP48	GP48
Sample Name:				Plants	Soil Biota	Wildlife	GP47-S-0.5	GP47-S-2.0	GP47-S-9.0	GP48-S-1.5	GP48-S-10.0	GP48-S-17.0
Collection Date:							06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015	06/09/2015
Collection Depth (ft bgs):							0.3 - 0.7	1.8 - 2.3	8.6 - 9.2	0.6 - 2.3	2.3 - 14.8	15.6-19.7
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP47 GP47-S-0.5 06/09/2015 0.3 - 0.7	GP47 GP47-S-2.0 06/09/2015 1.8 - 2.3	GP47 GP47-S-9.0 06/09/2015 8.6 - 9.2	GP48 GP48-S-1.5 06/09/2015 0.6 - 2.3	GP48 GP48-S-10.0 06/09/2015 2.3 - 14.8	GP48 GP48-S-17.0 06/09/2015 15.6-19.7
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP47 / GP47-S-0.5 / 06/09/2015 / 0.3 - 0.7	GP47 / GP47-S-2.0 / 06/09/2015 / 1.8 - 2.3	GP47 / GP47-S-9.0 / 06/09/2015 / 8.6 - 9.2	GP48 / GP48-S-1.5 / 06/09/2015 / 0.6 - 2.3	GP48 / GP48-S-10.0 / 06/09/2015 / 2.3 - 14.8	GP48 / GP48-S-17.0 / 06/09/2015 / 15.6-19.7
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP49	GP49	GP49	GP50	GP50	GP51
Sample Name:				Plants	Soil Biota	Wildlife	GP49-S-0.5	GP49-S-7.0	GP49-S-10.0	GP50-S-0.5	GP50-S-1.5	GP51-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.2-1	6.8-7.4	10-10.5	0.3-0.7	1.1-1.7	0.2-0.9
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	--	--	--	--	--	--
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP49	GP49	GP49	GP50	GP50	GP51
Sample Name:				Plants	Soil Biota	Wildlife	GP49-S-0.5	GP49-S-7.0	GP49-S-10.0	GP50-S-0.5	GP50-S-1.5	GP51-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.2-1	6.8-7.4	10-10.5	0.3-0.7	1.1-1.7	0.2-0.9
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP49 / GP49-S-0.5 / 04/23/2018 / 0.2-1	GP49 / GP49-S-7.0 / 04/23/2018 / 6.8-7.4	GP49 / GP49-S-10.0 / 04/23/2018 / 10-10.5	GP50 / GP50-S-0.5 / 04/23/2018 / 0.3-0.7	GP50 / GP50-S-1.5 / 04/23/2018 / 1.1-1.7	GP51 / GP51-S-0.5 / 04/23/2018 / 0.2-0.9
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP49	GP49	GP49	GP50	GP50	GP51
				Plants	Soil Biota	Wildlife	GP49-S-0.5	GP49-S-7.0	GP49-S-10.0	GP50-S-0.5	GP50-S-1.5	GP51-S-0.5
							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
							0.2-1	6.8-7.4	10-10.5	0.3-0.7	1.1-1.7	0.2-0.9
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP49	GP49	GP49	GP50	GP50	GP51
Sample Name:				Plants	Soil Biota	Wildlife	GP49-S-0.5	GP49-S-7.0	GP49-S-10.0	GP50-S-0.5	GP50-S-1.5	GP51-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.2-1	6.8-7.4	10-10.5	0.3-0.7	1.1-1.7	0.2-0.9
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	**0.023 J**	0.00733 U	0.00643 U	**0.0252 J**	0.00642 U	**0.00778 J**
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	**0.0181**	0.00733 U	0.00643 U	**0.0168**	0.00642 U	0.00529 U
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	**0.0234 J**	0.00733 U	0.00643 U	**0.0185 J**	0.00642 U	**0.00715 J**
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	**0.00934 J**	0.00733 U	0.00643 U	0.00653 U	0.00642 U	0.00529 U
Chrysene	NV	137	NV	NV	NV	NV	**0.0233 J**	0.00733 U	0.00643 U	**0.0257 J**	0.00642 U	**0.00682 J**
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	0.00632 U	0.00733 U	0.00643 U	0.00653 U	0.00642 U	0.00529 U
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	**0.0131**	0.00733 U	0.00643 U	**0.0085 J**	0.00642 U	0.00529 U
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	**0.0252 J**	0.00733 U	0.00643 U	**0.0223 J**	0.00642 U	**0.00156 J**
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	**6.09**	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	**1.76 J**	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	0.149 U	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	0.212 UJ	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	**0.218 J**	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	0.397 UJ	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	0.193 UJ	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	**0.355**	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	0.0931 U	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	**0.177 J**	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	**0.244 J**	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	0.202 UJ	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	0.238 UJ	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	0.0994 U	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	0.306 UJ	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	**36.2**	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	**2.58 J**	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	**11.6**	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	**3.68 J**	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP49 / GP49-S-0.5 / 04/23/2018 / 0.2-1	GP49 / GP49-S-7.0 / 04/23/2018 / 6.8-7.4	GP49 / GP49-S-10.0 / 04/23/2018 / 10-10.5	GP50 / GP50-S-0.5 / 04/23/2018 / 0.3-0.7	GP50 / GP50-S-1.5 / 04/23/2018 / 1.1-1.7	GP51 / GP51-S-0.5 / 04/23/2018 / 0.2-0.9
Total HxCDDs	NV	NV	NV	NV	NV	NV	**6.32 J**	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	**2.74 J**	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	**4.2 J**	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	**3.09 J**	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	3.86 U	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	3.2 U	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	**0.332 J**	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	**0.284 J**	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	**0.047 J**	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	**0.222 J**	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	**0.0638 J**	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP51 / GP51-S-1.0 / 04/23/2018 / 0.9-1.3	GP52 / GP52-S-0.5 / 04/23/2018 / 0.3-0.8	GP52 / GP52-S-6.0 / 04/23/2018 / 5.5-6.1	GP52 / GP52-S-7.5 / 04/23/2018 / 7.2-7.8	GP53 / GP53-S-0.5 / 04/24/2018 / 0.3-0.8	GP53 / GP53-S-1.0 / 04/24/2018 / 0.8-1.2
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	--	--	--	--	--	--
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP51	GP52	GP52	GP52	GP53	GP53
Sample Name:				Plants	Soil Biota	Wildlife	GP51-S-1.0	GP52-S-0.5	GP52-S-6.0	GP52-S-7.5	GP53-S-0.5	GP53-S-1.0
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/24/2018	04/24/2018
Collection Depth (ft bgs):							0.9-1.3	0.3-0.8	5.5-6.1	7.2-7.8	0.3-0.8	0.8-1.2
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP51	GP52	GP52	GP52	GP53	GP53
Sample Name:				Plants	Soil Biota	Wildlife	GP51-S-1.0	GP52-S-0.5	GP52-S-6.0	GP52-S-7.5	GP53-S-0.5	GP53-S-1.0
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/24/2018	04/24/2018
Collection Depth (ft bgs):							0.9-1.3	0.3-0.8	5.5-6.1	7.2-7.8	0.3-0.8	0.8-1.2
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP51	GP52	GP52	GP52	GP53	GP53
Sample Name:				Plants	Soil Biota	Wildlife	GP51-S-1.0	GP52-S-0.5	GP52-S-6.0	GP52-S-7.5	GP53-S-0.5	GP53-S-1.0
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/24/2018	04/24/2018
Collection Depth (ft bgs):							0.9-1.3	0.3-0.8	5.5-6.1	7.2-7.8	0.3-0.8	0.8-1.2
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP51	GP52	GP52	GP52	GP53	GP53
Sample Name:				Plants	Soil Biota	Wildlife	GP51-S-1.0	GP52-S-0.5	GP52-S-6.0	GP52-S-7.5	GP53-S-0.5	GP53-S-1.0
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/24/2018	04/24/2018
Collection Depth (ft bgs):							0.9-1.3	0.3-0.8	5.5-6.1	7.2-7.8	0.3-0.8	0.8-1.2
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	0.00624 U	0.00506 U	0.00764 U	0.00742 U	**0.015 J**	0.00543 U
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	0.00624 U	0.00506 U	0.00764 U	0.00742 U	**0.0148**	0.00543 U
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	0.00624 U	0.00506 U	0.00764 U	0.00742 U	**0.02 J**	0.00543 U
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	0.00624 U	0.00506 U	0.00764 U	0.00742 U	**0.00611 J**	0.00543 U
Chrysene	NV	137	NV	NV	NV	NV	0.00624 U	0.00506 U	0.00764 U	0.00742 U	**0.0178 J**	0.00543 U
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	0.00624 U	0.00506 U	0.00764 U	0.00742 U	0.00516 U	0.00543 U
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	0.00624 U	0.00506 U	0.00764 U	0.00742 U	**0.0123**	0.00543 U
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	0.00624 U	0.00506 U	0.00764 U	0.00742 U	**0.0203 J**	0.00543 U
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	**6.2**	--	--	**4.36 J**	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	**1.71 J**	--	--	**3.6 J**	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	**0.23 J**	--	--	**0.421 J**	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	**0.289 J**	--	--	0.0842 UJ	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	**0.202 J**	--	--	**2.05 J**	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	**0.525 J**	--	--	**0.264 J**	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	0.166 UJ	--	--	**0.482 J**	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	**0.465 J**	--	--	**0.131 J**	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	0.112 U	--	--	0.19 UJ	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	**0.248 J**	--	--	0.21 UJ	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	**0.156 J**	--	--	**0.578 J**	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	0.22 UJ	--	--	**0.354 J**	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	**0.333 J**	--	--	**0.395 J**	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	0.11 U	--	--	**0.115 J**	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	**0.232 J**	--	--	**0.219 J**	--
OCDD	NV	NV	NV	NV	NV	NV	--	**33.4**	--	--	**38.7 J**	--
OCDF	NV	NV	NV	NV	NV	NV	--	**9.58 J**	--	--	**2.03 J**	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	**11.2**	--	--	**7.73 J**	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	**8.16**	--	--	**7.94 J**	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP51	GP52	GP52	GP52	GP53	GP53
Sample Name:				Plants	Soil Biota	Wildlife	GP51-S-1.0	GP52-S-0.5	GP52-S-6.0	GP52-S-7.5	GP53-S-0.5	GP53-S-1.0
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/24/2018	04/24/2018
Collection Depth (ft bgs):							0.9-1.3	0.3-0.8	5.5-6.1	7.2-7.8	0.3-0.8	0.8-1.2
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	**27.5**	--	--	**2.58 J**	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	**2.83 J**	--	--	**7.89 J**	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	**21.4**	--	--	1.75 UJ	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	**4.02 J**	--	--	**4.76 J**	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	**20.6**	--	--	**0.836 J**	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	**3.4**	--	--	**1.09 J**	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	**0.618 J**	--	--	**0.697 J**	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	**0.448 J**	--	--	**0.210 J**	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	**0.167 J**	--	--	**0.487 J**	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	**0.324 J**	--	--	**0.139 J**	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	**0.6202 J**	--	--	**1.00 J**	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP53	GP54	GP54	HA1	HA2	HA3
Sample Name:				Plants	Soil Biota	Wildlife	GP53-S-2.0	GP54-S-0.5	GP54-S-5.5	HA1-S-0.5	HA2-S-0.5	HA3-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							1.5-2.2	0.4-0.9	5.3-6	0.5	0.5	0.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	14 U	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	**130**	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	0.68 U	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	**86**	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	--	--	--	**8.3**	**1100**	**860**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	0.34 U	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	14 U	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	1.4 U	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	0.074 U	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	0.074 U	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	0.074 U	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	0.074 U	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	0.074 U	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	0.074 U	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	0.074 U	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	0.074 U	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	GP53	GP54	GP54	HA1	HA2	HA3
							GP53-S-2.0	GP54-S-0.5	GP54-S-5.5	HA1-S-0.5	HA2-S-0.5	HA3-S-0.5
							04/24/2018	04/24/2018	04/24/2018	04/23/2015	04/23/2015	04/23/2015
							1.5-2.2	0.4-0.9	5.3-6	0.5	0.5	0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP53	GP54	GP54	HA1	HA2	HA3
Sample Name:				Plants	Soil Biota	Wildlife	GP53-S-2.0	GP54-S-0.5	GP54-S-5.5	HA1-S-0.5	HA2-S-0.5	HA3-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							1.5-2.2	0.4-0.9	5.3-6	0.5	0.5	0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP53	GP54	GP54	HA1	HA2	HA3
Sample Name:				Plants	Soil Biota	Wildlife	GP53-S-2.0	GP54-S-0.5	GP54-S-5.5	HA1-S-0.5	HA2-S-0.5	HA3-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							1.5-2.2	0.4-0.9	5.3-6	0.5	0.5	0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP53	GP54	GP54	HA1	HA2	HA3
Sample Name:				Plants	Soil Biota	Wildlife	GP53-S-2.0	GP54-S-0.5	GP54-S-5.5	HA1-S-0.5	HA2-S-0.5	HA3-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							1.5-2.2	0.4-0.9	5.3-6	0.5	0.5	0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	0.0067 U	**0.076 J**	0.00643 U	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	0.0067 U	**0.0529 J**	0.00643 U	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	0.0067 U	**0.0758 J**	0.00643 U	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	0.0067 U	0.0279 U	0.00643 U	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	0.0067 U	**0.0958 J**	0.00643 U	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	0.0067 U	0.0279 U	0.00643 U	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	0.0067 U	**0.0347 J**	0.00643 U	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	0.0067 U	**0.0725 J**	0.00643 U	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			GP53	GP54	GP54	HA1	HA2	HA3
Sample Name:				Plants	Soil Biota	Wildlife	GP53-S-2.0	GP54-S-0.5	GP54-S-5.5	HA1-S-0.5	HA2-S-0.5	HA3-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							1.5-2.2	0.4-0.9	5.3-6	0.5	0.5	0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA4	HA5	HA6	HA7	HA8	HA9
Sample Name:				Plants	Soil Biota	Wildlife	HA4-S-0.5	HA5-S-0.5	HA6-S-0.5	HA7-S-0.5	HA8-S-0.5	HA9-S-0.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							0.5	0.5	0.5	0.5	0.5	0.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**250**	**1300**	**25**	**430**	**150**	**76**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA4	HA5	HA6	HA7	HA8	HA9
Sample Name:							HA4-S-0.5	HA5-S-0.5	HA6-S-0.5	HA7-S-0.5	HA8-S-0.5	HA9-S-0.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							0.5	0.5	0.5	0.5	0.5	0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA4	HA5	HA6	HA7	HA8	HA9
Sample Name:				Plants	Soil Biota	Wildlife	HA4-S-0.5	HA5-S-0.5	HA6-S-0.5	HA7-S-0.5	HA8-S-0.5	HA9-S-0.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							0.5	0.5	0.5	0.5	0.5	0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA4 / HA4-S-0.5 / 04/23/2015 / 0.5	HA5 / HA5-S-0.5 / 04/23/2015 / 0.5	HA6 / HA6-S-0.5 / 04/23/2015 / 0.5	HA7 / HA7-S-0.5 / 04/23/2015 / 0.5	HA8 / HA8-S-0.5 / 04/23/2015 / 0.5	HA9 / HA9-S-0.5 / 04/23/2015 / 0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA4	HA5	HA6	HA7	HA8	HA9
Sample Name:				Plants	Soil Biota	Wildlife	HA4-S-0.5	HA5-S-0.5	HA6-S-0.5	HA7-S-0.5	HA8-S-0.5	HA9-S-0.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							0.5	0.5	0.5	0.5	0.5	0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA4	HA5	HA6	HA7	HA8	HA9
Sample Name:				Plants	Soil Biota	Wildlife	HA4-S-0.5	HA5-S-0.5	HA6-S-0.5	HA7-S-0.5	HA8-S-0.5	HA9-S-0.5
Collection Date:							04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015	04/23/2015
Collection Depth (ft bgs):							0.5	0.5	0.5	0.5	0.5	0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA10	HA11	HA12	HA12	HA13	HA13
Sample Name:				Plants	Soil Biota	Wildlife	HA10-S-0.5	HA11-S-0.5	HA12-S-0.5	HA12-S-1.0	HA13-S-0.5	HA13-S-1.0
Collection Date:							04/23/2015	04/23/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Collection Depth (ft bgs):							0.5	0.5	0.0 - 0.5	0.5-1.0	0.0 - 0.5	0.5 - 1.0
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	14 U	14 U	**38**	**21**	**61**	**51**
Barium	NV	83	345	500	330[b]	102	**130**	**130**	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	0.68 U	0.68 U	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	**86**	**86**	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**8.3**	**8.3**	--	--	--	--
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	0.34 U	0.34 U	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	14 U	14 U	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	1.4 U	1.4 U	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	0.073 U	0.068 U	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	0.073 U	0.068 U	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	0.073 U	0.068 U	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	0.073 U	0.068 U	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	0.073 U	0.068 U	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	0.073 U	0.068 U	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	0.073 U	0.068 U	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	0.073 U	0.068 U	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA10	HA11	HA12	HA12	HA13	HA13
Sample Name:				Plants	Soil Biota	Wildlife	HA10-S-0.5	HA11-S-0.5	HA12-S-0.5	HA12-S-1.0	HA13-S-0.5	HA13-S-1.0
Collection Date:							04/23/2015	04/23/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Collection Depth (ft bgs):							0.5	0.5	0.0 - 0.5	0.5-1.0	0.0 - 0.5	0.5 - 1.0
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA10 / HA10-S-0.5 / 04/23/2015 / 0.5	HA11 / HA11-S-0.5 / 04/23/2015 / 0.5	HA12 / HA12-S-0.5 / 06/10/2015 / 0.0 - 0.5	HA12 / HA12-S-1.0 / 06/10/2015 / 0.5-1.0	HA13 / HA13-S-0.5 / 06/10/2015 / 0.0 - 0.5	HA13 / HA13-S-1.0 / 06/10/2015 / 0.5 - 1.0
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA10	HA11	HA12	HA12	HA13	HA13
Sample Name:							HA10-S-0.5	HA11-S-0.5	HA12-S-0.5	HA12-S-1.0	HA13-S-0.5	HA13-S-1.0
Collection Date:							04/23/2015	04/23/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Collection Depth (ft bgs):							0.5	0.5	0.0 - 0.5	0.5-1.0	0.0 - 0.5	0.5 - 1.0
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA10	HA11	HA12	HA12	HA13	HA13
Sample Name:				Plants	Soil Biota	Wildlife	HA10-S-0.5	HA11-S-0.5	HA12-S-0.5	HA12-S-1.0	HA13-S-0.5	HA13-S-1.0
Collection Date:							04/23/2015	04/23/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Collection Depth (ft bgs):							0.5	0.5	0.0 - 0.5	0.5-1.0	0.0 - 0.5	0.5 - 1.0
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA10	HA11	HA12	HA12	HA13	HA13
Sample Name:				Plants	Soil Biota	Wildlife	HA10-S-0.5	HA11-S-0.5	HA12-S-0.5	HA12-S-1.0	HA13-S-0.5	HA13-S-1.0
Collection Date:							04/23/2015	04/23/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Collection Depth (ft bgs):							0.5	0.5	0.0 - 0.5	0.5-1.0	0.0 - 0.5	0.5 - 1.0
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA14	HA14	HA16	HA16	HA17	HA17
Sample Name:				Plants	Soil Biota	Wildlife	HA14-S-0.5	HA14-S-1.0	HA16-S-0.5	HA16-S-1.0	HA17-S-0.5	HA17-S-1.0
Collection Date:							06/10/2015	06/10/2015	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.0 - 0.5	0.5 - 1.0	0.5	1.0	0.5	1.0
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	**43**	**18**	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	--	--	**342**	**224**	**82.8**	**45.6**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA14	HA14	HA16	HA16	HA17	HA17
							HA14-S-0.5	HA14-S-1.0	HA16-S-0.5	HA16-S-1.0	HA17-S-0.5	HA17-S-1.0
							06/10/2015	06/10/2015	04/23/2018	04/23/2018	04/23/2018	04/23/2018
							0.0 - 0.5	0.5 - 1.0	0.5	1.0	0.5	1.0
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA14	HA14	HA16	HA16	HA17	HA17
Sample Name:				Plants	Soil Biota	Wildlife	HA14-S-0.5	HA14-S-1.0	HA16-S-0.5	HA16-S-1.0	HA17-S-0.5	HA17-S-1.0
Collection Date:							06/10/2015	06/10/2015	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.0 - 0.5	0.5 - 1.0	0.5	1.0	0.5	1.0
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA14 / HA14-S-0.5 / 06/10/2015 / 0.0 - 0.5	HA14 / HA14-S-1.0 / 06/10/2015 / 0.5 - 1.0	HA16 / HA16-S-0.5 / 04/23/2018 / 0.5	HA16 / HA16-S-1.0 / 04/23/2018 / 1.0	HA17 / HA17-S-0.5 / 04/23/2018 / 0.5	HA17 / HA17-S-1.0 / 04/23/2018 / 1.0
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA14	HA14	HA16	HA16	HA17	HA17
Sample Name:				Plants	Soil Biota	Wildlife	HA14-S-0.5	HA14-S-1.0	HA16-S-0.5	HA16-S-1.0	HA17-S-0.5	HA17-S-1.0
Collection Date:							06/10/2015	06/10/2015	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.0 - 0.5	0.5 - 1.0	0.5	1.0	0.5	1.0
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA14	HA14	HA16	HA16	HA17	HA17
Sample Name:				Plants	Soil Biota	Wildlife	HA14-S-0.5	HA14-S-1.0	HA16-S-0.5	HA16-S-1.0	HA17-S-0.5	HA17-S-1.0
Collection Date:							06/10/2015	06/10/2015	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.0 - 0.5	0.5 - 1.0	0.5	1.0	0.5	1.0
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA18 / HA18-S-0.5 / 04/23/2018 / 0.5	HA18 / HA18-S-1.0 / 04/23/2018 / 1.0	HA19 / HA19-S-0.5 / 04/23/2018 / 0.5	HA19 / HA19-S-1.0 / 04/23/2018 / 1.0	HA20 / HA20-S-0.5 / 04/23/2018 / 0.5	HA20 / HA20-S-1.0 / 04/23/2018 / 1.0
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**327**	**65.6**	**126**	**112**	**355**	**84.6**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA18	HA18	HA19	HA19	HA20	HA20
Sample Name:				Plants	Soil Biota	Wildlife	HA18-S-0.5	HA18-S-1.0	HA19-S-0.5	HA19-S-1.0	HA20-S-0.5	HA20-S-1.0
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.5	1.0	0.5	1.0	0.5	1.0
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA18	HA18	HA19	HA19	HA20	HA20
Sample Name:				Plants	Soil Biota	Wildlife	HA18-S-0.5	HA18-S-1.0	HA19-S-0.5	HA19-S-1.0	HA20-S-0.5	HA20-S-1.0
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.5	1.0	0.5	1.0	0.5	1.0
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA18 / HA18-S-0.5 / 04/23/2018 / 0.5	HA18 / HA18-S-1.0 / 04/23/2018 / 1.0	HA19 / HA19-S-0.5 / 04/23/2018 / 0.5	HA19 / HA19-S-1.0 / 04/23/2018 / 1.0	HA20 / HA20-S-0.5 / 04/23/2018 / 0.5	HA20 / HA20-S-1.0 / 04/23/2018 / 1.0
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA18	HA18	HA19	HA19	HA20	HA20
							HA18-S-0.5	HA18-S-1.0	HA19-S-0.5	HA19-S-1.0	HA20-S-0.5	HA20-S-1.0
							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
							0.5	1.0	0.5	1.0	0.5	1.0
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA18 / HA18-S-0.5 / 04/23/2018 / 0.5	HA18 / HA18-S-1.0 / 04/23/2018 / 1.0	HA19 / HA19-S-0.5 / 04/23/2018 / 0.5	HA19 / HA19-S-1.0 / 04/23/2018 / 1.0	HA20 / HA20-S-0.5 / 04/23/2018 / 0.5	HA20 / HA20-S-1.0 / 04/23/2018 / 1.0
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA21 / HA21-S-0.5 / 04/23/2018 / 0.5	HA21 / HA21-S-1.0 / 04/23/2018 / 1.0	HA21 / HA21-S-1.5 / 04/30/2018 / 1.5	HA22 / HA22-S-0.5 / 04/23/2018 / 0.5	HA22 / HA22-S-1.0 / 04/23/2018 / 1.0	HA23 / HA23-S-0.5 / 04/23/2018 / 0.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**421**	**256**	**257**	**172**	**111**	**146**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA21	HA21	HA21	HA22	HA22	HA23
Sample Name:				Plants	Soil Biota	Wildlife	HA21-S-0.5	HA21-S-1.0	HA21-S-1.5	HA22-S-0.5	HA22-S-1.0	HA23-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.5	1.0	1.5	0.5	1.0	0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA21	HA21	HA21	HA22	HA22	HA23
Sample Name:				Plants	Soil Biota	Wildlife	HA21-S-0.5	HA21-S-1.0	HA21-S-1.5	HA22-S-0.5	HA22-S-1.0	HA23-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.5	1.0	1.5	0.5	1.0	0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA21	HA21	HA21	HA22	HA22	HA23
Sample Name:				Plants	Soil Biota	Wildlife	HA21-S-0.5	HA21-S-1.0	HA21-S-1.5	HA22-S-0.5	HA22-S-1.0	HA23-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.5	1.0	1.5	0.5	1.0	0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA21	HA21	HA21	HA22	HA22	HA23
Sample Name:				Plants	Soil Biota	Wildlife	HA21-S-0.5	HA21-S-1.0	HA21-S-1.5	HA22-S-0.5	HA22-S-1.0	HA23-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.5	1.0	1.5	0.5	1.0	0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA21	HA21	HA21	HA22	HA22	HA23
Sample Name:				Plants	Soil Biota	Wildlife	HA21-S-0.5	HA21-S-1.0	HA21-S-1.5	HA22-S-0.5	HA22-S-1.0	HA23-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							0.5	1.0	1.5	0.5	1.0	0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA23	HA24	HA24	HA25	HA25	HA26
Sample Name:				Plants	Soil Biota	Wildlife	HA23-S-1.0	HA24-S-0.5	HA24-S-1.0	HA25-S-0.5	HA25-S-1.0	HA26-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	0.5	1.0	0.5	1.0	0.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**146**	**120**	**95.8**	**45.4**	**50.4**	**249**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA23	HA24	HA24	HA25	HA25	HA26
Sample Name:				Plants	Soil Biota	Wildlife	HA23-S-1.0	HA24-S-0.5	HA24-S-1.0	HA25-S-0.5	HA25-S-1.0	HA26-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	0.5	1.0	0.5	1.0	0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA23	HA24	HA24	HA25	HA25	HA26
				Plants	Soil Biota	Wildlife	HA23-S-1.0	HA24-S-0.5	HA24-S-1.0	HA25-S-0.5	HA25-S-1.0	HA26-S-0.5
							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
							1.0	0.5	1.0	0.5	1.0	0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA23	HA24	HA24	HA25	HA25	HA26
Sample Name:				Plants	Soil Biota	Wildlife	HA23-S-1.0	HA24-S-0.5	HA24-S-1.0	HA25-S-0.5	HA25-S-1.0	HA26-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	0.5	1.0	0.5	1.0	0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA23	HA24	HA24	HA25	HA25	HA26
Sample Name:				Plants	Soil Biota	Wildlife	HA23-S-1.0	HA24-S-0.5	HA24-S-1.0	HA25-S-0.5	HA25-S-1.0	HA26-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	0.5	1.0	0.5	1.0	0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA23	HA24	HA24	HA25	HA25	HA26
Sample Name:				Plants	Soil Biota	Wildlife	HA23-S-1.0	HA24-S-0.5	HA24-S-1.0	HA25-S-0.5	HA25-S-1.0	HA26-S-0.5
Collection Date:							04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	0.5	1.0	0.5	1.0	0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA26	HA26	HA27	HA27	HA28	HA28
Sample Name:				Plants	Soil Biota	Wildlife	HA26-S-1.0	HA26-S-1.5	HA27-S-0.5	HA27-S-1.0	HA28-S-0.5	HA28-S-1.0
Collection Date:							04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	0.5	1.0
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**396**	**307**	**185**	**120**	**213**	**282**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA26	HA26	HA27	HA27	HA28	HA28
Sample Name:				Plants	Soil Biota	Wildlife	HA26-S-1.0	HA26-S-1.5	HA27-S-0.5	HA27-S-1.0	HA28-S-0.5	HA28-S-1.0
Collection Date:							04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	0.5	1.0
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA26	HA26	HA27	HA27	HA28	HA28
Sample Name:				Plants	Soil Biota	Wildlife	HA26-S-1.0	HA26-S-1.5	HA27-S-0.5	HA27-S-1.0	HA28-S-0.5	HA28-S-1.0
Collection Date:							04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	0.5	1.0
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA26	HA26	HA27	HA27	HA28	HA28
Sample Name:				Plants	Soil Biota	Wildlife	HA26-S-1.0	HA26-S-1.5	HA27-S-0.5	HA27-S-1.0	HA28-S-0.5	HA28-S-1.0
Collection Date:							04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	0.5	1.0
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA26	HA26	HA27	HA27	HA28	HA28
Sample Name:				Plants	Soil Biota	Wildlife	HA26-S-1.0	HA26-S-1.5	HA27-S-0.5	HA27-S-1.0	HA28-S-0.5	HA28-S-1.0
Collection Date:							04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	0.5	1.0
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA26	HA26	HA27	HA27	HA28	HA28
Sample Name:				Plants	Soil Biota	Wildlife	HA26-S-1.0	HA26-S-1.5	HA27-S-0.5	HA27-S-1.0	HA28-S-0.5	HA28-S-1.0
Collection Date:							04/23/2018	04/30/2018	04/23/2018	04/23/2018	04/23/2018	04/23/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	0.5	1.0
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA28 / HA28-S-1.5 / 04/30/2018 / 1.5	HA29 / HA29-S-1.0-CS / 04/23/2018 / 1.0	HA30 / HA30-S-0.5 / 04/30/2018 / 0.5	HA30 / HA30-S-1.0 / 04/30/2018 / 1.0	HA31 / HA31-S-0.5 / 04/30/2018 / 0.5	HA31 / HA31-S-1.0 / 04/30/2018 / 1.0
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**159**	**276**	**141**	**50.8**	**15.8**	**17.5**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA28	HA29	HA30	HA30	HA31	HA31
Sample Name:				Plants	Soil Biota	Wildlife	HA28-S-1.5	HA29-S-1.0-CS	HA30-S-0.5	HA30-S-1.0	HA31-S-0.5	HA31-S-1.0
Collection Date:							04/30/2018	04/23/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Collection Depth (ft bgs):							1.5	1.0	0.5	1.0	0.5	1.0
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA28 / HA28-S-1.5 / 04/30/2018 / 1.5	HA29 / HA29-S-1.0-CS / 04/23/2018 / 1.0	HA30 / HA30-S-0.5 / 04/30/2018 / 0.5	HA30 / HA30-S-1.0 / 04/30/2018 / 1.0	HA31 / HA31-S-0.5 / 04/30/2018 / 0.5	HA31 / HA31-S-1.0 / 04/30/2018 / 1.0
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location: Sample Name: Collection Date: Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA28 HA28-S-1.5 04/30/2018 1.5	HA29 HA29-S-1.0-CS 04/23/2018 1.0	HA30 HA30-S-0.5 04/30/2018 0.5	HA30 HA30-S-1.0 04/30/2018 1.0	HA31 HA31-S-0.5 04/30/2018 0.5	HA31 HA31-S-1.0 04/30/2018 1.0
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA28 / HA28-S-1.5 / 04/30/2018 / 1.5	HA29 / HA29-S-1.0-CS / 04/23/2018 / 1.0	HA30 / HA30-S-0.5 / 04/30/2018 / 0.5	HA30 / HA30-S-1.0 / 04/30/2018 / 1.0	HA31 / HA31-S-0.5 / 04/30/2018 / 0.5	HA31 / HA31-S-1.0 / 04/30/2018 / 1.0
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA28	HA29	HA30	HA30	HA31	HA31
Sample Name:				Plants	Soil Biota	Wildlife	HA28-S-1.5	HA29-S-1.0-CS	HA30-S-0.5	HA30-S-1.0	HA31-S-0.5	HA31-S-1.0
Collection Date:							04/30/2018	04/23/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Collection Depth (ft bgs):							1.5	1.0	0.5	1.0	0.5	1.0
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA32	HA32	HA33	HA33	HA33	HA34
Sample Name:				Plants	Soil Biota	Wildlife	HA32-S-0.5	HA32-S-1.0	HA33-S-0.5	HA33-S-1.0	HA33-S-1.5	HA34-S-0.5
Collection Date:							04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Collection Depth (ft bgs):							0.5	1.0	0.5	1.0	1.5	0.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	--
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**105**	**16.9**	**29.4**	**10.9**	**7.21**	**107**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	--
Zinc	NV	300	179	86	200	360	--	--	--	--	--	--
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA32	HA32	HA33	HA33	HA33	HA34
Sample Name:				Plants	Soil Biota	Wildlife	HA32-S-0.5	HA32-S-1.0	HA33-S-0.5	HA33-S-1.0	HA33-S-1.5	HA34-S-0.5
Collection Date:							04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Collection Depth (ft bgs):							0.5	1.0	0.5	1.0	1.5	0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA32 / HA32-S-0.5 / 04/30/2018 / 0.5	HA32 / HA32-S-1.0 / 04/30/2018 / 1.0	HA33 / HA33-S-0.5 / 04/30/2018 / 0.5	HA33 / HA33-S-1.0 / 04/30/2018 / 1.0	HA33 / HA33-S-1.5 / 04/30/2018 / 1.5	HA34 / HA34-S-0.5 / 04/30/2018 / 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA32	HA32	HA33	HA33	HA33	HA34
Sample Name:				Plants	Soil Biota	Wildlife	HA32-S-0.5	HA32-S-1.0	HA33-S-0.5	HA33-S-1.0	HA33-S-1.5	HA34-S-0.5
Collection Date:							04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Collection Depth (ft bgs):							0.5	1.0	0.5	1.0	1.5	0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA32	HA32	HA33	HA33	HA33	HA34
				Plants	Soil Biota	Wildlife	HA32-S-0.5	HA32-S-1.0	HA33-S-0.5	HA33-S-1.0	HA33-S-1.5	HA34-S-0.5
							04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
							0.5	1.0	0.5	1.0	1.5	0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA32	HA32	HA33	HA33	HA33	HA34
Sample Name:				Plants	Soil Biota	Wildlife	HA32-S-0.5	HA32-S-1.0	HA33-S-0.5	HA33-S-1.0	HA33-S-1.5	HA34-S-0.5
Collection Date:							04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018
Collection Depth (ft bgs):							0.5	1.0	0.5	1.0	1.5	0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA34	HA34	HA35	HA35	HA35	DU01
Sample Name:				Plants	Soil Biota	Wildlife	HA34-S-1.0	HA34-S-1.5	HA35-S-0.5	HA35-S-1.0	HA35-S-1.5	DU01-S-0.5
Collection Date:							04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/25/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	1.5	0 - 0.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	--	--	--	--	--	**8.87**
Barium	NV	83	345	500	330[b]	102	--	--	--	--	--	**154**
Cadmium	2	0.035	1[c]	4	20	14	--	--	--	--	--	**0.358**
Chromium	2,000[d]	24,000[d]	101	42	42	67	--	--	--	--	--	**59.6**
Copper	NV	3,200	76.1	100	50	217	--	--	--	--	--	**60.5**
Lead	250	14	53	120[b]	500	118	**71.7**	**53.2**	**112**	**46.4**	**42.1**	**48.9**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	--	--	--	--	1.8 U
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	--	--	--	--	0.523 U
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	--	--	--	--	0.523 U
Zinc	NV	300	179	86	200	360	--	--	--	--	--	**121**
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA34	HA34	HA35	HA35	HA35	DU01
Sample Name:							HA34-S-1.0	HA34-S-1.5	HA35-S-0.5	HA35-S-1.0	HA35-S-1.5	DU01-S-0.5
Collection Date:							04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/25/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	1.5	0 - 0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA34 / HA34-S-1.0 / 04/30/2018 / 1.0	HA34 / HA34-S-1.5 / 04/30/2018 / 1.5	HA35 / HA35-S-0.5 / 04/30/2018 / 0.5	HA35 / HA35-S-1.0 / 04/30/2018 / 1.0	HA35 / HA35-S-1.5 / 04/30/2018 / 1.5	DU01 / DU01-S-0.5 / 04/25/2018 / 0 - 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA34	HA34	HA35	HA35	HA35	DU01
Sample Name:				Plants	Soil Biota	Wildlife	HA34-S-1.0	HA34-S-1.5	HA35-S-0.5	HA35-S-1.0	HA35-S-1.5	DU01-S-0.5
Collection Date:							04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/25/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	1.5	0 - 0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	HA34 / HA34-S-1.0 / 04/30/2018 / 1.0	HA34 / HA34-S-1.5 / 04/30/2018 / 1.5	HA35 / HA35-S-0.5 / 04/30/2018 / 0.5	HA35 / HA35-S-1.0 / 04/30/2018 / 1.0	HA35 / HA35-S-1.5 / 04/30/2018 / 1.5	DU01 / DU01-S-0.5 / 04/25/2018 / 0 - 0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			HA34	HA34	HA35	HA35	HA35	DU01
Sample Name:				Plants	Soil Biota	Wildlife	HA34-S-1.0	HA34-S-1.5	HA35-S-0.5	HA35-S-1.0	HA35-S-1.5	DU01-S-0.5
Collection Date:							04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/30/2018	04/25/2018
Collection Depth (ft bgs):							1.0	1.5	0.5	1.0	1.5	0 - 0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU02						DU03
Sample Name:				Plants	Soil Biota	Wildlife	DU02-S-0.5	SS36-S-0.5	SS37-S-0.5	SS38-S-0.5	SS39-S-0.5	SS40-S-0.5	DU03-S-0.5
Collection Date:							04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Metals (mg/kg)													
Arsenic	20	0.15	18.9	10	60	132	**14.7**	--	--	--	--	--	**11.6**
Barium	NV	83	345	500	330[b]	102	**193**	--	--	--	--	--	**127**
Cadmium	2	0.035	1[c]	4	20	14	**0.342**	--	--	--	--	--	**0.425**
Chromium	2,000[d]	24,000[d]	101	42	42	67	**82.7**	--	--	--	--	--	**67.7**
Copper	NV	3,200	76.1	100	50	217	**204**	**63.9**	**58.6**	**1050**	**26.5**	**120**	**48.9**
Lead	250	14	53	120[b]	500	118	**89**	--	--	--	--	--	**30.2**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	2.46 U	--	--	--	--	--	1.54 U
Selenium	NV	0.26	0.78[c]	1	70	0.3	0.521 U	--	--	--	--	--	0.537 U
Silver	NV	0.69	0.7	2	50[f]	14[b]	0.521 U	--	--	--	--	--	0.537 U
Zinc	NV	300	179	86	200	360	**221**	**121**	**175**	**279**	**67.4**	**390**	**123**
PCBs (mg/kg)													
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--	--
VOCs (mg/kg)													
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU02						DU03
Sample Name:				Plants	Soil Biota	Wildlife	DU02-S-0.5	SS36-S-0.5	SS37-S-0.5	SS38-S-0.5	SS39-S-0.5	SS40-S-0.5	DU03-S-0.5
Collection Date:							04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU02						DU03
Sample Name:				Plants	Soil Biota	Wildlife	DU02-S-0.5	SS36-S-0.5	SS37-S-0.5	SS38-S-0.5	SS39-S-0.5	SS40-S-0.5	DU03-S-0.5
Collection Date:							04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--	--
SVOCs (mg/kg)													
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU02						DU03
Sample Name:				Plants	Soil Biota	Wildlife	DU02-S-0.5	SS36-S-0.5	SS37-S-0.5	SS38-S-0.5	SS39-S-0.5	SS40-S-0.5	DU03-S-0.5
Collection Date:							04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
PAHs (mg/kg)													
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU02						DU03
Sample Name:				Plants	Soil Biota	Wildlife	DU02-S-0.5	SS36-S-0.5	SS37-S-0.5	SS38-S-0.5	SS39-S-0.5	SS40-S-0.5	DU03-S-0.5
Collection Date:							04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Dioxins/Furans (pg/g)													
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU02						DU03
Sample Name:				Plants	Soil Biota	Wildlife	DU02-S-0.5	SS36-S-0.5	SS37-S-0.5	SS38-S-0.5	SS39-S-0.5	SS40-S-0.5	DU03-S-0.5
Collection Date:							04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
TPH Identification (Presence/Absence)													
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
TPH (mg/kg)													
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: Sample Name: Collection Date: Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU04						DU05
				Plants	Soil Biota	Wildlife	DU04-S-0.5 04/24/2018 0 - 0.5	SS06-S-0.5 04/24/2018 0 - 0.5	SS07-S-0.5 04/24/2018 0 - 0.5	SS08-S-0.5 04/24/2018 0 - 0.5	SS09-S-0.5 04/24/2018 0 - 0.5	SS10-S-0.5 04/24/2018 0 - 0.5	DU05-S-0.5 04/26/2018 0 - 0.5
Metals (mg/kg)													
Arsenic	20	0.15	18.9	10	60	132	**10.4**	--	--	--	--	--	**12.3**
Barium	NV	83	345	500	330[b]	102	**153**	--	--	--	--	--	**134**
Cadmium	2	0.035	1[c]	4	20	14	**0.282**	--	--	--	--	--	**0.365**
Chromium	2,000[d]	24,000[d]	101	42	42	67	**80.8**	--	--	--	--	--	**71.2**
Copper	NV	3,200	76.1	100	50	217	**44.1**	--	--	--	--	--	**52.3**
Lead	250	14	53	120[b]	500	118	**128**	**27.7**	**36.7**	**572**	**59.3**	**34.4**	**34**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	1.25 U	--	--	--	--	--	1.16 U
Selenium	NV	0.26	0.78[c]	1	70	0.3	**0.567 J**	--	--	--	--	--	0.568 U
Silver	NV	0.69	0.7	2	50[f]	14[b]	0.566 U	--	--	--	--	--	0.568 U
Zinc	NV	300	179	86	200	360	**128**	--	--	--	--	--	**127**
PCBs (mg/kg)													
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--	--
VOCs (mg/kg)													
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU04						DU05
Sample Name:				Plants	Soil Biota	Wildlife	DU04-S-0.5	SS06-S-0.5	SS07-S-0.5	SS08-S-0.5	SS09-S-0.5	SS10-S-0.5	DU05-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU04						DU05
Sample Name:				Plants	Soil Biota	Wildlife	DU04-S-0.5	SS06-S-0.5	SS07-S-0.5	SS08-S-0.5	SS09-S-0.5	SS10-S-0.5	DU05-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--	--
SVOCs (mg/kg)													
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU04						DU05
Sample Name:				Plants	Soil Biota	Wildlife	DU04-S-0.5	SS06-S-0.5	SS07-S-0.5	SS08-S-0.5	SS09-S-0.5	SS10-S-0.5	DU05-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
PAHs (mg/kg)													
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU04						DU05
Sample Name:				Plants	Soil Biota	Wildlife	DU04-S-0.5	SS06-S-0.5	SS07-S-0.5	SS08-S-0.5	SS09-S-0.5	SS10-S-0.5	DU05-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Dioxins/Furans (pg/g)													
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU04						DU05
Sample Name:				Plants	Soil Biota	Wildlife	DU04-S-0.5	SS06-S-0.5	SS07-S-0.5	SS08-S-0.5	SS09-S-0.5	SS10-S-0.5	DU05-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/24/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
TPH Identification (Presence/Absence)													
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
TPH (mg/kg)													
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	DU06	DU07	DU08	DU09	DU10	DU10
Sample Name:							DU06-S-0.5	DU07-S-0.5	DU08-S-0.5	DU09-S-0.5	DU10A-S-0.5	DU10B-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/26/2018	04/30/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Metals (mg/kg)												
Arsenic	20	0.15	18.9	10	60	132	**10.2**	**9.31**	**11.9**	**13.1**	**11**	**10.4**
Barium	NV	83	345	500	330[b]	102	**122**	**124**	**122**	**140 J**	**147**	**120**
Cadmium	2	0.035	1[c]	4	20	14	**0.246**	**0.243**	**0.382**	**0.408**	**0.288 J**	**0.185 J**
Chromium	2,000[d]	24,000[d]	101	42	42	67	**64.3**	**61.7**	**72.9**	**73**	**68.7**	**82.7**
Copper	NV	3,200	76.1	100	50	217	**45.6**	**45.6**	**42.3**	**49.6**	**45.5**	**38.2**
Lead	250	14	53	120[b]	500	118	**27.8**	**27.1**	**20.5**	**26.2**	**41.2 J**	**15 J**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	0.594 U	2.12 U	1.17 U	0.473 U	0.813 UJ	0.484 UJ
Selenium	NV	0.26	0.78[c]	1	70	0.3	0.55 U	0.519 U	0.564 U	0.537 U	**0.622 J**	**0.575 J**
Silver	NV	0.69	0.7	2	50[f]	14[b]	0.55 U	0.519 U	0.564 U	0.537 U	0.528 U	0.563 U
Zinc	NV	300	179	86	200	360	**113**	**108**	**100**	**112 J**	**144**	**102**
PCBs (mg/kg)												
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	DU06	DU07	DU08	DU09	DU10	DU10
Sample Name:							DU06-S-0.5	DU07-S-0.5	DU08-S-0.5	DU09-S-0.5	DU10A-S-0.5	DU10B-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/26/2018	04/30/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU06	DU07	DU08	DU09	DU10	
Sample Name:				Plants	Soil Biota	Wildlife	DU06-S-0.5	DU07-S-0.5	DU08-S-0.5	DU09-S-0.5	DU10A-S-0.5	DU10B-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/26/2018	04/30/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--
SVOCs (mg/kg)												
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU06	DU07	DU08	DU09	DU10	
Sample Name:				Plants	Soil Biota	Wildlife	DU06-S-0.5	DU07-S-0.5	DU08-S-0.5	DU09-S-0.5	DU10A-S-0.5	DU10B-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/26/2018	04/30/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
PAHs (mg/kg)												
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU06	DU07	DU08	DU09	DU10	
Sample Name:				Plants	Soil Biota	Wildlife	DU06-S-0.5	DU07-S-0.5	DU08-S-0.5	DU09-S-0.5	DU10A-S-0.5	DU10B-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/26/2018	04/30/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--
Dioxins/Furans (pg/g)												
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU06	DU07	DU08	DU09	DU10	
Sample Name:				Plants	Soil Biota	Wildlife	DU06-S-0.5	DU07-S-0.5	DU08-S-0.5	DU09-S-0.5	DU10A-S-0.5	DU10B-S-0.5
Collection Date:							04/24/2018	04/24/2018	04/26/2018	04/30/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU10	DU11	DU11				
Sample Name:				Plants	Soil Biota	Wildlife	DU10C-S-0.5	DU11-S-0.5	SS51-S-0.5	SS52-S-0.5	SS53-S-0.5	SS54-S-0.5	SS55-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Metals (mg/kg)													
Arsenic	20	0.15	18.9	10	60	132	**10.7**	**16.8**	--	--	--	--	--
Barium	NV	83	345	500	330[b]	102	**129**	**107**	--	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	**0.39 J**	**0.517**	--	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	**72**	**159**	**130**	**169**	**124**	**150**	**111**
Copper	NV	3,200	76.1	100	50	217	**41.5**	**59.5**	--	--	--	--	--
Lead	250	14	53	120[b]	500	118	**14.7 J**	**25.3**	--	--	--	--	--
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	0.402 UJ	2.1 U	--	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	**0.699 J**	**0.716 J**	--	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	0.543 U	0.524 U	--	--	--	--	--
Zinc	NV	300	179	86	200	360	**105**	**111**	--	--	--	--	--
PCBs (mg/kg)													
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--	--
VOCs (mg/kg)													
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU10	DU11	DU11				
Sample Name:				Plants	Soil Biota	Wildlife	DU10C-S-0.5	DU11-S-0.5	SS51-S-0.5	SS52-S-0.5	SS53-S-0.5	SS54-S-0.5	SS55-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU10	DU11	DU11				
Sample Name:				Plants	Soil Biota	Wildlife	DU10C-S-0.5	DU11-S-0.5	SS51-S-0.5	SS52-S-0.5	SS53-S-0.5	SS54-S-0.5	SS55-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--	--
SVOCs (mg/kg)													
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU10	DU11	DU11				
Sample Name:				Plants	Soil Biota	Wildlife	DU10C-S-0.5	DU11-S-0.5	SS51-S-0.5	SS52-S-0.5	SS53-S-0.5	SS54-S-0.5	SS55-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
PAHs (mg/kg)													
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU10	DU11	DU11				
				Plants	Soil Biota	Wildlife	DU10C-S-0.5	DU11-S-0.5	SS51-S-0.5	SS52-S-0.5	SS53-S-0.5	SS54-S-0.5	SS55-S-0.5
							04/27/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018
							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Dioxins/Furans (pg/g)													
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU10	DU11	DU11				
Sample Name:				Plants	Soil Biota	Wildlife	DU10C-S-0.5	DU11-S-0.5	SS51-S-0.5	SS52-S-0.5	SS53-S-0.5	SS54-S-0.5	SS55-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
TPH Identification (Presence/Absence)													
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
TPH (mg/kg)													
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--	--

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Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU12	DU13	DU14	DU14			
Sample Name:				Plants	Soil Biota	Wildlife	DU12-S-0.5	DU13-S-0.5	DU14-S-0.5	SS66-S-0.5	SS67-S-0.5	SS68-S-0.5	SS69-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Metals (mg/kg)													
Arsenic	20	0.15	18.9	10	60	132	**9.69**	**9.11**	**12.3**	--	--	--	--
Barium	NV	83	345	500	330[b]	102	**142**	**93.7**	**99.3**	--	--	--	--
Cadmium	2	0.035	1[c]	4	20	14	**0.227**	**0.249**	**0.579**	--	--	--	--
Chromium	2,000[d]	24,000[d]	101	42	42	67	**74.6**	**92.4**	**117**	**85.5**	**83.7**	**149**	**203**
Copper	NV	3,200	76.1	100	50	217	**50.2**	**40.5**	**53.3**	--	--	--	--
Lead	250	14	53	120[b]	500	118	**58.4**	**14.7**	**84.1**	--	--	--	--
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	1.31 U	1.77 U	1.91 U	--	--	--	--
Selenium	NV	0.26	0.78[c]	1	70	0.3	0.501 U	0.496 U	0.528 U	--	--	--	--
Silver	NV	0.69	0.7	2	50[f]	14[b]	0.501 U	0.496 U	0.528 U	--	--	--	--
Zinc	NV	300	179	86	200	360	**125**	**82.4**	**122**	--	--	--	--
PCBs (mg/kg)													
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--	--	--	--	--
VOCs (mg/kg)													
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU12	DU13	DU14	DU14			
Sample Name:				Plants	Soil Biota	Wildlife	DU12-S-0.5	DU13-S-0.5	DU14-S-0.5	SS66-S-0.5	SS67-S-0.5	SS68-S-0.5	SS69-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--	--	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--	--	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--	--	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--	--	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--	--	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--	--	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--	--	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU12	DU13	DU14	DU14			
Sample Name:				Plants	Soil Biota	Wildlife	DU12-S-0.5	DU13-S-0.5	DU14-S-0.5	SS66-S-0.5	SS67-S-0.5	SS68-S-0.5	SS69-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--	--	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--	--	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--	--	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	--	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--	--	--	--	--
SVOCs (mg/kg)													
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--	--	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--	--	--	--	--

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU12	DU13	DU14	DU14			
Sample Name:				Plants	Soil Biota	Wildlife	DU12-S-0.5	DU13-S-0.5	DU14-S-0.5	SS66-S-0.5	SS67-S-0.5	SS68-S-0.5	SS69-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--	--	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--	--	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--	--	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--	--	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--	--	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--	--	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--	--	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--	--	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--	--	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--	--	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--	--	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--	--	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
PAHs (mg/kg)													
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU12	DU13	DU14	DU14			
Sample Name:				Plants	Soil Biota	Wildlife	DU12-S-0.5	DU13-S-0.5	DU14-S-0.5	SS66-S-0.5	SS67-S-0.5	SS68-S-0.5	SS69-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--	--	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--	--	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--	--	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--	--	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--	--	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--	--	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--	--	--	--	--
Dioxins/Furans (pg/g)													
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU12	DU13	DU14	DU14			
Sample Name:				Plants	Soil Biota	Wildlife	DU12-S-0.5	DU13-S-0.5	DU14-S-0.5	SS66-S-0.5	SS67-S-0.5	SS68-S-0.5	SS69-S-0.5
Collection Date:							04/27/2018	04/26/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018	04/27/2018
Collection Depth (ft bgs):							0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--	--	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--	--	--	--	--
TPH Identification (Presence/Absence)													
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
TPH (mg/kg)													
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--	--	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--	--	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--	--	--	--	--

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	DU14 / SS70-S-0.5 / 04/27/2018 / 0 - 0.5	DU15 / DU15-S-0.5 / 04/25/2018 / 0 - 0.5	DU18 / DU18-S-0.5 / 04/25/2018 / 0 - 0.5
Metals (mg/kg)									
Arsenic	20	0.15	18.9	10	60	132	--	**9.9**	**8.12**
Barium	NV	83	345	500	330[b]	102	--	**100**	**93.1**
Cadmium	2	0.035	1[c]	4	20	14	--	**0.334**	**0.188 J**
Chromium	2,000[d]	24,000[d]	101	42	42	67	**198**	**64.3**	**49.7**
Copper	NV	3,200	76.1	100	50	217	--	**32.5**	**35.2**
Lead	250	14	53	120[b]	500	118	--	**12.9**	**11.3**
Mercury	2	0.1	0.14[e]	0.3	0.1	5.5	--	1.38 U	2.73 U
Selenium	NV	0.26	0.78[c]	1	70	0.3	--	0.575 U	0.53 U
Silver	NV	0.69	0.7	2	50[f]	14[b]	--	0.575 U	0.53 U
Zinc	NV	300	179	86	200	360	--	**88.4**	**72.2**
PCBs (mg/kg)									
Aroclor 1016	NV	--	NV	NV	NV	NV	--	--	--
Aroclor 1221	NV	--	NV	NV	NV	NV	--	--	--
Aroclor 1232	NV	--	NV	NV	NV	NV	--	--	--
Aroclor 1242	NV	--	NV	NV	NV	NV	--	--	--
Aroclor 1248	NV	--	NV	NV	NV	NV	--	--	--
Aroclor 1254	NV	--	NV	NV	NV	NV	--	--	--
Aroclor 1260	NV	--	NV	NV	NV	NV	--	--	--
Total PCB Aroclors	1	0.14	NV	40	NV	0.65	--	--	--
VOCs (mg/kg)									
1,1,1,2-Tetrachloroethane	NV	38.5	NV	NV	NV	NV	--	--	--
1,1,1-Trichloroethane	2	160,000	NV	NV	NV	NV	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	NV	NV	NV	NV	--	--	--
1,1,2-Trichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--
1,1-Dichloroethane	NV	17.5	NV	NV	NV	NV	--	--	--
1,1-Dichloroethene	NV	4,000	NV	NV	NV	NV	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3-Trichlorobenzene	NV	NV	NV	NV	20	NV	--	--	--
1,2,3-Trichloropropane	NV	NV	NV	NV	NV	NV	--	--	--
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--
1,2,4-Trimethylbenzene	NV	NV	NV	NV	NV	NV	--	--	--
1,2-Dibromo-3-chloropropane	NV	1.25	NV	NV	NV	NV	--	--	--
1,2-Dibromoethane	0.005	0.5	NV	NV	NV	NV	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--
1,2-Dichloroethane	NV	11	NV	NV	NV	NV	--	--	--
1,2-Dichloropropane	NV	27.8	NV	NV	700	NV	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	NV	NV	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU14	DU15	DU18
				Plants	Soil Biota	Wildlife	SS70-S-0.5	DU15-S-0.5	DU18-S-0.5
							04/27/2018	04/25/2018	04/25/2018
							0 - 0.5	0 - 0.5	0 - 0.5
1,3-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	20	NV	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	NV	NV	--	--	--
2-Butanone	NV	48,000	NV	NV	NV	NV	--	--	--
2-Chloroethylvinyl ether	NV	NV	NV	NV	NV	NV	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--
2-Hexanone	NV	NV	NV	NV	NV	NV	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	NV	NV	--	--	--
4-Isopropyltoluene	NV	8,000	NV	NV	NV	NV	--	--	--
4-Methyl-2-pentanone	NV	NV	NV	NV	NV	NV	--	--	--
Acetone	NV	2.1	NV	NV	NV	NV	--	--	--
Acrolein	NV	40	NV	NV	NV	NV	--	--	--
Acrylonitrile	NV	NV	NV	NV	NV	NV	--	--	--
Benzene	0.03	18.2	NV	NV	NV	NV	--	--	--
Bromobenzene	NV	NV	NV	NV	NV	NV	--	--	--
Bromodichloromethane	NV	16.1	NV	NV	NV	NV	--	--	--
Bromoethane	NV	NV	NV	NV	NV	NV	--	--	--
Bromoform	NV	127	NV	NV	NV	NV	--	--	--
Bromomethane	NV	112	NV	NV	NV	NV	--	--	--
Carbon disulfide	NV	8,000	NV	NV	NV	NV	--	--	--
Carbon tetrachloride	NV	14.3	NV	NV	NV	NV	--	--	--
Chlorobenzene	NV	1,600	NV	NV	40	NV	--	--	--
Chlorobromomethane	NV	NV	NV	NV	NV	NV	--	--	--
Chloroethane	NV	NV	NV	NV	NV	NV	--	--	--
Chloroform	NV	32.3	NV	NV	NV	NV	--	--	--
Chloromethane	NV	NV	NV	NV	NV	NV	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--
cis-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--
Dibromochloromethane	NV	11.9	NV	NV	NV	NV	--	--	--
Dibromomethane	NV	NV	NV	NV	NV	NV	--	--	--
Dichlorodifluoromethane	NV	16,000	NV	NV	NV	NV	--	--	--
Ethylbenzene	6	8,000	NV	NV	NV	NV	--	--	--
Freon 113	NV	2,400,000	NV	NV	NV	NV	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--
Isopropylbenzene	NV	800	NV	NV	NV	NV	--	--	--
m,p-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--
Methyl iodide	NV	NV	NV	NV	NV	NV	--	--	--
Methyl tert-butyl ether	NV	556	NV	NV	NV	NV	--	--	--
Methylene chloride	0.02	500	NV	NV	NV	NV	--	--	--
Naphthalene	5	1,600	NV	NV	NV	NV	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU14	DU15	DU18
				Plants	Soil Biota	Wildlife	SS70-S-0.5	DU15-S-0.5	DU18-S-0.5
							04/27/2018	04/25/2018	04/25/2018
							0 - 0.5	0 - 0.5	0 - 0.5
n-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--
n-Propylbenzene	NV	800	NV	NV	NV	NV	--	--	--
o-Xylene	9[g]	16,000[g]	NV	NV	NV	NV	--	--	--
sec-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--
Styrene	NV	16,000	NV	300	NV	NV	--	--	--
tert-Butylbenzene	NV	NV	NV	NV	NV	NV	--	--	--
Tetrachloroethene	0.05	0.0028	NV	NV	NV	NV	--	--	--
Toluene	7	6,400	NV	200	NV	NV	--	--	--
trans-1,2-dichloroethene	NV	1,600	NV	NV	NV	NV	--	--	--
trans-1,3-Dichloropropene	NV	10	NV	NV	NV	NV	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	NV	NV	NV	NV	--	--	--
Trichloroethene	0.03	0.0015	NV	NV	NV	NV	--	--	--
Trichlorofluoromethane	NV	24,000	NV	NV	NV	NV	--	--	--
Vinyl Acetate	NV	80,000	NV	NV	NV	NV	--	--	--
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--
Xylenes, Total	9	16,000	NV	NV	NV	NV	--	--	--
SVOCs (mg/kg)									
1,2,4-Trichlorobenzene	NV	34.5	NV	NV	20	NV	--	--	--
1,2-Dichlorobenzene	NV	7,200	NV	NV	NV	NV	--	--	--
1,2-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--
1,3-Dichlorobenzene	NV	NV	NV	NV	NV	NV	--	--	--
1,4-Dichlorobenzene	NV	185	NV	NV	NV	NV	--	--	--
1,4-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--
2,3,4,6-Tetrachlorophenol	NV	2,400	NV	NV	NV	NV	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	NV	20	20	NV	--	--	--
2,3-Dichloroaniline	NV	NV	NV	NV	NV	NV	--	--	--
2,4,5-Trichlorophenol	NV	8,000	NV	4	9	NV	--	--	--
2,4,6-Trichlorophenol	NV	80	NV	NV	10	NV	--	--	--
2,4-Dichlorophenol	NV	240	NV	NV	NV	NV	--	--	--
2,4-Dimethylphenol	NV	1,600	NV	NV	NV	NV	--	--	--
2,4-Dinitrophenol	NV	160	NV	20	NV	NV	--	--	--
2,4-Dinitrotoluene	NV	3.23	NV	NV	NV	NV	--	--	--
2,6-Dinitrotoluene	NV	0.667	NV	NV	NV	NV	--	--	--
2-Chloronaphthalene	NV	NV	NV	NV	NV	NV	--	--	--
2-Chlorophenol	NV	400	NV	NV	NV	NV	--	--	--
2-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--
2-Nitroaniline	NV	800	NV	NV	NV	NV	--	--	--
2-Nitrophenol	NV	NV	NV	NV	NV	NV	--	--	--
3- & 4-Methylphenol	NV	NV	NV	NV	NV	NV	--	--	--
3,3-Dichlorobenzidine	NV	2.22	NV	NV	NV	NV	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	DU14 / SS70-S-0.5 / 04/27/2018 / 0 - 0.5	DU15 / DU15-S-0.5 / 04/25/2018 / 0 - 0.5	DU18 / DU18-S-0.5 / 04/25/2018 / 0 - 0.5
3-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--
4-Bromophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--
4-Chloro-3-methylphenol	NV	NV	NV	NV	NV	NV	--	--	--
4-Chloroaniline	NV	5	NV	NV	NV	NV	--	--	--
4-Chlorophenylphenyl ether	NV	NV	NV	NV	NV	NV	--	--	--
4-Nitroaniline	NV	NV	NV	NV	NV	NV	--	--	--
4-Nitrophenol	NV	NV	NV	NV	7	NV	--	--	--
Aniline	NV	175	NV	NV	NV	NV	--	--	--
Benzidine	NV	0.00435	NV	NV	NV	NV	--	--	--
Benzyl alcohol	NV	8,000	NV	NV	NV	NV	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	NV	NV	NV	NV	--	--	--
Bis(2-chloroethyl)ether	NV	0.909	NV	NV	NV	NV	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	NV	NV	NV	NV	--	--	--
Bis(2-ethylhexyl)phthalate	NV	71.4	NV	NV	NV	NV	--	--	--
Butylbenzylphthalate	NV	526	NV	NV	NV	NV	--	--	--
Carbazole	NV	NV	NV	NV	NV	NV	--	--	--
Di(2-ethylhexyl)adipate	NV	833	NV	NV	NV	NV	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--
Diethyl phthalate	NV	64,000	NV	100	NV	NV	--	--	--
Dimethyl phthalate	NV	NV	NV	NV	200	NV	--	--	--
Di-n-butyl phthalate	NV	NV	NV	200	NV	NV	--	--	--
Di-n-octyl phthalate	NV	800	NV	NV	NV	NV	--	--	--
Hexachlorobenzene	NV	0.625	NV	NV	NV	NV	--	--	--
Hexachlorobutadiene	NV	12.8	NV	NV	NV	NV	--	--	--
Hexachlorocyclopentadiene	NV	480	NV	NV	NV	NV	--	--	--
Hexachloroethane	NV	25	NV	NV	NV	NV	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.33	NV	NV	NV	NV	--	--	--
Isophorone	NV	1,050	NV	NV	NV	NV	--	--	--
m-Dinitrobenzene	NV	8	NV	NV	NV	NV	--	--	--
Nitrobenzene	NV	160	NV	NV	40	NV	--	--	--
N-Nitrosodimethylamine	NV	0.00667	NV	NV	NV	NV	--	--	--
N-Nitrosodiphenylamine	NV	204	NV	NV	20	NV	--	--	--
N-Nitrosodipropylamine	NV	0.143	NV	NV	NV	NV	--	--	--
Pentachlorophenol	NV	2.5	NV	NV	NV	NV	--	--	--
Phenol	NV	24,000	NV	70	30	NV	--	--	--
Pyridine	NV	80	NV	NV	NV	NV	--	--	--
PAHs (mg/kg)									
1-Methylnaphthalene	NV	34.5	NV	NV	NV	NV	--	--	--
2-Methylnaphthalene	NV	320	NV	NV	NV	NV	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a] Plants	EICs[a] Soil Biota	EICs[a] Wildlife	DU14 / SS70-S-0.5 / 04/27/2018 / 0 - 0.5	DU15 / DU15-S-0.5 / 04/25/2018 / 0 - 0.5	DU18 / DU18-S-0.5 / 04/25/2018 / 0 - 0.5
Acenaphthene	NV	5	NV	20	NV	NV	--	--	--
Acenaphthylene	NV	NV	NV	NV	NV	NV	--	--	--
Anthracene	NV	110	NV	NV	NV	NV	--	--	--
Benzo(a)anthracene	NV	1.37	NV	NV	NV	NV	--	--	--
Benzo(a)pyrene	0.1	0.19	NV	NV	NV	12	--	--	--
Benzo(b)fluoranthene	NV	1.37	NV	NV	NV	NV	--	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	NV	NV	--	--	--
Benzo(j+k)fluoranthene	NV	13.7	NV	NV	NV	NV	--	--	--
Chrysene	NV	137	NV	NV	NV	NV	--	--	--
Dibenzo(a,h)anthracene	NV	0.137	NV	NV	NV	NV	--	--	--
Dibenzofuran	NV	80	NV	NV	NV	NV	--	--	--
Fluoranthene	NV	3,200	NV	NV	NV	NV	--	--	--
Fluorene	NV	3,200	NV	NV	30	NV	--	--	--
Indeno(1,2,3-cd)pyrene	NV	1.37	NV	NV	NV	NV	--	--	--
Naphthalene	5	0.24	NV	NV	NV	NV	--	--	--
Phenanthrene	NV	NV	NV	NV	NV	NV	--	--	--
Pyrene	NV	2,400	NV	NV	NV	NV	--	--	--
Total Benzofluoranthenes	NV	1.37	NV	NV	NV	NV	--	--	--
Total Naphthalenes	5	1,600	NV	NV	NV	NV	--	--	--
cPAH TEQ	0.1	--	NV	NV	NV	NV	--	--	--
Dioxins/Furans (pg/g)									
1,2,3,4,6,7,8-HpCDD	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3,4,6,7,8-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3,4,7,8,9-HpCDF	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3,4,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3,4,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3,6,7,8-HxCDD	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3,7,8,9-HxCDD	NV	161	NV	NV	NV	NV	--	--	--
1,2,3,7,8,9-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3,7,8-PeCDD	NV	NV	NV	NV	NV	NV	--	--	--
1,2,3,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--
2,3,4,6,7,8-HxCDF	NV	NV	NV	NV	NV	NV	--	--	--
2,3,4,7,8-PeCDF	NV	NV	NV	NV	NV	NV	--	--	--
2,3,7,8-TCDD	NV	12.8	NV	NV	NV	NV	--	--	--
2,3,7,8-TCDF	NV	NV	NV	NV	NV	NV	--	--	--
OCDD	NV	NV	NV	NV	NV	NV	--	--	--
OCDF	NV	NV	NV	NV	NV	NV	--	--	--
Total HpCDDs	NV	NV	NV	NV	NV	NV	--	--	--
Total HpCDFs	NV	NV	NV	NV	NV	NV	--	--	--

Location: / Sample Name: / Collection Date: / Collection Depth (ft bgs):	MTCA A, Unrestricted Land Use	MTCA B and Protection of Groundwater (vadose and saturated)	Site-Specific Background Value	EICs[a]			DU14	DU15	DU18
				Plants	Soil Biota	Wildlife	SS70-S-0.5	DU15-S-0.5	DU18-S-0.5
							04/27/2018	04/25/2018	04/25/2018
							0 - 0.5	0 - 0.5	0 - 0.5
Total HxCDDs	NV	NV	NV	NV	NV	NV	--	--	--
Total HxCDFs	NV	NV	NV	NV	NV	NV	--	--	--
Total PeCDDs	NV	NV	NV	NV	NV	NV	--	--	--
Total PeCDFs	NV	NV	NV	NV	NV	NV	--	--	--
Total TCDDs	NV	NV	NV	NV	NV	NV	--	--	--
Total TCDFs	NV	NV	NV	NV	NV	NV	--	--	--
Dioxin/Furan TEQ (ND=0)	NV	12.8	NV	NV	NV	NV	--	--	--
Total Dioxins Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--
Total Dioxins Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--
Total Furans Mammalian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--
Total Furans Avian TEQ (ND=0)[h]	NV	NV	NV	2	2	2	--	--	--
TPH Identification (Presence/Absence)									
Gasoline	NV	NV	NV	NV	NV	NV	--	--	--
Diesel	NV	NV	NV	NV	NV	NV	--	--	--
Lube Oil	NV	NV	NV	NV	NV	NV	--	--	--
TPH (mg/kg)									
Gasoline	100[i]	NV	NV	NV	100	5,000	--	--	--
Diesel	2,000	NV	NV	NV	200	6,000	--	--	--
Lube Oil	2,000	NV	NV	NV	NV	NV	--	--	--
Heavy Oils (Diesel + Lube Oil)	2,000	--	NV	NV	200	6,000	--	--	--

MAUL FOSTER ALONGI

Table 2-3
Analytical Results—Discrete and ISM Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

NOTES:

Calculated sums use the highest non-detect value when all constituents are non-detect. When detect and non-detect values are summed, zero is used for non-detect values.

Detected results are indicated by bold font.

The lowest value of MTCA B cleanup levels and cleanup levels protective of groundwater (vadose and saturated) is provided. Non-detect data not compared to a cleanup level.

Results that exceed an ecological indicator concentration or a site-specific natural background value (if higher than the EIC) are shaded. Non-detect results are not evaluated against cleanup criteria.

Results that exceed both a MTCA A cleanup level and an EIC are shaded. Non-detect results are not evaluated against cleanup criteria.

Results that exceed MTCA A cleanup level, a MTCA B cleanup level or a cleanup level protective of groundwater, are shaded. Non-detect results or results below site-specific background criteria are not evaluated against cleanup criteria.

-- = not analyzed.

cPAH TEQ = carcinogenic PAH toxic equivalency quotient.

EIC = ecological indicator concentration.

ft bgs = feet below ground surface.

J = the result is an estimated value.

mg/kg = milligrams per kilogram.

MTCA = Model Toxics Control Act.

ND = TPH not detected.

NV = no value.

PAH = polycyclic aromatic hydrocarbon.

PCB = polychlorinated biphenyl.

pg/g = picograms per gram.

SVOC = semivolatile organic compound.

Total Naphthalenes = sum of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene.

Total PCB Aroclors = sum of all PCB Aroclors.

TPH = total petroleum hydrocarbon.

U = result is non-detect.

UJ = result is non-detect and an estimated value.

VOC = volatile organic compound.

[a]EICs were obtained from MTCA Table 749-3.

[b]Eco-SSLs were obtained from: https://www.epa.gov/chemical-research/interim-ecological-soil-screening-level-documents.

[c]Statewide 90th percentile natural background concentration developed by the Washington State Department of Ecology, obtained from: https://fortress.wa.gov/ecy/publications/documents/94115.pdf.

[d]Value is for chromium III.

[e]Calculated using normal distribution in MTCA Stat program downloaded from: https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools.

[f]Oak Ridge National Laboratory screening benchmark concentration for the toxicity of chemicals to soil microorganisms and microbial processes, presented here: https://info.ornl.gov/sites/publications/Files/Pub57854.pdf.

[g]m-xylene and o-xylene MTCA A cleanup level is for xylenes.

[h]Total dioxin TEQ and total furan TEQ summed using methodology described in Washington State Department of Ecology publication 16-09-044, "Toxics Cleanup Program Implementation Memo #13", June 12, 2016.

[i]MTCA cleanup level is for gasoline-range organics with no detectable benzene present.

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP2	GP8	GP11	GP12	GP13	GP15	GP17	GP18
				Sample Name:	GP2-W-10.0	GP8-W-12.5	GP11-W-18.0	GP12-W-15.0	GP13-W-13.0	GP15-W-18.0	GP17-W-13.5	GP18-W-13.0
				Collection Date:	08/19/2014	08/19/2014	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/21/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
Total Metals (ug/L)												
Arsenic	5	0.0583	5[(a)]	--	--	--	--	--	--	**140**	**64**	**40**
Barium	NV	3,200	1,000	--	--	--	--	--	--	**920**	**240**	**170**
Cadmium	5	8	0.25	--	--	--	--	--	--	4.4 U	4.4 U	4.4 U
Chromium	50	NV	57.2	--	--	--	--	--	--	**640**	**320**	**190**
Lead	15	NV	0.54	--	--	--	--	--	--	**57**	**43**	**19**
Mercury	2	NV	0.012	--	--	--	--	--	--	0.5 U	0.5 U	0.5 U
Selenium	NV	80	5	--	--	--	--	--	--	**6.8**	5.6 U	5.6 U
Silver	NV	80	1.9	--	--	--	--	--	--	11 U	11 U	11 U
Dissolved Metals (ug/L)												
Arsenic	5	0.0583	5[(a)]	--	**2.9**	--	--	--	--	**11**	**17**	**15**
Barium	NV	3,200	1,000	--	**20.5**	--	--	--	--	**48**	**60**	**35**
Cadmium	5	8	0.25	--	0.1 U	--	--	--	--	4 U	4 U	4 U
Chromium	50	NV	57.2	--	0.5 U	--	--	--	--	10 U	10 U	10 U
Copper	NV	320	3.47	--	**1.0**	--	--	--	--	--	--	--
Lead	15	NV	0.54	--	0.1 U	--	--	--	--	1 U	1 U	1 U
Mercury	2	NV	0.012	--	0.1 U	--	--	--	--	0.5 U	0.5 U	0.5 U
Selenium	NV	80	5	--	0.5 U	--	--	--	--	5 U	5 U	5 U
Silver	NV	80	1.9	--	0.2 U	--				10 U	10 U	10 U
Zinc	NV	4,800	32.3	--	4.0 U	--	--	--	--	--	--	--
VOCs (ug/L)												
1,1,1,2-Tetrachloroethane	NV	1.68	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,1,1-Trichloroethane	200	16000	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,1,2,2-Tetrachloroethane	NV	0.219	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,1,2-Trichloroethane	NV	0.768	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,1-Dichloroethane	NV	7.68	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,1-Dichloroethene	NV	400	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,1-Dichloropropene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,2,3-Trichlorobenzene	NV	NV	--	--	--	0.5 U	0.2 U	0.2 U	0.2 U	--	--	--
1,2,3-Trichloropropane	NV	0.0015	--	--	--	0.5 U	0.2 U	0.2 U	0.2 U	--	--	--
1,2,4-Trichlorobenzene	NV	1.51	--	--	--	0.5 U	0.2 U	0.2 U	0.2 U	--	--	--
1,2,4-Trimethylbenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,2-Dibromo-3-chloropropane	NV	0.05	--	--	--	0.5 U	1 U	1 U	1 U	--	--	--
1,2-Dibromoethane	0.01	0.02	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,2-Dichlorobenzene	NV	720	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,2-Dichloroethane	5	0.48	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--

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Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP2	GP8	GP11	GP12	GP13	GP15	GP17	GP18
				Sample Name:	GP2-W-10.0	GP8-W-12.5	GP11-W-18.0	GP12-W-15.0	GP13-W-13.0	GP15-W-18.0	GP17-W-13.5	GP18-W-13.0
				Collection Date:	08/19/2014	08/19/2014	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/21/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
1,2-Dichloropropane	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,3,5-Trimethylbenzene	NV	80	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,3-Dichlorobenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,3-Dichloropropane	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
1,4-Dichlorobenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
2,2-Dichloropropane	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
2-Butanone	NV	4,800	--	--	--	5 U	5 U	5 U	5 U	--	--	--
2-Chloroethylvinyl ether	NV	NV	--	--	--	1 U	1 U	1 U	1 U	--	--	--
2-Chlorotoluene	NV	160	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
2-Hexanone	NV	NV	--	--	--	5 U	2 U	2 U	2 U	--	--	--
4-Chlorotoluene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
4-Isopropyltoluene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
4-Methyl-2-pentanone	NV	640	--	--	--	5 U	2 U	2 U	2 U	--	--	--
Acetone	NV	7,200	--	--	--	5 U	5 U	5 U	5 U	--	--	--
Acrolein	NV	4	--	--	--	5 U	--	--	--	--	--	--
Acrylonitrile	NV	0.08	--	--	--	1 U	--	--	--	--	--	--
Benzene	5	0.8	--	--	1 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Bromobenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Bromodichloromethane	NV	0.71	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Bromoethane	NV	NV	--	--	--	0.2 U	--	--	--	--	--	--
Bromoform	NV	5.54	--	--	--	0.2 U	1 U	1 U	1 U	--	--	--
Bromomethane	NV	11.2	--	--	--	1 U	0.26 U	0.26 U	0.26 U	--	--	--
Carbon disulfide	NV	800	NV	400	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Carbon tetrachloride	NV	0.63	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Chlorobenzene	NV	160	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Chlorobromomethane	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Chloroethane	NV	NV	--	--	--	0.2 U	1 U	1 U	1 U	--	--	--
Chloroform	NV	80	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Chloromethane	NV	NV	--	--	--	0.5 U	1 U	1 U	1 U	--	--	--
cis-1,2-Dichloroethene	NV	16	NV	160	--	**0.6**	0.2 U	0.2 U	0.2 U	--	--	--
cis-1,3-Dichloropropene	NV	0.44	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Dibromochloromethane	NV	0.52	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Dibromomethane	NV	80	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Dichlorodifluoromethane	NV	1,600	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--
Ethylbenzene	700	800	--	--	1 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Freon 113	NV	240,000	--	--	--	0.2 U	--	--	--	--	--	--

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP2	GP8	GP11	GP12	GP13	GP15	GP17	GP18
				Sample Name:	GP2-W-10.0	GP8-W-12.5	GP11-W-18.0	GP12-W-15.0	GP13-W-13.0	GP15-W-18.0	GP17-W-13.5	GP18-W-13.0
				Collection Date:	08/19/2014	08/19/2014	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/21/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
Hexachlorobutadiene	NV	0.56	--	--	--	0.5 U	0.2 U	0.2 U	0.2 U	--	--	--
Isopropylbenzene	NV	800	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
m,p-Xylene	1,000[(c)]	1,600[c]	--	--	2 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	--
Methyl iodide	NV	NV	--	--	--	1 U	1.5 U	1.5 U	1.5 U	--	--	--
Methyl tert-butyl ether	20	24.3	--	--	--	--	0.2 U	0.2 U	0.2 U	--	--	--
Methylene chloride	5	5.83	--	--	--	1 U	1 U	1 U	1 U	--	--	--
Naphthalene	160	160	--	--	--	0.5 U	1 U	1 U	1 U	--	--	--
n-Butylbenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
n-Propylbenzene	NV	800	NV	NV	--	0.2 U	0.2 U	**0.32**	0.2 U	--	--	--
o-Xylene	1,000[(c)]	1,600[(c)]	--	--	1 U	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
sec-Butylbenzene	NV	800	NV	NV	--	0.2 U	0.2 U	**0.29**	0.2 U	--	--	--
Styrene	NV	1,600	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
tert-Butylbenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Tetrachloroethene	5	21	0.69	22.9	--	**11**	0.2 U	0.2 U	0.2 U	--	--	--
Toluene	1,000	640	--	--	1 U	0.2 U	1 U	1 U	1 U	--	--	--
trans-1,2-dichloroethene	NV	160	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
trans-1,3-Dichloropropene	NV	240	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	--	--	--	1 U	--	--	--	--	--	--
Trichloroethene	5	0.54	2.5	1.55	--	**0.79**	0.2 U	0.2 U	0.2 U	--	--	--
Trichlorofluoromethane	NV	2,400	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Vinyl Acetate	NV	8,000	--	--	--	0.2 U	1 U	1 U	1 U	--	--	--
Vinyl chloride	0.2	24	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--	--	--
Xylenes, Total	1,000[(c)]	1,600[(c)]	--	--	2 U	0.4 U	0.4 U	0.4 U	0.4 U	--	--	--
SVOCs (ug/L)												
1,2,4-Trichlorobenzene	NV	1.51	--	--	--	--	1 U	0.99 U	--	--	--	--
1,2-Dichlorobenzene	NV	720	--	--	--	--	1 U	0.99 U	--	--	--	--
1,2-Dinitrobenzene	NV	1.6	--	--	--	--	1 U	0.99 U	--	--	--	--
1,3-Dichlorobenzene	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
1,4-Dichlorobenzene	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
1,4-Dinitrobenzene	NV	1.6	--	--	--	--	1 U	0.99 U	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	480	--	--	--	--	1 U	0.99 U	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
2,3-Dichloroaniline	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
2,4,5-Trichlorophenol	NV	800	--	--	--	--	1 U	0.99 U	--	--	--	--
2,4,6-Trichlorophenol	NV	3.98	--	--	--	--	1 U	0.99 U	--	--	--	--
2,4-Dichlorophenol	NV	24	--	--	--	--	1 U	0.99 U	--	--	--	--

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP2	GP8	GP11	GP12	GP13	GP15	GP17	GP18
				Sample Name:	GP2-W-10.0	GP8-W-12.5	GP11-W-18.0	GP12-W-15.0	GP13-W-13.0	GP15-W-18.0	GP17-W-13.5	GP18-W-13.0
				Collection Date:	08/19/2014	08/19/2014	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/21/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
2,4-Dimethylphenol	NV	160	--	--	--	--	1 U	0.99 U	--	--	--	--
2,4-Dinitrophenol	NV	32	--	--	--	--	5.2 U	5 U	--	--	--	--
2,4-Dinitrotoluene	NV	32	--	--	--	--	1 U	0.99 U	--	--	--	--
2,6-Dinitrotoluene	NV	16	--	--	--	--	1 U	0.99 U	--	--	--	--
2-Chloronaphthalene	NV	640	--	--	--	--	1 U	0.99 U	--	--	--	--
2-Chlorophenol	NV	40	--	--	--	--	1 U	0.99 U	--	--	--	--
2-Methylphenol	NV	400	--	--	--	--	1 U	0.99 U	--	--	--	--
2-Nitroaniline	NV	160	--	--	--	--	1 U	0.99 U	--	--	--	--
2-Nitrophenol	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
3- & 4-Methylphenol	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
3,3-Dichlorobenzidine	NV	0.19	--	--	--	--	1 U	0.99 U	--	--	--	--
3-Nitroaniline	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	--	--	--	--	5.2 U	5 U	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
4-Chloroaniline	NV	0.22	--	--	--	--	1 U	0.99 U	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
4-Nitroaniline	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
4-Nitrophenol	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
Aniline	NV	7.68	--	--	--	--	5.2 U	5 U	--	--	--	--
Benzidine	NV	0.00038	--	--	--	--	5.2 U	5 U	--	--	--	--
Benzyl alcohol	NV	800	--	--	--	--	1 U	0.99 U	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.04	--	--	--	--	1 U	0.99 U	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	6.25	--	--	--	--	5.2 U	5 U	--	--	--	--
Butylbenzylphthalate	NV	46.1	--	--	--	--	1 U	0.99 U	--	--	--	--
Carbazole	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
Di(2-ethylhexyl)adipate	NV	72.92	--	--	--	--	1 U	0.99 U	--	--	--	--
Dibenzofuran	NV	16	--	--	--	--	1 U	0.99 U	--	--	--	--
Diethyl phthalate	NV	12,800	--	--	--	--	1 U	0.99 U	--	--	--	--
Dimethyl phthalate	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
Di-n-butyl phthalate	NV	1,600	NV	NV	--	--	**1**	**1.6**	--	--	--	--
Di-n-octyl phthalate	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
Hexachlorobenzene	NV	0.05	--	--	--	--	1 U	0.99 U	--	--	--	--
Hexachlorobutadiene	NV	0.56	--	--	--	--	1 U	0.99 U	--	--	--	--

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Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP2	GP8	GP11	GP12	GP13	GP15	GP17	GP18
				Sample Name:	GP2-W-10.0	GP8-W-12.5	GP11-W-18.0	GP12-W-15.0	GP13-W-13.0	GP15-W-18.0	GP17-W-13.5	GP18-W-13.0
				Collection Date:	08/19/2014	08/19/2014	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/21/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
Hexachlorocyclopentadiene	NV	48	--	--	--	--	1 U	0.99 U	--	--	--	--
Hexachloroethane	NV	3.13	--	--	--	--	1 U	0.99 U	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.11	--	--	--	--	1 U	0.99 U	--	--	--	--
Isophorone	NV	46.05	--	--	--	--	1 U	0.99 U	--	--	--	--
m-Dinitrobenzene	NV	1.6	--	--	--	--	1 U	0.99 U	--	--	--	--
Nitrobenzene	NV	16	--	--	--	--	1 U	0.99 U	--	--	--	--
N-Nitrosodimethylamine	NV	0.064	--	--	--	--	1 U	0.99 U	--	--	--	--
N-Nitrosodiphenylamine	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
N-Nitrosodipropylamine	NV	NV	--	--	--	--	1 U	0.99 U	--	--	--	--
Pentachlorophenol	NV	0.22	--	--	--	--	5.2 U	5 U	--	--	--	--
Phenol	NV	2,400	--	--	--	--	1 U	0.99 U	--	--	--	--
Pyridine	NV	8	--	--	--	--	1 U	0.99 U	--	--	--	--
PAHs (ug/L)												
1-Methylnaphthalene	NV	1.51	--	--	0.1 U	--	0.1 U	0.099 U	--	--	--	--
2-Methylnaphthalene	NV	32	NV	--	0.1 U	--	0.1 U	**0.26**	--	--	--	--
Acenaphthene	NV	960	--	--	0.1 U	--	0.1 U	0.099 U	--	--	--	--
Acenaphthylene	NV	NV	--	--	0.1 U	--	0.1 U	0.099 U	--	--	--	--
Anthracene	NV	4,800	--	--	0.1 U	--	0.1 U	0.099 U	--	--	--	--
Benzo(a)anthracene	NV	0.12	0.0028	--	0.1 U	--	0.01 U	**0.013**	--	--	--	--
Benzo(a)pyrene	0.1	0.01	0.0028	--	0.1 U	--	0.01 U	0.0099 U	--	--	--	--
Benzo(b)fluoranthene	NV	0.12	0.0028	--	--	--	0.01 U	0.0099 U	--	--	--	--
Benzo(ghi)perylene	NV	NV	--	--	0.1 U	--	0.01 U	0.0099 U	--	--	--	--
Benzo(j+k)fluoranthene	NV	1.2	--	--	--	--	0.01 U	0.0099 U	--	--	--	--
Chrysene	NV	12	0.0028	--	0.1 U	--	0.01 U	0.0099 U	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.01	--	--	0.1 U	--	0.01 U	0.0099 U	--	--	--	--
Dibenzofuran	NV	16	--	--	0.1 U	--	--	--	--	--	--	--
Fluoranthene	NV	640	--	--	0.1 U	--	0.1 U	0.099 U	--	--	--	--
Fluorene	NV	640	--	--	0.1 U	--	0.1 U	0.099 U	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	0.12	--	--	0.1 U	--	0.01 U	0.0099 U	--	--	--	--
Naphthalene	160	160	4,713	--	**0.14**	--	0.1 U	**0.18**	--	--	--	--
Phenanthrene	NV	NV	--	--	0.1 U	--	0.1 U	0.099 U	--	--	--	--
Pyrene	NV	480	830	--	0.1 U	--	0.1 U	**0.15**	--	--	--	--
Total Benzofluoranthenes	NV	--	--	--	0.1 U	--	--	--	--	--	--	--
Total Naphthalenes	160	--	4,713	--	**0.24**	--	0.1 U	**0.49**	--	--	--	--
cPAH TEQ	0.1	--	0.0028	--	ND	--	ND	**0.0013**	--	--	--	--

MAUL FOSTER ALONGI

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP2	GP8	GP11	GP12	GP13	GP15	GP17	GP18
				Sample Name:	GP2-W-10.0	GP8-W-12.5	GP11-W-18.0	GP12-W-15.0	GP13-W-13.0	GP15-W-18.0	GP17-W-13.5	GP18-W-13.0
				Collection Date:	08/19/2014	08/19/2014	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/20/2015	04/21/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	ND	ND	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	**DETECT**	ND	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	**DETECT**	ND	--	--	--	--	--	--
TPH (ug/L)												
Gasoline	1,000[(d)]	NV	NV	NV	--	--	100 U	100 U	100 U	--	--	--
Diesel	500	NV	NV	NV	**540**	--	--	--	--	260 U	260 U	260 U
Lube Oil	500	NV	NV	NV	**1,200**	--	--	--	--	420 U	410 U	410 U
Heavy Oils (Diesel + Lube Oil)	500	NV	NV	NV	**1,740**	--	--	--	--	420 U	410 U	410 U

MAUL FOSTER ALONGI

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP20	GP21	GP24	GP25	GP26	GP27	GP28	GP29
				Sample Name:	GP20-W-13.0	GP21-W-19.0	GP24-W-18.0	GP25-W-15.0	GP26-W-12.5	GP27-W-10.0	GP28-W-13.0	GP29-W-15.0
				Collection Date:	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
Total Metals (ug/L)												
Arsenic	5	0.0583	5[(a)]	--	**18**	3.3 U	--	--	--	--	--	**3.4**
Barium	NV	3,200	1,000	--	**160**	**160**	--	--	--	--	--	**150**
Cadmium	5	8	0.25	--	4.4 U	4.4 U	--	--	--	--	--	4.4 U
Chromium	50	NV	57.2	--	**170**	11 U	--	--	--	--	--	**22**
Lead	15	NV	0.54	--	**30**	**48**	--	--	--	--	--	**14**
Mercury	2	NV	0.012	--	0.5 U	0.5 U	--	--	--	--	--	0.5 U
Selenium	NV	80	5	--	5.6 U	5.6 U	--	--	--	--	--	5.6 U
Silver	NV	80	1.9	--	11 U	11 U	--	--	--	--	--	11 U
Dissolved Metals (ug/L)												
Arsenic	5	0.0583	5[(a)]	--	3 U	3 U	--	--	--	--	--	3 U
Barium	NV	3,200	1,000	--	**47**	**100**	--	--	--	--	--	**36**
Cadmium	5	8	0.25	--	4 U	4 U	--	--	--	--	--	4 U
Chromium	50	NV	57.2	--	10 U	10 U	--	--	--	--	--	10 U
Copper	NV	320	3.47	--	--	--	--	--	--	--	--	--
Lead	15	NV	0.54	--	1 U	1 U	--	--	--	--	--	1 U
Mercury	2	NV	0.012	--	0.5 U	0.5 U	--	--	--	--	--	0.5 U
Selenium	NV	80	5	--	5 U	5 U	--	--	--	--	--	5 U
Silver	NV	80	1.9	--	10 U	10 U	--	--	--	--	--	10 U
Zinc	NV	4,800	32.3	--	--	--	--	--	--	--	--	--
VOCs (ug/L)												
1,1,1,2-Tetrachloroethane	NV	1.68	--	--	--	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	200	16000	--	--	--	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	NV	0.219	--	--	--	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	NV	0.768	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	NV	7.68	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	NV	400	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	NV	NV	--	--	--	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	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	NV	0.0015	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	NV	1.51	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	NV	0.05	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	0.01	0.02	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	NV	720	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	5	0.48	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

MAUL FOSTER ALONGI

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP20	GP21	GP24	GP25	GP26	GP27	GP28	GP29
				Sample Name:	GP20-W-13.0	GP21-W-19.0	GP24-W-18.0	GP25-W-15.0	GP26-W-12.5	GP27-W-10.0	GP28-W-13.0	GP29-W-15.0
				Collection Date:	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
1,2-Dichloropropane	NV	NV	--	--	--	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	NV	80	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Butanone	NV	4,800	--	--	--	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chloroethylvinyl ether	NV	NV	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Chlorotoluene	NV	160	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	NV	NV	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Isopropyltoluene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Methyl-2-pentanone	NV	640	--	--	--	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Acetone	NV	7,200	--	--	--	6.8 U	6.8 U	6.8 U	6.8 U	7.1 U	7.1 U	7.1 U
Acrolein	NV	4	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	NV	0.08	--	--	--	--	--	--	--	--	--	--
Benzene	5	0.8	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	NV	0.71	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoethane	NV	NV	--	--	--	--	--	--	--	--	--	--
Bromoform	NV	5.54	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	NV	11.2	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon disulfide	NV	800	NV	400	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	NV	0.63	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	NV	160	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobromomethane	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	NV	NV	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	NV	80	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	NV	NV	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	NV	16	NV	160	--	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	NV	0.44	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	NV	0.52	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	NV	80	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	NV	1,600	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	700	800	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Freon 113	NV	240,000	--	--	--	--	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP20	GP21	GP24	GP25	GP26	GP27	GP28	GP29
				Sample Name:	GP20-W-13.0	GP21-W-19.0	GP24-W-18.0	GP25-W-15.0	GP26-W-12.5	GP27-W-10.0	GP28-W-13.0	GP29-W-15.0
				Collection Date:	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
Hexachlorobutadiene	NV	0.56	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Isopropylbenzene	NV	800	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene	1,000(c)	1,600c	--	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methyl iodide	NV	NV	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl ether	20	24.3	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Methylene chloride	5	5.83	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Naphthalene	160	160	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Butylbenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
n-Propylbenzene	NV	800	NV	NV	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene	1,000(c)	1,600(c)	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
sec-Butylbenzene	NV	800	NV	NV	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Styrene	NV	1,600	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
tert-Butylbenzene	NV	NV	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	5	21	0.69	22.9	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**
Toluene	1,000	640	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-dichloroethene	NV	160	--	--	--	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	NV	240	--	--	--	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	NV	NV	--	--	--	--	--	--	--	--	--	--
Trichloroethene	5	0.54	2.5	1.55	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	NV	2,400	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl Acetate	NV	8,000	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	0.2	24	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Xylenes, Total	1,000(c)	1,600(c)	--	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
SVOCs (ug/L)												
1,2,4-Trichlorobenzene	NV	1.51	--	--	--	0.94 U	--	--	--	--	--	0.95 U
1,2-Dichlorobenzene	NV	720	--	--	--	0.94 U	--	--	--	--	--	0.95 U
1,2-Dinitrobenzene	NV	1.6	--	--	--	0.94 U	--	--	--	--	--	0.95 U
1,3-Dichlorobenzene	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
1,4-Dichlorobenzene	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
1,4-Dinitrobenzene	NV	1.6	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2,3,4,6-Tetrachlorophenol	NV	480	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2,3,5,6-Tetrachlorophenol	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2,3-Dichloroaniline	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2,4,5-Trichlorophenol	NV	800	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2,4,6-Trichlorophenol	NV	3.98	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2,4-Dichlorophenol	NV	24	--	--	--	0.94 U	--	--	--	--	--	0.95 U

MAUL FOSTER ALONGI

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP20	GP21	GP24	GP25	GP26	GP27	GP28	GP29
				Sample Name:	GP20-W-13.0	GP21-W-19.0	GP24-W-18.0	GP25-W-15.0	GP26-W-12.5	GP27-W-10.0	GP28-W-13.0	GP29-W-15.0
				Collection Date:	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
2,4-Dimethylphenol	NV	160	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2,4-Dinitrophenol	NV	32	--	--	--	4.7 U	--	--	--	--	--	4.8 U
2,4-Dinitrotoluene	NV	32	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2,6-Dinitrotoluene	NV	16	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2-Chloronaphthalene	NV	640	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2-Chlorophenol	NV	40	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2-Methylphenol	NV	400	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2-Nitroaniline	NV	160	--	--	--	0.94 U	--	--	--	--	--	0.95 U
2-Nitrophenol	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
3- & 4-Methylphenol	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
3,3-Dichlorobenzidine	NV	0.19	--	--	--	0.94 U	--	--	--	--	--	0.95 U
3-Nitroaniline	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
4,6-Dinitro-2-methylphenol	NV	NV	--	--	--	4.7 U	--	--	--	--	--	4.8 U
4-Bromophenylphenyl ether	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
4-Chloro-3-methylphenol	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
4-Chloroaniline	NV	0.22	--	--	--	0.94 U	--	--	--	--	--	0.95 U
4-Chlorophenylphenyl ether	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
4-Nitroaniline	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
4-Nitrophenol	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Aniline	NV	7.68	--	--	--	4.7 U	--	--	--	--	--	4.8 U
Benzidine	NV	0.00038	--	--	--	4.7 U	--	--	--	--	--	4.8 U
Benzyl alcohol	NV	800	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Bis(2-chloroethoxy)methane	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Bis(2-chloroethyl)ether	NV	0.04	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Bis(2-chloroisopropyl)ether	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Bis(2-ethylhexyl)phthalate	NV	6.25	--	--	--	4.7 U	--	--	--	--	--	4.8 U
Butylbenzylphthalate	NV	46.1	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Carbazole	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Di(2-ethylhexyl)adipate	NV	72.92	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Dibenzofuran	NV	16	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Diethyl phthalate	NV	12,800	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Dimethyl phthalate	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Di-n-butyl phthalate	NV	1,600	NV	NV	--	**1.5**	--	--	--	--	--	0.95 U
Di-n-octyl phthalate	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Hexachlorobenzene	NV	0.05	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Hexachlorobutadiene	NV	0.56	--	--	--	0.94 U	--	--	--	--	--	0.95 U

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP20	GP21	GP24	GP25	GP26	GP27	GP28	GP29
				Sample Name:	GP20-W-13.0	GP21-W-19.0	GP24-W-18.0	GP25-W-15.0	GP26-W-12.5	GP27-W-10.0	GP28-W-13.0	GP29-W-15.0
				Collection Date:	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
Hexachlorocyclopentadiene	NV	48	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Hexachloroethane	NV	3.13	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Hydrazine, 1,2-diphenyl	NV	0.11	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Isophorone	NV	46.05	--	--	--	0.94 U	--	--	--	--	--	0.95 U
m-Dinitrobenzene	NV	1.6	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Nitrobenzene	NV	16	--	--	--	0.94 U	--	--	--	--	--	0.95 U
N-Nitrosodimethylamine	NV	0.064	--	--	--	0.94 U	--	--	--	--	--	0.95 U
N-Nitrosodiphenylamine	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
N-Nitrosodipropylamine	NV	NV	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Pentachlorophenol	NV	0.22	--	--	--	4.7 U	--	--	--	--	--	4.8 U
Phenol	NV	2,400	--	--	--	0.94 U	--	--	--	--	--	0.95 U
Pyridine	NV	8	--	--	--	0.94 U	--	--	--	--	--	0.95 U
PAHs (ug/L)												
1-Methylnaphthalene	NV	1.51	--	--	--	0.094 U	--	--	--	--	--	0.095 U
2-Methylnaphthalene	NV	32	NV	--	--	0.094 U	--	--	--	--	--	0.095 U
Acenaphthene	NV	960	--	--	--	0.094 U	--	--	--	--	--	0.095 U
Acenaphthylene	NV	NV	--	--	--	0.094 U	--	--	--	--	--	0.095 U
Anthracene	NV	4,800	--	--	--	0.094 U	--	--	--	--	--	0.095 U
Benzo(a)anthracene	NV	0.12	0.0028	--	--	**0.018**	--	--	--	--	--	**0.015**
Benzo(a)pyrene	0.1	0.01	0.0028	--	--	**0.014**	--	--	--	--	--	**0.012** J
Benzo(b)fluoranthene	NV	0.12	0.0028	--	--	**0.013**	--	--	--	--	--	**0.012** J
Benzo(ghi)perylene	NV	NV	--	--	--	0.0094 U	--	--	--	--	--	0.0095 UJ
Benzo(j+k)fluoranthene	NV	1.2	--	--	--	0.0094 U	--	--	--	--	--	0.0095 UJ
Chrysene	NV	12	0.0028	--	--	**0.011**	--	--	--	--	--	**0.014**
Dibenzo(a,h)anthracene	NV	0.01	--	--	--	0.0094 U	--	--	--	--	--	0.0095 UJ
Dibenzofuran	NV	16	--	--	--	--	--	--	--	--	--	--
Fluoranthene	NV	640	--	--	--	0.094 U	--	--	--	--	--	0.095 U
Fluorene	NV	640	--	--	--	0.094 U	--	--	--	--	--	0.095 U
Indeno(1,2,3-cd)pyrene	NV	0.12	--	--	--	0.0094 U	--	--	--	--	--	0.0095 UJ
Naphthalene	160	160	4,713	--	--	**0.26**	--	--	--	--	--	0.095 U
Phenanthrene	NV	NV	--	--	--	0.094 U	--	--	--	--	--	0.095 U
Pyrene	NV	480	830	--	--	0.094 U	--	--	--	--	--	0.095 U
Total Benzofluoranthenes	NV	--	--	--	--	--	--	--	--	--	--	--
Total Naphthalenes	160	--	4,713	--	--	**0.35**	--	--	--	--	--	0.095 U
cPAH TEQ	0.1	--	0.0028	--	--	**0.017**	--	--	--	--	--	**0.015**

MAUL FOSTER ALONGI

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP20	GP21	GP24	GP25	GP26	GP27	GP28	GP29
				Sample Name:	GP20-W-13.0	GP21-W-19.0	GP24-W-18.0	GP25-W-15.0	GP26-W-12.5	GP27-W-10.0	GP28-W-13.0	GP29-W-15.0
				Collection Date:	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/21/2015	04/22/2015	04/22/2015	04/22/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	--	--	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	--	--	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	--	--	--	--	--	--	--	--
TPH (ug/L)												
Gasoline	1,000[d]	NV	NV	NV	--	100 U	--	--	--	--	--	100 U
Diesel	500	NV	NV	NV	260 U	--	--	--	--	--	--	--
Lube Oil	500	NV	NV	NV	420 U	--	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	500	NV	NV	NV	420 U	--	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP30	GP32	GP33	GP33	MW01	MW02	MW03	MW04
				Sample Name:	GP30-W-20.0	GP32-W-15.0	GP DUP-W-12.0	GP33-W-12.0	MW01-GW-061015	MW02-GW-061015	MW03-GW-061015	MW04-GW-061015
				Collection Date:	04/22/2015	04/22/2015	04/22/2015	04/22/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
Total Metals (ug/L)												
Arsenic	5	0.0583	5[a]	--	**420**	--	--	--	**38**	**1.3**	**21**	**5**
Barium	NV	3,200	1,000	--	**3000**	--	--	--	28 U	**110**	**28**	**66**
Cadmium	5	8	0.25	--	**8.9**	--	--	--	0.24 U	0.24 U	0.24 U	0.24 U
Chromium	50	NV	57.2	--	**2300**	--	--	--	11 U	11 U	11 U	11 U
Lead	15	NV	0.54	--	**250**	--	--	--	**0.94**	**2.1**	0.5 U	0.5 U
Mercury	2	NV	0.012	--	**1.4**	--	--	--	0.025 U	0.025 U	0.025 U	0.025 U
Selenium	NV	80	5	--	**18**	--	--	--	5 U	5 U	5 U	5 U
Silver	NV	80	1.9	--	11 U	--	--	--	1.1 U	1.1 U	1.1 U	1.1 U
Dissolved Metals (ug/L)												
Arsenic	5	0.0583	5[a]	--	**58**	--	--	--	**37**	**1.2**	**21**	**5.6**
Barium	NV	3,200	1,000	--	25 U	--	--	--	25 U	**110**	**26**	**64**
Cadmium	5	8	0.25	--	4 U	--	--	--	0.25 U	0.25 U	0.25 U	0.25 U
Chromium	50	NV	57.2	--	10 U	--	--	--	10 U	10 U	10 U	10 U
Copper	NV	320	3.47	--	--	--	--	--	--	--	--	--
Lead	15	NV	0.54	--	1 U	--	--	--	0.5 U	**1**	0.5 U	0.5 U
Mercury	2	NV	0.012	--	0.5 U	--	--	--	0.025 U	0.025 U	0.025 U	0.025 U
Selenium	NV	80	5	--	5 U	--	--	--	5 U	5 U	5 U	5 U
Silver	NV	80	1.9	--	10 U	--	--	--	1 U	1 U	1 U	1 U
Zinc	NV	4,800	32.3	--	--	--	--	--	--	--		--
VOCs (ug/L)												
1,1,1,2-Tetrachloroethane	NV	1.68	--	--	0.2 U	--	--	--	--	--	--	--
1,1,1-Trichloroethane	200	16000	--	--	0.2 U	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	0.219	--	--	0.2 U	--	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	0.768	--	--	0.2 U	--	--	--	--	--	--	--
1,1-Dichloroethane	NV	7.68	--	--	0.2 U	--	--	--	--	--	--	--
1,1-Dichloroethene	NV	400	--	--	0.2 U	--	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	0.0015	--	--	0.2 U	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	1.51	--	--	0.2 U	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	0.05	--	--	1 U	--	--	--	--	--	--	--
1,2-Dibromoethane	0.01	0.02	--	--	0.2 U	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	720	--	--	0.2 U	--	--	--	--	--	--	--
1,2-Dichloroethane	5	0.48	--	--	0.2 U	--	--	--	--	--	--	--

MAUL FOSTER ALONGI

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP30	GP32	GP33	GP33	MW01	MW02	MW03	MW04
				Sample Name:	GP30-W-20.0	GP32-W-15.0	GP DUP-W-12.0	GP33-W-12.0	MW01-GW-061015	MW02-GW-061015	MW03-GW-061015	MW04-GW-061015
				Collection Date:	04/22/2015	04/22/2015	04/22/2015	04/22/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
1,2-Dichloropropane	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	80	--	--	0.2 U	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
1,3-Dichloropropane	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
2-Butanone	NV	4,800	--	--	5 U	--	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	--	--	1 U	--	--	--	--	--	--	--
2-Chlorotoluene	NV	160	--	--	0.2 U	--	--	--	--	--	--	--
2-Hexanone	NV	NV	--	--	2 U	--	--	--	--	--	--	--
4-Chlorotoluene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
4-Isopropyltoluene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	640	--	--	2 U	--	--	--	--	--	--	--
Acetone	NV	7,200	--	--	7.1 U	--	--	--	--	--	--	--
Acrolein	NV	4	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	NV	0.08	--	--	--	--	--	--	--	--	--	--
Benzene	5	0.8	--	--	0.2 U	--	--	--	--	--	--	--
Bromobenzene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
Bromodichloromethane	NV	0.71	--	--	0.2 U	--	--	--	--	--	--	--
Bromoethane	NV	NV	--	--	--	--	--	--	--	--	--	--
Bromoform	NV	5.54	--	--	1 U	--	--	--	--	--	--	--
Bromomethane	NV	11.2	--	--	0.2 U	--	--	--	--	--	--	--
Carbon disulfide	NV	800	NV	400	**0.23**	--	--	--	--	--	--	--
Carbon tetrachloride	NV	0.63	--	--	0.2 U	--	--	--	--	--	--	--
Chlorobenzene	NV	160	--	--	0.2 U	--	--	--	--	--	--	--
Chlorobromomethane	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
Chloroethane	NV	NV	--	--	1 U	--	--	--	--	--	--	--
Chloroform	NV	80	--	--	0.2 U	--	--	--	--	--	--	--
Chloromethane	NV	NV	--	--	1 U	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	16	NV	160	0.2 U	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	0.44	--	--	0.2 U	--	--	--	--	--	--	--
Dibromochloromethane	NV	0.52	--	--	0.2 U	--	--	--	--	--	--	--
Dibromomethane	NV	80	--	--	0.2 U	--	--	--	--	--	--	--
Dichlorodifluoromethane	NV	1,600	--	--	0.2 U	--	--	--	--	--	--	--
Ethylbenzene	700	800	--	--	0.2 U	--	--	--	--	--	--	--
Freon 113	NV	240,000	--	--	--	--	--	--	--	--	--	--

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP30	GP32	GP33	GP33	MW01	MW02	MW03	MW04
				Sample Name:	GP30-W-20.0	GP32-W-15.0	GP DUP-W-12.0	GP33-W-12.0	MW01-GW-061015	MW02-GW-061015	MW03-GW-061015	MW04-GW-061015
				Collection Date:	04/22/2015	04/22/2015	04/22/2015	04/22/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
Hexachlorobutadiene	NV	0.56	--	--	0.2 U	--	--	--	--	--	--	--
Isopropylbenzene	NV	800	--	--	0.2 U	--	--	--	--	--	--	--
m,p-Xylene	1,000^(c)	1,600^c	--	--	0.4 U	--	--	--	--	--	--	--
Methyl iodide	NV	NV	--	--	1 U	--	--	--	--	--	--	--
Methyl tert-butyl ether	20	24.3	--	--	0.2 U	--	--	--	--	--	--	--
Methylene chloride	5	5.83	--	--	1 U	--	--	--	--	--	--	--
Naphthalene	160	160	--	--	1 U	--	--	--	--	--	--	--
n-Butylbenzene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	0.2 U	--	--	--	--	--	--	--
o-Xylene	1,000^(c)	1,600^(c)	--	--	0.2 U	--	--	--	--	--	--	--
sec-Butylbenzene	NV	800	NV	NV	0.2 U	--	--	--	--	--	--	--
Styrene	NV	1,600	--	--	0.2 U	--	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	--	--	0.2 U	--	--	--	--	--	--	--
Tetrachloroethene	5	21	0.69	22.9	0.2 U	--	--	--	0.2 U	0.2 U	--	--
Toluene	1,000	640	--	--	1 U	--	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	160	--	--	0.2 U	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	240	--	--	0.2 U	--	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	--	--	--	--	--	--	--	--	--	--
Trichloroethene	5	0.54	2.5	1.55	0.2 U	--	--	--	--	--	--	--
Trichlorofluoromethane	NV	2,400	--	--	0.2 U	--	--	--	--	--	--	--
Vinyl Acetate	NV	8,000	--	--	1 U	--	--	--	--	--	--	--
Vinyl chloride	0.2	24	--	--	0.2 U	--	--	--	--	--	--	--
Xylenes, Total	1,000^(c)	1,600^(c)	--	--	0.4 U	--	--	--	--	--	--	--
SVOCs (ug/L)												
1,2,4-Trichlorobenzene	NV	1.51	--	--	0.96 U	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	720	--	--	0.96 U	--	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	1.6	--	--	0.96 U	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	1.6	--	--	0.96 U	--	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	480	--	--	0.96 U	--	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	800	--	--	0.96 U	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	3.98	--	--	0.96 U	--	--	--	--	--	--	--
2,4-Dichlorophenol	NV	24	--	--	0.96 U	--	--	--	--	--	--	--

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP30	GP32	GP33	GP33	MW01	MW02	MW03	MW04
				Sample Name:	GP30-W-20.0	GP32-W-15.0	GP DUP-W-12.0	GP33-W-12.0	MW01-GW-061015	MW02-GW-061015	MW03-GW-061015	MW04-GW-061015
				Collection Date:	04/22/2015	04/22/2015	04/22/2015	04/22/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
2,4-Dimethylphenol	NV	160	--	--	0.96 U	--	--	--	--	--	--	--
2,4-Dinitrophenol	NV	32	--	--	4.8 U	--	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	32	--	--	0.96 U	--	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	16	--	--	0.96 U	--	--	--	--	--	--	--
2-Chloronaphthalene	NV	640	--	--	0.96 U	--	--	--	--	--	--	--
2-Chlorophenol	NV	40	--	--	0.96 U	--	--	--	--	--	--	--
2-Methylphenol	NV	400	--	--	0.96 U	--	--	--	--	--	--	--
2-Nitroaniline	NV	160	--	--	0.96 U	--	--	--	--	--	--	--
2-Nitrophenol	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	0.19	--	--	0.96 U	--	--	--	--	--	--	--
3-Nitroaniline	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	--	--	4.8 U	--	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
4-Chloroaniline	NV	0.22	--	--	0.96 U	--	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
4-Nitroaniline	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
4-Nitrophenol	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
Aniline	NV	7.68	--	--	4.8 U	--	--	--	--	--	--	--
Benzidine	NV	0.00038	--	--	4.8 U	--	--	--	--	--	--	--
Benzyl alcohol	NV	800	--	--	0.96 U	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.04	--	--	0.96 U	--	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	6.25	--	--	4.8 U	--	--	--	--	--	--	--
Butylbenzylphthalate	NV	46.1	--	--	0.96 U	--	--	--	--	--	--	--
Carbazole	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	72.92	--	--	0.96 U	--	--	--	--	--	--	--
Dibenzofuran	NV	16	--	--	0.96 U	--	--	--	--	--	--	--
Diethyl phthalate	NV	12,800	--	--	0.96 U	--	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
Di-n-butyl phthalate	NV	1,600	NV	NV	0.96 U	--	--	--	--	--	--	--
Di-n-octyl phthalate	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
Hexachlorobenzene	NV	0.05	--	--	0.96 U	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	0.56	--	--	0.96 U	--	--	--	--	--	--	--

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP30	GP32	GP33	GP33	MW01	MW02	MW03	MW04
				Sample Name:	GP30-W-20.0	GP32-W-15.0	GP DUP-W-12.0	GP33-W-12.0	MW01-GW-061015	MW02-GW-061015	MW03-GW-061015	MW04-GW-061015
				Collection Date:	04/22/2015	04/22/2015	04/22/2015	04/22/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
Hexachlorocyclopentadiene	NV	48	--	--	0.96 U	--	--	--	--	--	--	--
Hexachloroethane	NV	3.13	--	--	0.96 U	--	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.11	--	--	0.96 U	--	--	--	--	--	--	--
Isophorone	NV	46.05	--	--	0.96 U	--	--	--	--	--	--	--
m-Dinitrobenzene	NV	1.6	--	--	0.96 U	--	--	--	--	--	--	--
Nitrobenzene	NV	16	--	--	0.96 U	--	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.064	--	--	0.96 U	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	NV	--	--	0.96 U	--	--	--	--	--	--	--
Pentachlorophenol	NV	0.22	--	--	4.8 U	--	--	--	--	--	--	--
Phenol	NV	2,400	--	--	0.96 U	--	--	--	--	--	--	--
Pyridine	NV	8	--	--	0.96 U	--	--	--	--	--	--	--
PAHs (ug/L)												
1-Methylnaphthalene	NV	1.51	--	--	0.096 U	--	--	--	--	--	--	--
2-Methylnaphthalene	NV	32	NV	--	0.096 U	--	--	--	--	--	--	--
Acenaphthene	NV	960	--	--	0.096 U	--	--	--	--	--	--	--
Acenaphthylene	NV	NV	--	--	0.096 U	--	--	--	--	--	--	--
Anthracene	NV	4,800	--	--	0.096 U	--	--	--	--	--	--	--
Benzo(a)anthracene	NV	0.12	0.0028	--	0.0096 U	--	--	--	**0.0099**	0.0096 U	--	--
Benzo(a)pyrene	0.1	0.01	0.0028	--	0.0096 U	--	--	--	0.0095 U	0.0096 U	--	--
Benzo(b)fluoranthene	NV	0.12	0.0028	--	0.0096 U	--	--	--	0.0095 U	0.0096 U	--	--
Benzo(ghi)perylene	NV	NV	--	--	0.0096 U	--	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	1.2	--	--	0.0096 U	--	--	--	0.0095 U	0.0096 U	--	--
Chrysene	NV	12	0.0028	--	0.0096 U	--	--	--	0.0095 U	0.0096 U	--	--
Dibenzo(a,h)anthracene	NV	0.01	--	--	0.0096 U	--	--	--	0.0095 U	0.0096 U	--	--
Dibenzofuran	NV	16	--	--	--	--	--	--	--	--	--	--
Fluoranthene	NV	640	--	--	0.096 U	--	--	--	--	--	--	--
Fluorene	NV	640	--	--	0.096 U	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	0.12	--	--	0.0096 U	--	--	--	0.0095 U	0.0096 U	--	--
Naphthalene	160	160	4,713	--	0.096 U	--	--	--	--	--	--	--
Phenanthrene	NV	NV	--	--	0.096 U	--	--	--	--	--	--	--
Pyrene	NV	480	830	--	0.096 U	--	--	--	--	--	--	--
Total Benzofluoranthenes	NV	--	--	--	--	--	--	--	--	--	--	--
Total Naphthalenes	160	--	4,713	--	0.096 U	--	--	--	--	--	--	--
cPAH TEQ	0.1	--	0.0028	--	ND	--	--	--	**0.00099**	ND	--	--

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP30	GP32	GP33	GP33	MW01	MW02	MW03	MW04
				Sample Name:	GP30-W-20.0	GP32-W-15.0	GP DUP-W-12.0	GP33-W-12.0	MW01-GW-061015	MW02-GW-061015	MW03-GW-061015	MW04-GW-061015
				Collection Date:	04/22/2015	04/22/2015	04/22/2015	04/22/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)								
TPH Identification (Presence/Absence)												
Gasoline	NV	NV	NV	NV	ND	--	--	--	--	--	--	--
Diesel	NV	NV	NV	NV	ND	--	--	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	ND	--	--	--	--	--	--	--
TPH (ug/L)												
Gasoline	1,000[d]	NV	NV	NV	--				--	--	--	--
Diesel	500	NV	NV	NV	--	260 U	260 U	270 U	--	--	--	--
Lube Oil	500	NV	NV	NV	--	420 U	420 U	430 U	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	500	NV	NV	NV	--	420 U	420 U	430 U	--	--	--	--

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Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	MW09	MW10		MW11
				Sample Name:	MW09-GW-050118	MW10-GW-050118	MWDUP-GW-050118	MW11-GW-050118
				Collection Date:	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)				
Total Metals (ug/L)								
Arsenic	5	0.0583	5[a]	--	--	--	--	--
Barium	NV	3,200	1,000	--	--	--	--	--
Cadmium	5	8	0.25	--	--	--	--	--
Chromium	50	NV	57.2	--	--	--	--	--
Lead	15	NV	0.54	--	--	--	--	--
Mercury	2	NV	0.012	--	--	--	--	--
Selenium	NV	80	5	--	--	--	--	--
Silver	NV	80	1.9	--	--	--	--	--
Dissolved Metals (ug/L)								
Arsenic	5	0.0583	5[a]	--	--	--	--	--
Barium	NV	3,200	1,000	--	--	--	--	--
Cadmium	5	8	0.25	--	--	--	--	--
Chromium	50	NV	57.2	--	--	--	--	--
Copper	NV	320	3.47	--	--	--	--	--
Lead	15	NV	0.54	--	--	--	--	--
Mercury	2	NV	0.012	--	--	--	--	--
Selenium	NV	80	5	--	--	--	--	--
Silver	NV	80	1.9	--	--	--	--	--
Zinc	NV	4,800	32.3	--	--	--	--	--
VOCs (ug/L)								
1,1,1,2-Tetrachloroethane	NV	1.68	--	--	--	--	--	--
1,1,1-Trichloroethane	200	16000	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	0.219	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	0.768	--	--	--	--	--	--
1,1-Dichloroethane	NV	7.68	--	--	--	--	--	--
1,1-Dichloroethene	NV	400	--	--	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	NV	NV	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	NV	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	0.0015	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	1.51	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	NV	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	0.05	--	--	--	--	--	--
1,2-Dibromoethane	0.01	0.02	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	720	--	--	--	--	--	--
1,2-Dichloroethane	5	0.48	--	--	--	--	--	--

				Location:	MW09	MW10		MW11
				Sample Name:	MW09-GW-050118	MW10-GW-050118	MWDUP-GW-050118	MW11-GW-050118
				Collection Date:	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)				
1,2-Dichloropropane	NV	NV	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	80	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	--	--	--	--	--	--
1,3-Dichloropropane	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	NV	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	--	--	--	--	--	--
2-Butanone	NV	4,800	--	--	--	--	--	--
2-Chloroethylvinyl ether	NV	NV	--	--	--	--	--	--
2-Chlorotoluene	NV	160	--	--	--	--	--	--
2-Hexanone	NV	NV	--	--	--	--	--	--
4-Chlorotoluene	NV	NV	--	--	--	--	--	--
4-Isopropyltoluene	NV	NV	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	640	--	--	--	--	--	--
Acetone	NV	7,200	--	--	--	--	--	--
Acrolein	NV	4	--	--	--	--	--	--
Acrylonitrile	NV	0.08	--	--	--	--	--	--
Benzene	5	0.8	--	--	--	--	--	--
Bromobenzene	NV	NV	--	--	--	--	--	--
Bromodichloromethane	NV	0.71	--	--	--	--	--	--
Bromoethane	NV	NV	--	--	--	--	--	--
Bromoform	NV	5.54	--	--	--	--	--	--
Bromomethane	NV	11.2	--	--	--	--	--	--
Carbon disulfide	NV	800	NV	400	--	--	--	--
Carbon tetrachloride	NV	0.63	--	--	--	--	--	--
Chlorobenzene	NV	160	--	--	--	--	--	--
Chlorobromomethane	NV	NV	--	--	--	--	--	--
Chloroethane	NV	NV	--	--	--	--	--	--
Chloroform	NV	80	--	--	--	--	--	--
Chloromethane	NV	NV	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	16	NV	160	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,3-Dichloropropene	NV	0.44	--	--	--	--	--	--
Dibromochloromethane	NV	0.52	--	--	--	--	--	--
Dibromomethane	NV	80	--	--	--	--	--	--
Dichlorodifluoromethane	NV	1,600	--	--	--	--	--	--
Ethylbenzene	700	800	--	--	--	--	--	--
Freon 113	NV	240,000	--	--	--	--	--	--

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	MW09	MW10		MW11
				Sample Name:	MW09-GW-050118	MW10-GW-050118	MWDUP-GW-050118	MW11-GW-050118
				Collection Date:	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)				
Hexachlorobutadiene	NV	0.56	--	--	--	--	--	--
Isopropylbenzene	NV	800	--	--	--	--	--	--
m,p-Xylene	1,000(c)	1,600c	--	--	--	--	--	--
Methyl iodide	NV	NV	--	--	--	--	--	--
Methyl tert-butyl ether	20	24.3	--	--	--	--	--	--
Methylene chloride	5	5.83	--	--	--	--	--	--
Naphthalene	160	160	--	--	--	--	--	--
n-Butylbenzene	NV	NV	--	--	--	--	--	--
n-Propylbenzene	NV	800	NV	NV	--	--	--	--
o-Xylene	1,000(c)	1,600(c)	--	--	--	--	--	--
sec-Butylbenzene	NV	800	NV	NV	--	--	--	--
Styrene	NV	1,600	--	--	--	--	--	--
tert-Butylbenzene	NV	NV	--	--	--	--	--	--
Tetrachloroethene	5	21	0.69	22.9	0.2 U	**22.8**	**23**	0.2 U
Toluene	1,000	640	--	--	--	--	--	--
trans-1,2-dichloroethene	NV	160	--	--	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	NV	240	--	--	--	--	--	--
trans-1,4-Dichloro-2-butene	NV	NV	--	--	--	--	--	--
Trichloroethene	5	0.54	2.5	1.55	0.2 U	**1.34**	**1.38**	0.2 U
Trichlorofluoromethane	NV	2,400	--	--	--	--	--	--
Vinyl Acetate	NV	8,000	--	--	--	--	--	--
Vinyl chloride	0.2	24	--	--	0.2 U	0.2 U	0.2 U	0.2 U
Xylenes, Total	1,000(c)	1,600(c)	--	--	--	--	--	--
SVOCs (ug/L)								
1,2,4-Trichlorobenzene	NV	1.51	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	720	--	--	--	--	--	--
1,2-Dinitrobenzene	NV	1.6	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	NV	--	--	--	--	--	--
1,4-Dinitrobenzene	NV	1.6	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	NV	480	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NV	NV	--	--	--	--	--	--
2,3-Dichloroaniline	NV	NV	--	--	--	--	--	--
2,4,5-Trichlorophenol	NV	800	--	--	--	--	--	--
2,4,6-Trichlorophenol	NV	3.98	--	--	--	--	--	--
2,4-Dichlorophenol	NV	24	--	--	--	--	--	--

Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	MW09	MW10		MW11
				Sample Name:	MW09-GW-050118	MW10-GW-050118	MWDUP-GW-050118	MW11-GW-050118
				Collection Date:	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)				
2,4-Dimethylphenol	NV	160	--	--	--	--	--	--
2,4-Dinitrophenol	NV	32	--	--	--	--	--	--
2,4-Dinitrotoluene	NV	32	--	--	--	--	--	--
2,6-Dinitrotoluene	NV	16	--	--	--	--	--	--
2-Chloronaphthalene	NV	640	--	--	--	--	--	--
2-Chlorophenol	NV	40	--	--	--	--	--	--
2-Methylphenol	NV	400	--	--	--	--	--	--
2-Nitroaniline	NV	160	--	--	--	--	--	--
2-Nitrophenol	NV	NV	--	--	--	--	--	--
3- & 4-Methylphenol	NV	NV	--	--	--	--	--	--
3,3-Dichlorobenzidine	NV	0.19	--	--	--	--	--	--
3-Nitroaniline	NV	NV	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NV	NV	--	--	--	--	--	--
4-Bromophenylphenyl ether	NV	NV	--	--	--	--	--	--
4-Chloro-3-methylphenol	NV	NV	--	--	--	--	--	--
4-Chloroaniline	NV	0.22	--	--	--	--	--	--
4-Chlorophenylphenyl ether	NV	NV	--	--	--	--	--	--
4-Nitroaniline	NV	NV	--	--	--	--	--	--
4-Nitrophenol	NV	NV	--	--	--	--	--	--
Aniline	NV	7.68	--	--	--	--	--	--
Benzidine	NV	0.00038	--	--	--	--	--	--
Benzyl alcohol	NV	800	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	NV	NV	--	--	--	--	--	--
Bis(2-chloroethyl)ether	NV	0.04	--	--	--	--	--	--
Bis(2-chloroisopropyl)ether	NV	NV	--	--	--	--	--	--
Bis(2-ethylhexyl)phthalate	NV	6.25	--	--	--	--	--	--
Butylbenzylphthalate	NV	46.1	--	--	--	--	--	--
Carbazole	NV	NV	--	--	--	--	--	--
Di(2-ethylhexyl)adipate	NV	72.92	--	--	--	--	--	--
Dibenzofuran	NV	16	--	--	--	--	--	--
Diethyl phthalate	NV	12,800	--	--	--	--	--	--
Dimethyl phthalate	NV	NV	--	--	--	--	--	--
Di-n-butyl phthalate	NV	1,600	NV	NV	--	--	--	--
Di-n-octyl phthalate	NV	NV	--	--	--	--	--	--
Hexachlorobenzene	NV	0.05	--	--	--	--	--	--
Hexachlorobutadiene	NV	0.56	--	--	--	--	--	--

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Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	MW09	MW10		MW11
				Sample Name:	MW09-GW-050118	MW10-GW-050118	MWDUP-GW-050118	MW11-GW-050118
				Collection Date:	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)				
Hexachlorocyclopentadiene	NV	48	--	--	--	--	--	--
Hexachloroethane	NV	3.13	--	--	--	--	--	--
Hydrazine, 1,2-diphenyl	NV	0.11	--	--	--	--	--	--
Isophorone	NV	46.05	--	--	--	--	--	--
m-Dinitrobenzene	NV	1.6	--	--	--	--	--	--
Nitrobenzene	NV	16	--	--	--	--	--	--
N-Nitrosodimethylamine	NV	0.064	--	--	--	--	--	--
N-Nitrosodiphenylamine	NV	NV	--	--	--	--	--	--
N-Nitrosodipropylamine	NV	NV	--	--	--	--	--	--
Pentachlorophenol	NV	0.22	--	--	--	--	--	--
Phenol	NV	2,400	--	--	--	--	--	--
Pyridine	NV	8	--	--	--	--	--	--
PAHs (ug/L)								
1-Methylnaphthalene	NV	1.51	--	--	--	--	--	--
2-Methylnaphthalene	NV	32	NV	--	--	--	--	--
Acenaphthene	NV	960	--	--	--	--	--	--
Acenaphthylene	NV	NV	--	--	--	--	--	--
Anthracene	NV	4,800	--	--	--	--	--	--
Benzo(a)anthracene	NV	0.12	0.0028	--	--	--	--	--
Benzo(a)pyrene	0.1	0.01	0.0028	--	--	--	--	--
Benzo(b)fluoranthene	NV	0.12	0.0028	--	--	--	--	--
Benzo(ghi)perylene	NV	NV	--	--	--	--	--	--
Benzo(j+k)fluoranthene	NV	1.2	--	--	--	--	--	--
Chrysene	NV	12	0.0028	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	0.01	--	--	--	--	--	--
Dibenzofuran	NV	16	--	--	--	--	--	--
Fluoranthene	NV	640	--	--	--	--	--	--
Fluorene	NV	640	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	NV	0.12	--	--	--	--	--	--
Naphthalene	160	160	4,713	--	--	--	--	--
Phenanthrene	NV	NV	--	--	--	--	--	--
Pyrene	NV	480	830	--	--	--	--	--
Total Benzofluoranthenes	NV	--	--	--	--	--	--	--
Total Naphthalenes	160	--	4,713	--	--	--	--	--
cPAH TEQ	0.1	--	0.0028	--	--	--	--	--

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Table 2-4
Analytical Results—Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	MW09	MW10		MW11
				Sample Name:	MW09-GW-050118	MW10-GW-050118	MWDUP-GW-050118	MW11-GW-050118
				Collection Date:	05/01/2018	05/01/2018	05/01/2018	05/01/2018
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)				
TPH Identification (Presence/Absence)								
Gasoline	NV	NV	NV	NV	--	--	--	--
Diesel	NV	NV	NV	NV	--	--	--	--
Lube Oil	NV	NV	NV	NV	--	--	--	--
TPH (ug/L)								
Gasoline	1,000[(d)]	NV	NV	NV	--	--	--	--
Diesel	500	NV	NV	NV	--	--	--	--
Lube Oil	500	NV	NV	NV	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	500	NV	NV	NV	--	--	--	--

NOTES:

Calculated sums use the highest non-detect value when all constituents are non-detect. When detect and non-detect values are summed, zero is used for non-detect values.

Data are compared to MTCA A CULs. When a MTCA A value was not available, data were compared to the MTCA B CUL. Non-detect data are not compared to a CUL.

Detected results are indicated by bold font.

The minimum applicable surface water ARAR is provided for each detected constituent.

MTCA B cleanup levels are provided. Lower of the Method B Cancer and Non Cancer is shown.

Results that exceed all cleanup levels are shaded. Non-detect results are not evaluated against cleanup criteria.

Results that exceed just surface water criteria are highlighted.

Screening levels for protection of indoor air to MTCA Method B CULs are provided for all detected VOCs.

-- = not analyzed.

ARAR = applicable or relevant and appropriate requirement.

cPAH TEQ = carcinogenic PAH toxic equivalency quotient.

CUL = cleanup level.

ft bgs = feet below ground surface.

J = result is an estimated value.

mg/kg = milligrams per kilogram.

MTCA = Model Toxics Control Act.

ND = non-detect value.

NV = no value.

PAH = polycyclic aromatic hydrocarbon.

PCB = polychlorinated biphenyl.

SVOC = semivolatile organic compound.

Total Naphthalenes = sum of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene.

Total PCB Aroclors = sum of all PCB Aroclors.

TPH = total petroleum hydrocarbon.

U = result is non-detect.

ug/L = micrograms per liter.

UJ = result is non-detect and an estimated value.

VOC = volatile organic compound.

[a] MTCA Method A CUL used for surface water ARAR based on Washington State background conditions Table 720-1 of Washington Administrative Code 173-340-900.

[b] Value is for chromium III.

[c] m-xylene and o-xylene MTCA cleanup level is for xylenes.

[d] MTCA cleanup level is for gasoline-range organics with no detectable benzene present.

Table 2-5
Analytical Results—Subslab Soil Gas
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

	Location:	GP31
	Sample Name:	GP31-BV-0.5
	Collection Date:	04/22/2015
Analyte	Method B Soil Gas Screening Level[a]	
Chlorinated VOCs (ug/m^3)		
1,1-Dichloroethene	3,050	0.62 U
cis-1,2-Dichloroethene	NV	0.62 U
Tetrachloroethene	321	**100**
trans-1,2-dichloroethene	NV	0.62 U
Trichloroethene	12.3	0.84 U
Vinyl chloride	9.33	0.4 U

NOTES:

Detections are in **bold** font.

The lower of available carcinogen or noncarcinogen screening level is used.

NV = no value.

U = result is non-detect.

ug/m^3 = micrograms per cubic meter.

VOC = volatile organic compound.

[a]Soil gas screening levels are for subslab soil vapor for protection of indoor air to Model Toxics Control Act Method B cleanup levels.

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Table 2-6
Analytical Results—Background Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	DU16[a]	DU17[a]	DU17	DU17	DU17	DU17	DU17	DU16	DU16	DU16	DU16	DU16
Sample Name:	DU16-S-0.5	DU17-S-0.5	SS16-S-0.5	SS17-S-0.5	SS18-S-0.5	SS19-S-0.5	SS20-S-0.5	SS46-S-0.5	SS47-S-0.5	SS48-S-0.5	SS49-S-0.5	SS50-S-0.5
Collection Date:	04/26/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/25/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018	04/26/2018
Collection Depth (ft bgs):	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Metals (mg/kg)												
Arsenic	**8.67**	**10.6**	**13.9**	**15.2**	**8.01**	**8.65**	**15.1**	**7.29**	**15.7**	**7.41**	**13.9**	**10.8**
Barium	**120**	**119**	**531**	**118**	**122**	**147**	**158**	**160**	**345**	**105**	**138**	**141**
Cadmium	**0.182 J**	**0.216 J**	0.938 U	0.887 U	0.942 U	1.16 U	0.79 U	0.746 U	0.866 U	0.756 U	0.917 U	0.828 U
Chromium	**40.8**	**52.2**	**71.1**	**56.5**	**39.5**	**67.8**	**91.1**	**51.2**	**25.9**	**37.4**	**73.6**	**74.7**
Copper	**26.7**	**42.7**	**66.6**	**28.9**	**27.8**	**34.3**	**54.7**	**25.3**	**37**	**20.2**	**45.2**	**40.7**
Lead	**16.3**	**22.5**	**96.2**	**40.5**	**42**	**39.9**	**14.4**	**20.7**	**37.4**	**13.9**	**25.4**	**22.8**
Mercury	1.55 U	0.776 U	0.15 U	**0.183 J**	0.151 U	0.186 U	0.126 U	0.119 U	0.139 U	**0.143 J**	**0.183 J**	**0.168 J**
Selenium	**0.585 J**	0.579 U	0.938 U	0.887 U	0.942 U	1.16 U	0.79 U	0.746 U	0.866 U	0.756 U	**1.2 J**	**0.859 J**
Silver	0.572 U	0.579 U	**0.39**	**0.406**	**0.191 J**	0.232 U	**0.316**	0.149 U	0.173 U	**0.158 J**	**0.679**	**0.581**
Zinc	**77.7**	**90.4**	**267**	**108**	**75.2**	**87.8**	**133**	**64.4**	**157**	**83.3**	**115**	**121**

NOTES:
Detected results are shown in **bold** font.
bgs = below ground surface.
J = Result is an estimated value.
mg/kg = milligrams per kilogram.
U = Result not detected at method detection limit.
[a]Incremental sampling methodology composite sample.

Table 4-1
Proposed Sampling and Analyses Summary
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

AOC	Objective		Location Type	Sample Type	No. of Locations	Location ID	Sample Matrix	Total Depth (ft bgs)	Sample Collection Depth/ Screened Interval (ft bgs)	Analytical Suite								
										Pb	As and Pb[a]	Cu and Zn	Total Cr	Eco Metals	cVOCs	He	Redox Chemicals	Plant and Soil Biota Evaluation
AOC 1: Former Laundry Building	Vapor Concentrations of Chlorinated Solvents in the Former Laundry Building		Indoor air	Discrete, 8-hour	2	INAIR-1 and INAIR-2	Air	--	--	--	--	--	--	--	X	--	--	--
			Outdoor air	Discrete, 8-hour	1	OUTAIR-1	Air	--	--	--	--	--	--	--	X	--	--	--
			Sub-slab	Discrete, grab	2	SB01 and SB02	Sub-slab	0.5	--	--	--	--	--	--	X	X	--	--
AOC 3: Pb in soil	Lead in Soil adjacent to Previously Restored Buildings		Surface soil (thin-walled tube sampler)	Five-point composite	4	CS01 to CS04	Soil	0.5	0 - 0.5	X	--	--	--	--	--	--	--	--
				Discrete	1	HA68 (field check)	Soil	0.5	0-0.5	X	--	--	--	--	--	--	--	--
				Discrete	20	HA69 to HA89	Soil	0.5	0 - 0.5	X (archived)	--	--	--	--	--	--	--	--
AOC 5: Property-wide metals in soil	Tier I—Initial Investigation	Background Evaluation	Boring location	Discrete	7	GP55 to GP61	Soil	20 to 30[b]	4 - 10 10 - 14	--	--	--		X	--	--	--	--
			Surface soil (thin-walled tube sampler)	Discrete	10	SS101 to SS111	Soil	0.5	0 - 0.5	--	--	--	X	--	--	--	--	--
	Tier II—Follow-Up Investigation	Bioassay	Surface soil (thin-walled tube sampler)	Five-point composite	3	CS05 to CS07	Soil	0.5	0 - 0.5	--	--	--	X	--	--	--	--	X
		Delineation of SS-38 and SS-40 detections of Cu and Zn[c]	Surface soil (thin-walled tube sampler)	Discrete	TBD[b]	TBD[b]	Soil	0.5	0 - 0.5	--	--	X		--	--	--	--	--
AOC 7: As and Pb in Groundwater	Groundwater Conditions in Anthropogenic-Influence Area		Monitoring well	Discrete	5 (plus 1 field duplicate)	MW01	GW	25	20 - 25	--	X	--		--	--	--	X	--
						MW02	GW	20	15 - 20	--	X	--		--	--	--	X	--
						MW03	GW	20	15 - 20	--	X	--		--	--	--	X	--
						MW04	GW	20	10 - 20	--	X	--		--	--	--	X	--
						MW09	GW	30	10 - 20	--	X	--		--	--	--	X	--
	Background Groundwater Investigation		Boring location	Discrete	7	GP55 to GP61	GW	20 to 30[b]	saturated blue-gray clay (and alluvium if present)[d]	--	X	--		--	--	--	X	--

Table 4-1
Proposed Sampling and Analyses Summary
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

NOTES:

-- = not analyzed.

AOC = area of concern.

As = arsenic; analysis by USEPA Method 6020A.

Cu = copper; analysis by USEPA Method 6020A.

cVOCs = chlorinated volatile organic compounds, including tetrachloroethene, trichloroethene, 1,1-dichloroethene, 1,2-dichloroethane, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride; analysis by USEPA TO-15 SIM.

ft bgs = feet below ground surface.

GW = groundwater.

He = helium; analysis by ASTM International Method D-1946.

ID = identification.

Eco Metals = arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc; analysis by USEPA Method 6020A.

No. = number.

Pb = lead; analysis by USEPA Method 6020A.

Redox Chemicals = total organic carbon by USEPA Method 415.1; nitrate as nitrogen by USEPA Method 353.2; sulfate by ASTM D516-11; dissolved manganese by USEPA Method 6020A; and ferrous iron, using a Hach test kit in the field. The following field parameters will be recorded for each location as well: dissolved oxygen, pH, and oxidation reduction potential.

sq. ft = square feet.

USEPA = U.S. Environmental Protection Agency.

X = analyze.

Zn = zinc; analysis by USEPA Method 6020A.

[a]Total and dissolved concentrations of metals will be analyzed from groundwater samples.

[b]Dependent on field observations.

[c]Additional characterization of previous exceedance areas near SS-38 and SS-40 will depend on area of exposed ground surface (i.e., available habitat). If greater than 400 sq. ft, additional samples will be collected at one sample/400 sq. ft. If less than 400 sq. ft, propose evaluation of remedial action and confirmation sampling.

[d]If both the alluvial and glaciomarine deposits are present and there are two water bearing zones associated with each lithology at a boring location, an attempt will be made to collect two reconnaissance groundwater samples from screened intervales at each respective water-bearing zone.

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Table 4-2
Evaluation of Data Needs for TEE
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Area of Evaluation	Surface ISM TEE Samples (0.5 feet bgs)	Surface Discrete TEE Samples (0.5 feet bgs)	Surface Discrete Non-TEE Samples (0-6 feet bgs)	Subsurface Discrete (6-15 feet bgs)	Surface Data Needs	Subsurface Data Needs	Included in Tier I - Initial Investigation	Included in Tier II - Follow-Up Investigation
DU01	*no exceedances*	--	Cr, TPH	Cr	None. No exceedances in surface ISM TEE Samples. Non-TEE samples are not representative of habitat (located in Power House AOC under asphalt).	Potential Phase 2 Evaluation (following Phase 1 Subsurface Background Investigation & Bioassay).	--	--
DU02	Cu, Zn	Cu, Zn	Pb	--	Delineate SS-38 and S-40 for Cu and Zn with additional characterization or propose remedy based on size of adjacent exposed area (Tier I). Conduct WOE TEE (Tier I).	Potential Phase 2 Evaluation (following Phase 1 Surface and Subsurface Background Investigation & Bioassay).	X	TBD
DU03	*no exceedances*	--	Cr	Cr	None. Non-TEE samples are not representative of habitat (area north of maintenance building under asphalt).	Potential Phase 2 Evaluation (following Phase 1 Subsurface Background Investigation & Bioassay).	--	--
DU04	Pb	Pb	Pb, Cr, Zn	As, Cr	None. A soil removal interim remedial action is scheduled for the area of TEE exceedances.	Potential Phase 2 Evaluation (following Phase 1 Subsurface Background Investigation & Bioassay).	--	--
DU05	*no exceedances*	--	*no exceedances*	--	None.	None.	--	--
DU06	*no exceedances*	--	Pb, Cr, Zn	Cr	None. No exceedances in surface ISM TEE samples.	Potential Phase 2 Evaluation (following Phase 1 Subsurface Background Investigation & Bioassay).	--	--
DU07	*no exceedances*	--	Pb	*no exceedances*	None. No exceedances in surface ISM TEE samples. Non-TEE samples are not representative of habitat.	None.	--	--
DU08	*no exceedances*	--	*no exceedances*	*no exceedances*	None.	None.	--	--
DU09	*no exceedances*	--	--	--	None.	None.	--	--
DU10	*no exceedances*	--	--	--	None.	None.	--	--
DU11	Cr	Cr	--	--	Additional evaluation of natural background along Hansen Creek (Tier I). Conduct WOE TEE (Tier I). Conduct evaluation via bioassays and wildlife exposure model (Tier II).	Potential Phase 2 Evaluation (following Phase 1 Subsurface Background Investigation & Bioassay).	X	TBD

Table 4-2
Evaluation of Data Needs for TEE
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Area of Evaluation	Surface ISM TEE Samples (0.5 feet bgs)	Surface Discrete TEE Samples (0.5 feet bgs)	Surface Discrete Non-TEE Samples (0-6 feet bgs)	Subsurface Discrete (6-15 feet bgs)	Surface Data Needs	Subsurface Data Needs	Included in Tier I - Initial Investigation	Included in Tier II - Follow-Up Investigation
DU12	*no exceedances*	--	--	--	None.	None.	--	--
DU13	*no exceedances*	--	--	--	None.	None.	--	--
DU14	Cr	Cr	Cr	Cr	Additional evaluation of natural background along Hansen Creek (Tier I). Conduct WOE TEE (Tier I). Conduct evaluation via bioassays and wildlife exposure model (Tier II).	Potential Phase 2 Evaluation (following Phase 1 Subsurface Background Investigation & Bioassay).	X	TBD
DU15	*no exceedances*	--	--	--	None.	None.	--	--
DU16	Background	Background	--	--	None.	Conduct Phase 1 Subsurface Background Investigation in decision unit (Tier I).	X	X
DU17	Background	Background	--	--	None.	Conduct Phase 1 Subsurface Background Investigation in decision unit (Tier I).	X	X
DU18	*no exceedances*	--	--	--	None.	None.	--	--

NOTES:
Highlighted cells indicate proposed action item for work plan.
No exceedances indicate no detections above site-specific natural background values or ecological indicator criteria if value is higher than natural background value.
Samples collected for human health evaluation purposes (i.e., hand auger locations immediately adjacent to buildings or other areas not representative of habitat) are not included for TEE evaluation.
-- = not applicable.
AOC = area of concern.
As = arsenic.
bgs = below ground surface.
Cr = chromium.
Cu = copper.
ISM = incremental sampling methodology.
Pb = lead.
TBD = to be determined based on Tier I investigation results.
TEE = terrestrial ecological evaluation.
TPH = total petroleum hydrocarbons.
WOE = weight of evidence.
X = yes.
Zn = zinc.

Table 4-3
AOC 7: Lead and Arsenic in Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:					GP2	GP15	GP17	GP18	GP20	GP21
Sample Name:					GP2-W-10.0	GP15-W-18.0	GP17-W-13.5	GP18-W-13.0	GP20-W-13.0	GP21-W-19.0
Collection Date:					08/19/2014	04/20/2015	04/20/2015	04/21/2015	04/21/2015	04/21/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)						
Total Metals (ug/L)										
Arsenic	5	0.0583	5[a]	--	--	**140**	**64**	**40**	**18**	3.3 U
Lead	15	NV	0.54	--	--	**57**	**43**	**19**	**30**	**48**
Dissolved Metals (ug/L)										
Arsenic	5	0.0583	5[a]	--	**2.9**	**11**	**17**	**15**	3 U	3 U
Lead	15	NV	0.54	--	0.1 U	1 U	1 U	1 U	1 U	1 U
Chlorinated VOCs (ug/L)										
cis-1,2-Dichloroethene	NV	16	NV	160	--	--	--	--	--	0.2 U
Tetrachloroethene	5	21	0.69	22.9	--	--	--	--	--	0.2 U
Trichloroethene	5	0.54	2.5	1.55	--	--	--	--	--	0.2 U
Vinyl chloride	0.2	24	--	--	--	--	--	--	--	0.2 U
TPH Identification (Presence/Absence)										
Gasoline	NV	NV	NV	NV	ND	--	--	--	--	--
Diesel	NV	NV	NV	NV	**DETECT**	--	--	--	--	--
Lube Oil	NV	NV	NV	NV	**DETECT**	--	--	--	--	--
TPH (ug/L)										
Gasoline	1,000[b]	NV	NV	NV	--	--	--	--	--	100 U
Diesel	500	NV	NV	NV	**540**	260 U	260 U	260 U	260 U	--
Lube Oil	500	NV	NV	NV	**1,200**	420 U	410 U	410 U	420 U	--
Heavy Oils (Diesel + Lube Oil)	500	NV	NV	NV	**1,740**	420 U	410 U	410 U	420 U	--
Field Water Quality Parameters from FSDSs										
Turbidity (NTUs)	--	--	--	--	14.7	964	very turbid	100	very turbid	200
pH	--	--	--	--	6.61	6.97	7.1	7.08	6.3	6.31
ORP (mV)	--	--	--	--	57.7	--	--	--	--	--
DO (mg/L)	--	--	--	--	1.21	--	--	--	--	--
Well and Boring Log Information										
Predominant Soil Type in Screen	--	--	--	--	greenish gray to light gray, dark brown, clay	blue gray, clay	gray, sandy gravel	blue gray, sandy silt/ gravelly sand	gray, silty sand/sandy gravel	gravelly sand
Screened Interval (ft bgs)	--	--	--	--	7 to 12	15 to 20	13 to 18	11.5 to 16.5	10 to 15	15 to 20

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Table 4-3
AOC 7: Lead and Arsenic in Groundwater
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

				Location:	GP29	GP30	MW01	MW02	MW03	MW04
				Sample Name:	GP29-W-15.0	GP30-W-20.0	MW01-GW-061015	MW02-GW-061015	MW03-GW-061015	MW04-GW-061015
				Collection Date:	04/22/2015	04/22/2015	06/10/2015	06/10/2015	06/10/2015	06/10/2015
Analyte	MTCA A CUL	MTCA B CUL	Surface Water ARAR	Screening Level for Protection of Indoor Air (MTCA B)						
Total Metals (ug/L)										
Arsenic	5	0.0583	5[a]	--	**3.4**	**420**	**38**	**1.3**	**21**	**5**
Lead	15	NV	0.54	--	**14**	**250**	**0.94**	**2.1**	0.5 U	0.5 U
Dissolved Metals (ug/L)										
Arsenic	5	0.0583	5[a]	--	3 U	**58**	**37**	**1.2**	**21**	**5.6**
Lead	15	NV	0.54	--	1 U	1 U	0.5 U	**1**	0.5 U	0.5 U
Chlorinated VOCs (ug/L)										
cis-1,2-Dichloroethene	NV	16	NV	160	0.2 U	0.2 U	--	--	--	--
Tetrachloroethene	5	21	0.69	22.9	**0.3**	0.2 U	0.2 U	0.2 U	--	--
Trichloroethene	5	0.54	2.5	1.55	0.2 U	0.2 U	--	--	--	--
Vinyl chloride	0.2	24	--	--	0.2 U	0.2 U	--	--	--	--
TPH Identification (Presence/Absence)										
Gasoline	NV	NV	NV	NV	--	ND	--	--	--	--
Diesel	NV	NV	NV	NV	--	ND	--	--	--	--
Lube Oil	NV	NV	NV	NV	--	ND	--	--	--	--
TPH (ug/L)										
Gasoline	1,000[b]	NV	NV	NV	100 U	--	--	--	--	--
Diesel	500	NV	NV	NV	--	--	--	--	--	--
Lube Oil	500	NV	NV	NV	--	--	--	--	--	--
Heavy Oils (Diesel + Lube Oil)	500	NV	NV	NV	--	--	--	--	--	--
Field Water Quality Parameters from FSDSs										
Turbidity (NTUs)	--	--	--	--	338.4	very turbid	14.52	3.73	17.59	0.58
pH	--	--	--	--	6.5	--	7.55	6.18	7.2	5.72
ORP (mV)	--	--	--	--	--	--	51.8	4.7	-36.6	-15.2
DO (mg/L)	--	--	--	--	--	--	3.08	0.32	1.89	0.5
Well and Boring Log Information										
Predominant Soil Type in Screen	--	--	--	--	sandy silt; sandy gravel; blue gray, clay	blue gray, clay	blue gray, silt/silty sand	sandy gravel	blue gray, silt w/ sand	dark gray, silt/sand
Screened Interval (ft bgs)	--	--	--	--	15 to 20	18 to 23	19.8 to 24.8	14 to 19	14.5 to 19.5	9 to 19

NOTES:
Calculated sums use the highest non-detect value when all constituents are non-detect. When detect and non-detect values are summed, zero is used for non-detect values.
Data are compared to MTCA A CULs. When a MTCA A value was not available, data were compared to the MTCA B CUL. Non-detect data are not compared to a CUL.
Detected results are indicated by bold font.
The minimum applicable surface water ARAR is provided for each detected constituent.
MTCA B cleanup levels are provided. Lower of the Method B Cancer and Non Cancer is shown.
Results that exceed all cleanup levels are shaded. Non-detect results are not evaluated against cleanup criteria.
Results that exceed just surface water criteria are highlighted.
Screening levels for protection of indoor air to MTCA Method B cleanup levels are provided for all detected VOCs.
-- = not analyzed.
AOC = area of concern.
ARAR = applicable or relevant and appropriate requirement.
CUL = cleanup level.
DO = dissolved oxygen.
FSDS = field sampling data sheet.
ft bgs = feet below ground surface.
J = result is an estimated value.
mg/L = milligrams per liter.
MTCA = Model Toxics Control Act.
mV = millivolt.
ND = non-detect value.
NTU = nephelometric turbidity unit.
NV = no value.
ORP = oxygen-reduction potential.
TPH = total petroleum hydrocarbon.
U = result is non-detect.
ug/L = micrograms per liter.
VOC = volatile organic compound.
[a] MTCA Method A CUL used for surface water ARAR based on Washington State background conditions Table 720-1 of WAC 173-340-900.
[b] MTCA cleanup level is for gasoline-range organics with no detectable benzene present.

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Table 4-4
AOC 7: Lead and Arsenic in Soil
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Location:	MTCA A, Unrestricted Land Use	MTCA B	Site-Specific Background Value	Ecological Indicator Concentrations[a]			GP1	GP2	GP3	GP4	GP5	GP9	GP39
Sample Name:				Plants	Soil Biota	Wildlife	GP1-S-1.4	GP2-S-3.0	GP3-S-7.0	GP4-S-5.4	GP5-S-14.5	GP9-S-0.5	GP39-S-3.5
Collection Date:							08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014	08/19/2014	04/23/2015
Collection Depth (ft bgs):							1.4	3	7	5.4	14.5	0.5	3.5
Metals (mg/kg)													
Arsenic	20	NA	18.9	10	60	7	**7.4**	**13**	**4**	**6.2**	**6.1**	**9.1**	16 U
Lead	250	NA	53	50	500	118	**13.1**	**19.9**	**15.3**	**28.3**	**10**	**43.9**	**20**
Chlorinated VOCs (mg/kg)													
cis-1,2-Dichloroethene	NV	160	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--	0.0016 U
Tetrachloroethene	0.05	476	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--	0.0016 U
Trichloroethene	0.03	12	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--	0.0016 U
Vinyl chloride	NV	240	NV	NV	NV	NV	--	--	--	0.0017 U	0.0015 U	--	0.0016 U
TPH Identification (Presence/Absence)													
Gasoline	NV	NV	NV	NV	NV	NV	ND	20 U	20 U	ND	ND	ND	--
Diesel	NV	NV	NV	NV	NV	NV	ND	50 U	50 U	ND	ND	**DETECT**	--
Lube Oil	NV	NV	NV	NV	NV	NV	ND	100 U	100 U	ND	ND	**DETECT**	--
TPH (mg/kg)													
Gasoline	100[b]	NA	NV	NV	100	5,000	--	--	--	--	--	--	--
Diesel	2,000	NA	NV	NV	200	6,000	--	--	--	--	--	**220**	--
Lube Oil	2,000	NA	NV	NV	NV	NV	--	--	--	--	--	**2,700**	--
Heavy Oils (Diesel + Lube Oil)	2,000	NA	NV	NV	200	6,000	--	--	--	--	--	**2,920**	--

NOTES:
Calculated sums use the highest non-detect value when all constituents are non-detect. When detect and non-detect values are summed, zero is used for non-detect values.
Detected results are indicated by bold font.
MTCA B cleanup levels are provided. Lower of the Method B Cancer and Non Cancer is shown. Non-detect data not compared to a cleanup level.
Results that exceed an ecological indicator concentration are shaded. Non-detect results are not evaluated against cleanup criteria.
Results that exceed both a MTCA A cleanup level and an ecological indicator concentration are shaded. Non-detect results are not evaluated against cleanup criteria.
Results that exceed MTCA A cleanup level, or a MTCA B cleanup level if no MTCA A value is available, are shaded. Non-detect results are not evaluated against cleanup criteria.
-- = not analyzed.
AOC = area of concern.
ft bgs = feet below ground surface.
mg/kg = milligrams per kilogram.
MTCA = Model Toxics Control Act.
NA = not applicable.
ND = non-detect value.
NV = no value.
TPH = total petroleum hydrocarbon.
U = result is non-detect.
VOC = volatile organic compound.
[a]Ecological indicator concentrations were obtained from MTCA Table 749-3.
[b]MTCA cleanup level is for gasoline-range organics with no detectable benzene present.

FIGURES

Source: Aerial photograph obtained from Esri ArcGIS Online; parcels and roads and streams datasets obtained from Skagit County; city limits dataset obtained from City of Sedro-Woolley.

Legend

- Property Parcel and Parcel Name
- Northern State Recreational Area
- Sedro-Woolley City Limits (Post Annexation)
- Stream

0 500 1,000

Feet

Figure 1-1
Property Vicinity
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Path: X:\0624.04 Port of Skagit\10_Brownfield_Haz\Project\Fig1_Property_Vicinity_New_Parcels.mxd
Print Date: 12/3/2019
Approved By: mstringer
Produced By: agiuse
Project: 0624.04.01-01

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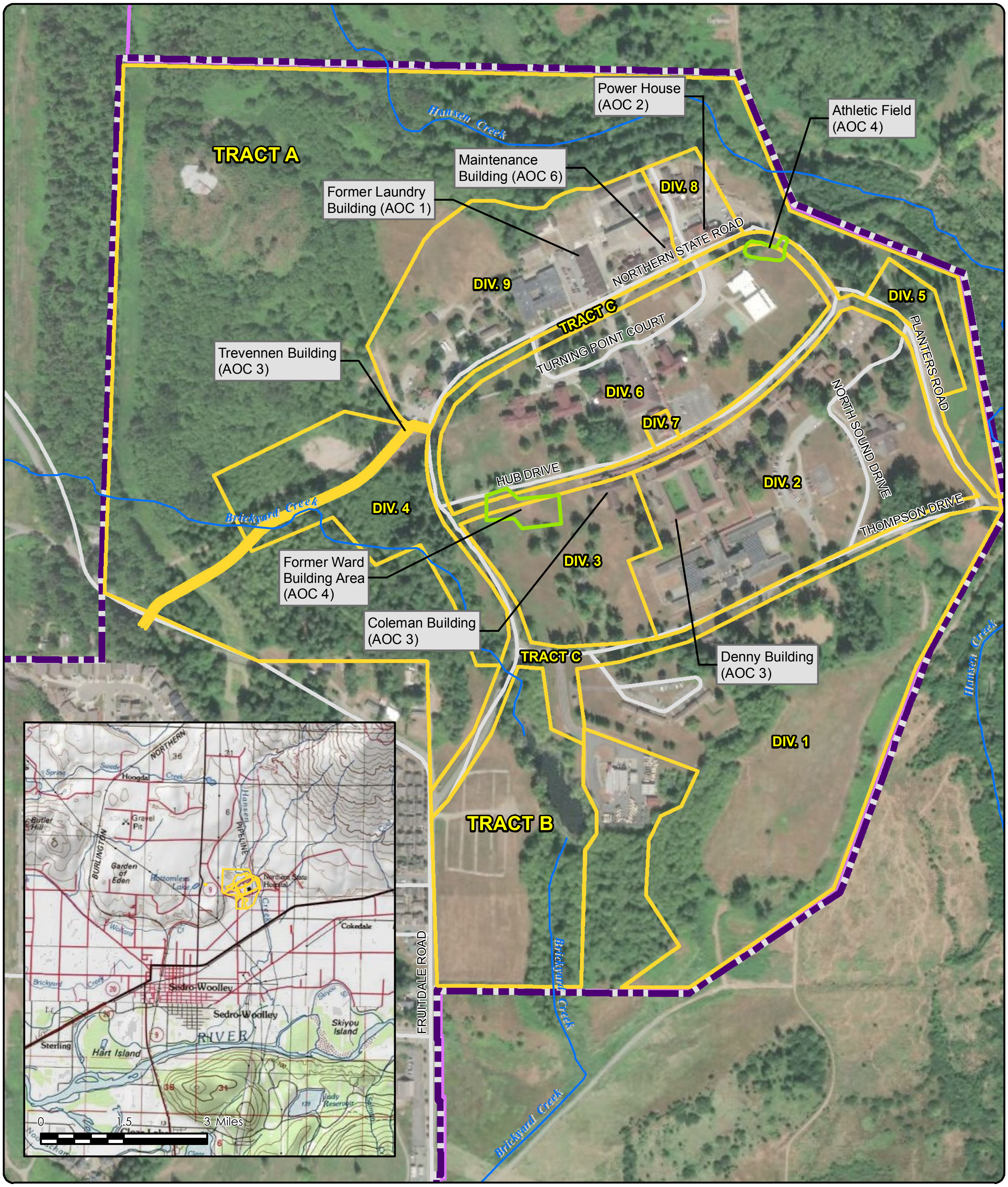
Produced By: abixby
Project: 0624.04.01-01



Source: Aerial photograph obtained from Esri ArcGIS Online; parcels, roads, and stream datasets obtained from Skagit County; city limits dataset obtained from the City of Sedro-Woolley.

Legend

- Property Parcel and Parcel Number
- Sedro-Woolley City Limits (Post Annexation)
- Northern State Recreational Area
- Road
- Stream

Figure 1-2
Property Features
Former Northern State Hospital
Port of Skagit County
Sedro-Woolley, Washington

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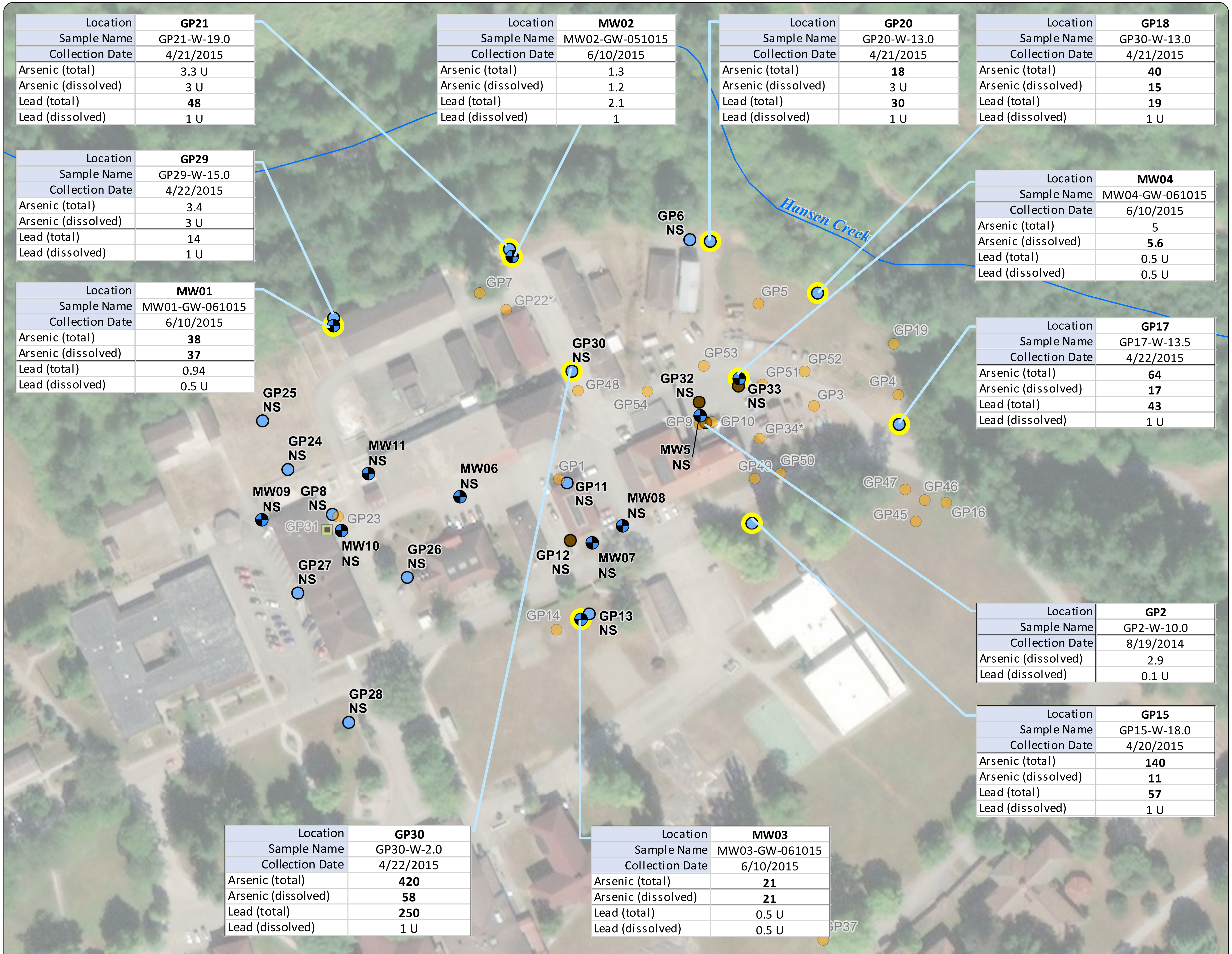
Notes:
AOC = area of concern.
AOC 3 = elevated lead in soil near historical buildings on the Property.
AOC 5 = metal ecological exceedances in soil across the Property.
AOC 7 = arsenic and lead concentrations groundwater across the Property.

0 300 600 Feet

Figure 2-1
AOC 7: Lead and Arsenic in Groundwater Historical Data

Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington



Location	GP21
Sample Name	GP21-W-19.0
Collection Date	4/21/2015
Arsenic (total)	3.3 U
Arsenic (dissolved)	3 U
Lead (total)	**48**
Lead (dissolved)	1 U

Location	MW02
Sample Name	MW02-GW-051015
Collection Date	6/10/2015
Arsenic (total)	1.3
Arsenic (dissolved)	1.2
Lead (total)	2.1
Lead (dissolved)	1

Location	GP20
Sample Name	GP20-W-13.0
Collection Date	4/21/2015
Arsenic (total)	**18**
Arsenic (dissolved)	3 U
Lead (total)	**30**
Lead (dissolved)	1 U

Location	GP18
Sample Name	GP30-W-13.0
Collection Date	4/21/2015
Arsenic (total)	**40**
Arsenic (dissolved)	**15**
Lead (total)	**19**
Lead (dissolved)	1 U

Location	GP29
Sample Name	GP29-W-15.0
Collection Date	4/22/2015
Arsenic (total)	3.4
Arsenic (dissolved)	3 U
Lead (total)	14
Lead (dissolved)	1 U

Location	MW04
Sample Name	MW04-GW-061015
Collection Date	6/10/2015
Arsenic (total)	5
Arsenic (dissolved)	**5.6**
Lead (total)	0.5 U
Lead (dissolved)	0.5 U

Location	MW01
Sample Name	MW01-GW-061015
Collection Date	6/10/2015
Arsenic (total)	**38**
Arsenic (dissolved)	**37**
Lead (total)	0.94
Lead (dissolved)	0.5 U

Location	GP17
Sample Name	GP17-W-13.5
Collection Date	4/22/2015
Arsenic (total)	**64**
Arsenic (dissolved)	**17**
Lead (total)	**43**
Lead (dissolved)	1 U

Location	GP2
Sample Name	GP2-W-10.0
Collection Date	8/19/2014
Arsenic (dissolved)	2.9
Lead (dissolved)	0.1 U

Location	GP15
Sample Name	GP15-W-18.0
Collection Date	4/20/2015
Arsenic (total)	**140**
Arsenic (dissolved)	**11**
Lead (total)	**57**
Lead (dissolved)	1 U

Location	GP30
Sample Name	GP30-W-2.0
Collection Date	4/22/2015
Arsenic (total)	**420**
Arsenic (dissolved)	**58**
Lead (total)	**250**
Lead (dissolved)	1 U

Location	MW03
Sample Name	MW03-GW-061015
Collection Date	6/10/2015
Arsenic (total)	**21**
Arsenic (dissolved)	**21**
Lead (total)	0.5 U
Lead (dissolved)	0.5 U

Legend

- Monitoring Well Location
- Boring Location (Groundwater)
- Boring Location (Soil and Groundwater)
- Boring Location (Soil)
- Sub-Slab Vapor Probe (Approximate)
- MTCA Method A CUL Exceedance

Analyte	Units	MTCA Method A CUL	Surface Water ARARs
Arsenic	ug/L	5	5
Lead	ug/L	15	0.54

Notes:
All property features are approximate.
All results are displayed in ug/L.
Bold value exceed the MTCA Method A CUL.
Results are compared to MTCA Method A (unrestricted land use) CULs. Surface water ARARs are also provided in the table for reference.
ARAR = applicable or relevant and appropriate requirement.
CUL = cleanup level.
MTCA = Model Toxics Control Act.
NS = not sampled for lead or arsenic.
U = not detected above the detection limit.
ug/L = micrograms per liter.

0 60 120
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online; streams dataset obtained from Skagit County.

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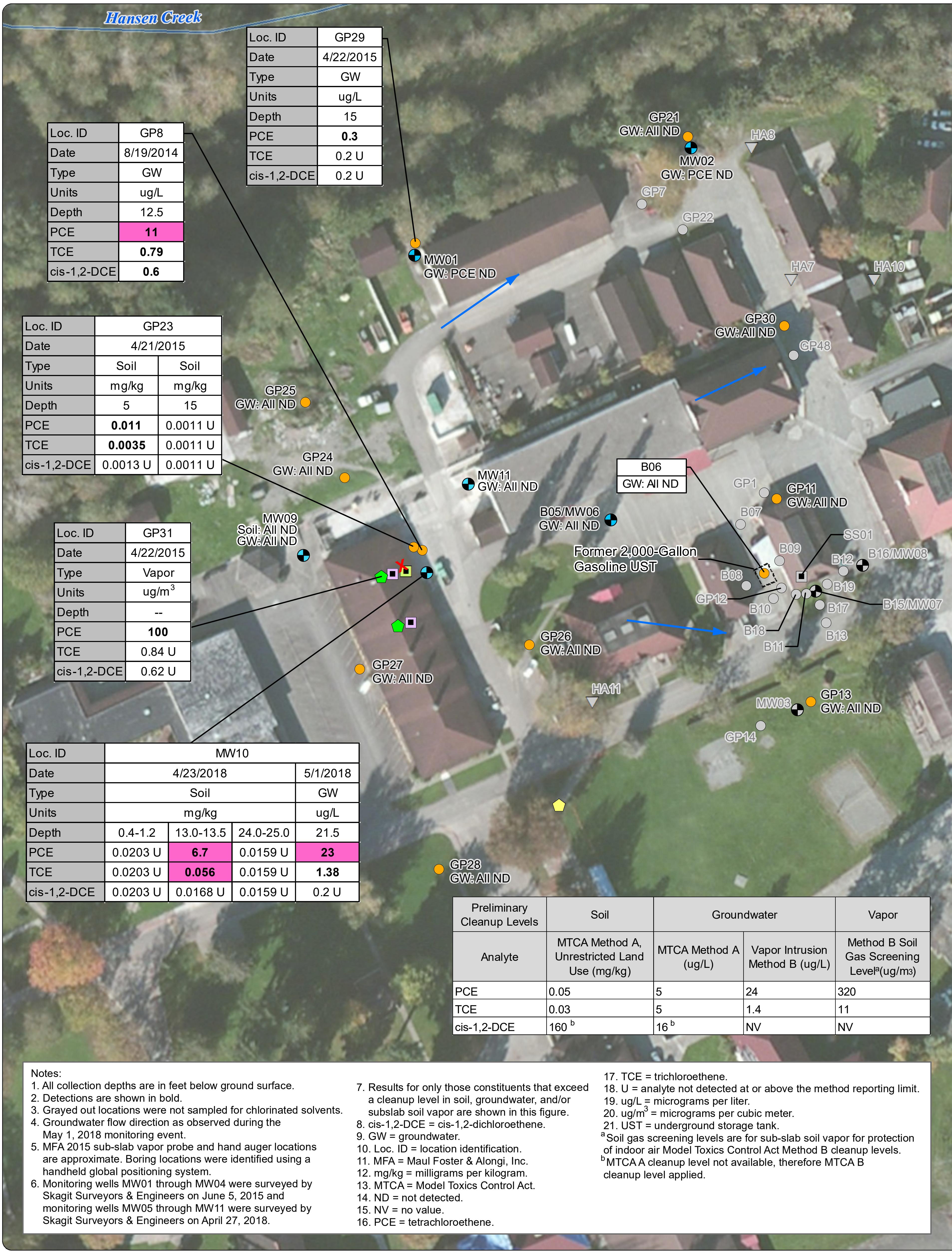

Loc. ID	GP29
Date	4/22/2015
Type	GW
Units	ug/L
Depth	15
PCE	**0.3**
TCE	0.2 U
cis-1,2-DCE	0.2 U

Loc. ID	GP8
Date	8/19/2014
Type	GW
Units	ug/L
Depth	12.5
PCE	**11**
TCE	**0.79**
cis-1,2-DCE	**0.6**

Loc. ID	GP23	
Date	4/21/2015	
Type	Soil	Soil
Units	mg/kg	mg/kg
Depth	5	15
PCE	**0.011**	0.0011 U
TCE	**0.0035**	0.0011 U
cis-1,2-DCE	0.0013 U	0.0011 U

Loc. ID	GP31
Date	4/22/2015
Type	Vapor
Units	ug/m^3
Depth	--
PCE	**100**
TCE	0.84 U
cis-1,2-DCE	0.62 U

Loc. ID	MW10			
Date	4/23/2018			5/1/2018
Type	Soil			GW
Units	mg/kg			ug/L
Depth	0.4-1.2	13.0-13.5	24.0-25.0	21.5
PCE	0.0203 U	**6.7**	0.0159 U	**23**
TCE	0.0203 U	**0.056**	0.0159 U	**1.38**
cis-1,2-DCE	0.0203 U	0.0168 U	0.0159 U	0.2 U

Preliminary Cleanup Levels	Soil	Groundwater		Vapor
Analyte	MTCA Method A, Unrestricted Land Use (mg/kg)	MTCA Method A (ug/L)	Vapor Intrusion Method B (ug/L)	Method B Soil Gas Screening Level[a] (ug/m^3)
PCE	0.05	5	24	320
TCE	0.03	5	1.4	11
cis-1,2-DCE	160 [b]	16 [b]	NV	NV

Notes:
1. All collection depths are in feet below ground surface.
2. Detections are shown in bold.
3. Grayed out locations were not sampled for chlorinated solvents.
4. Groundwater flow direction as observed during the May 1, 2018 monitoring event.
5. MFA 2015 sub-slab vapor probe and hand auger locations are approximate. Boring locations were identified using a handheld global positioning system.
6. Monitoring wells MW01 through MW04 were surveyed by Skagit Surveyors & Engineers on June 5, 2015 and monitoring wells MW05 through MW11 were surveyed by Skagit Surveyors & Engineers on April 27, 2018.
7. Results for only those constituents that exceed a cleanup level in soil, groundwater, and/or subslab soil vapor are shown in this figure.
8. cis-1,2-DCE = cis-1,2-dichloroethene.
9. GW = groundwater.
10. Loc. ID = location identification.
11. MFA = Maul Foster & Alongi, Inc.
12. mg/kg = milligrams per kilogram.
13. MTCA = Model Toxics Control Act.
14. ND = not detected.
15. NV = no value.
16. PCE = tetrachloroethene.
17. TCE = trichloroethene.
18. U = analyte not detected at or above the method reporting limit.
19. ug/L = micrograms per liter.
20. ug/m^3 = micrograms per cubic meter.
21. UST = underground storage tank.

[a] Soil gas screening levels are for sub-slab soil vapor for protection of indoor air Model Toxics Control Act Method B cleanup levels.
[b] MTCA A cleanup level not available, therefore MTCA B cleanup level applied.

Source: Aerial photograph obtained from Esri ArcGIS Online

Legend

- Indoor Air
- Outdoor Air
- Sub-Slab Vapor
- Monitoring Well
- Monitoring Well Not Sampled
- Boring Location
- Boring Location Not Sampled
- Sub-Slab Vapor Probe
- Sub-Slab Vapor Probe Not Sampled
- Hand Auger Location Not Sampled
- Groundwater Flow Direction
- X Drain Pipe

0 50 100
Feet

Figure 4-1
Former Laundry Building AOC Locations

Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

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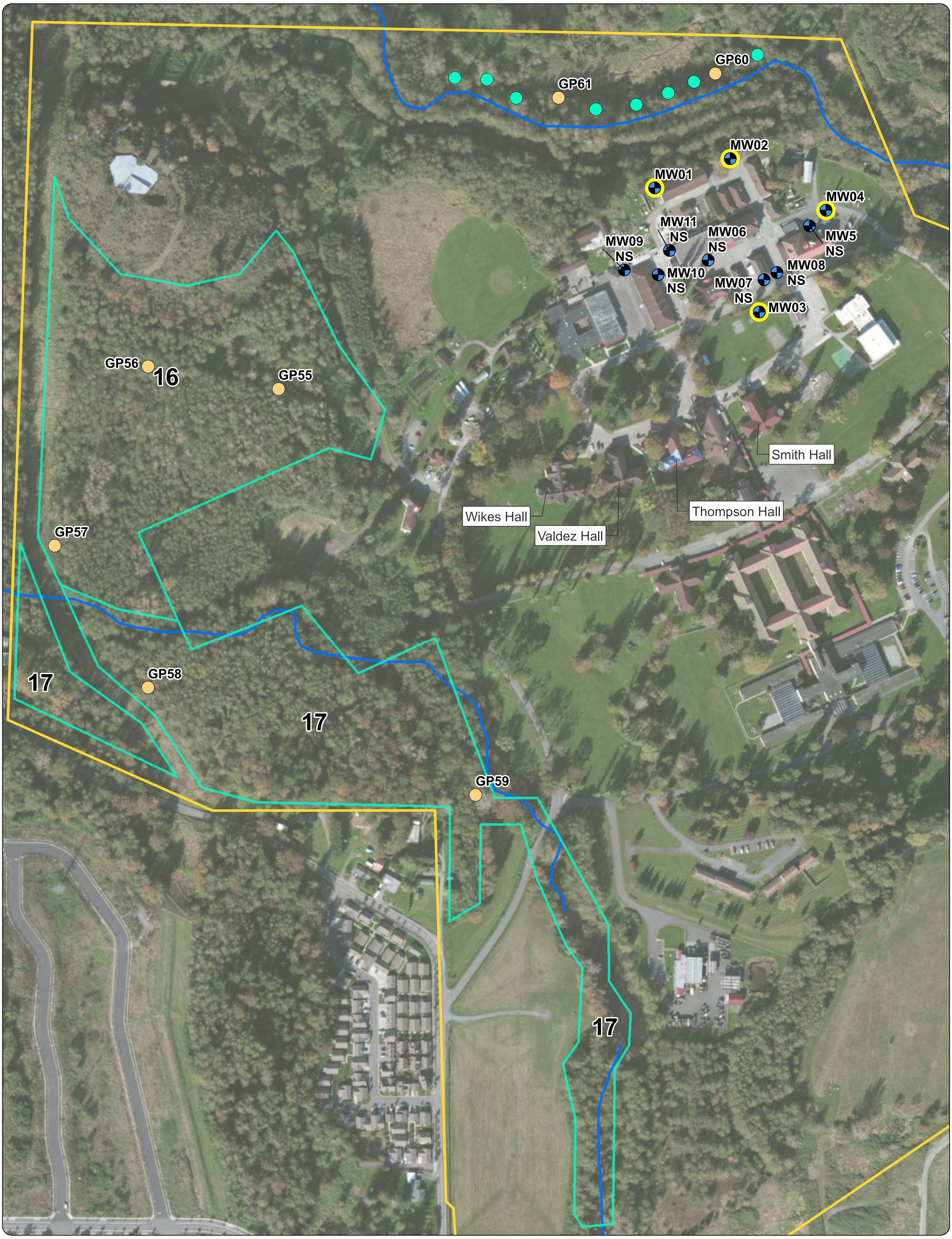

Source: Aerial photograph obtained from Esri ArcGIS Online; parcels and roads and streams datasets obtained from Skagit County; city limits dataset obtained from City of Sedro-Woolley.

Property address:
2070 Northern State Road
Sedro-Woolley, Washington

NOTES:
CUL = cleanup level.
MTCA = Model Toxics Contral Act.
NS = not sampled for arsenic or lead.

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Legend

- Proposed Background Surface Soil Sample
- Background Soil & Groundwater Boring Location
- Monitoring Well Location
- Historical MTCA Method A CUL Exceedance
- Decision Unit
- Property
- Stream

0 500 1,000
Feet

Figure 4-2
Tier I Sample Locations

Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Path: X:\0624.04 Port of Skagit\10_Brownfield_Haz\Project\Fig4_2_Tier_I_Sample_Locations.mxd
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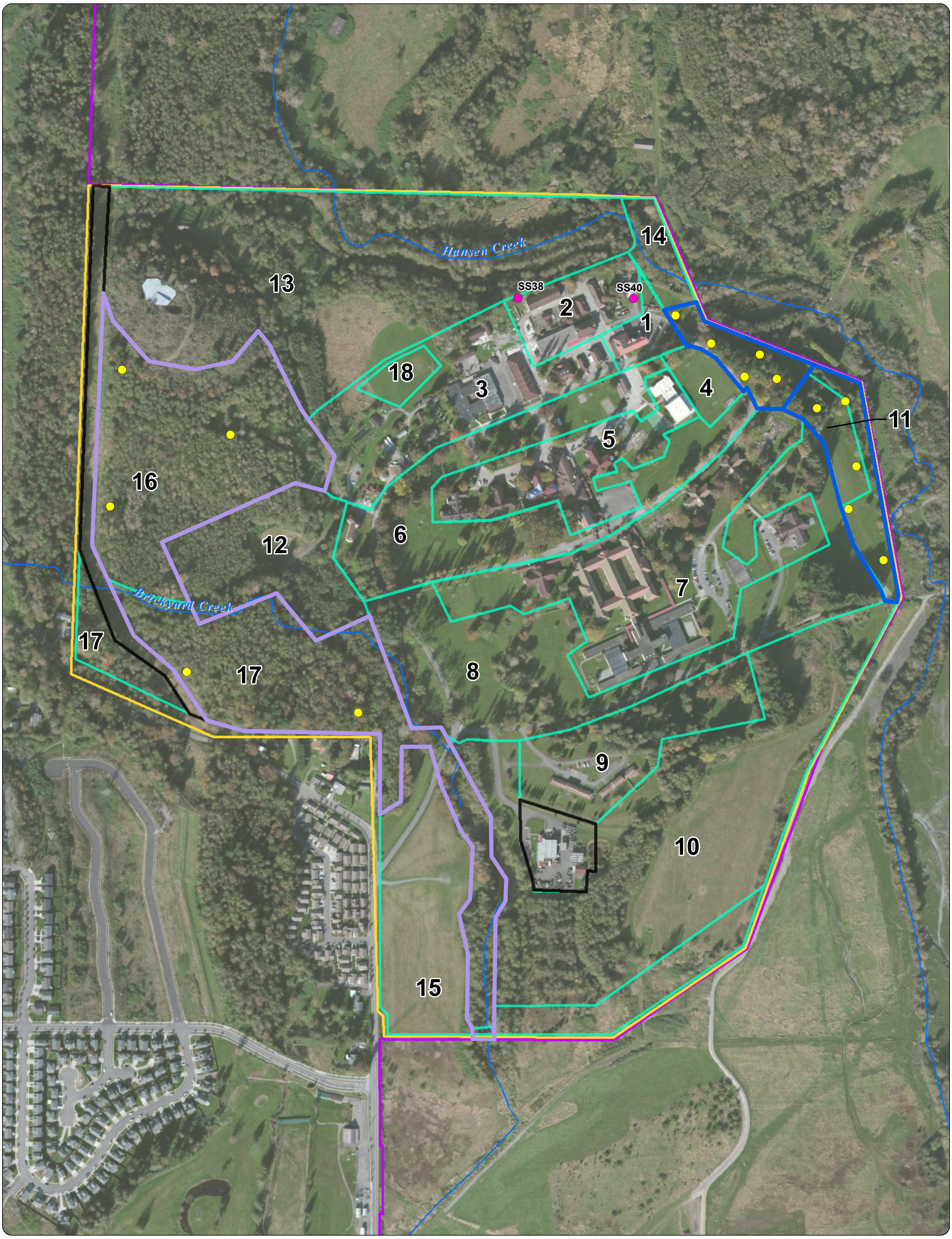
Produced By: aguse
Project: 0624.04.01-01



Source: Aerial photograph obtained from Esri ArcGIS Online; parcels and roads and streams datasets obtained from Skagit County; city limits dataset obtained from City of Sedro-Woolley.

Property address:
2070 Northern State Road
Sedro-Woolley, Washington

Legend

- Proposed Bioassay Composite Location
- Discrete Soil Sample
- National Guard Armory
- Decision Unit Boundary with Identification No.
- Northern State Recreational Area
- Property
- Background Area
- Investigation Area
- Stream

0 500 1,000
Feet

Figure 4-3
Tier II Sample Locations

Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

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Print Date: 12/12/2019
Approved By: mstringer
Produced By: sturner
Project: 0624.04.01-01

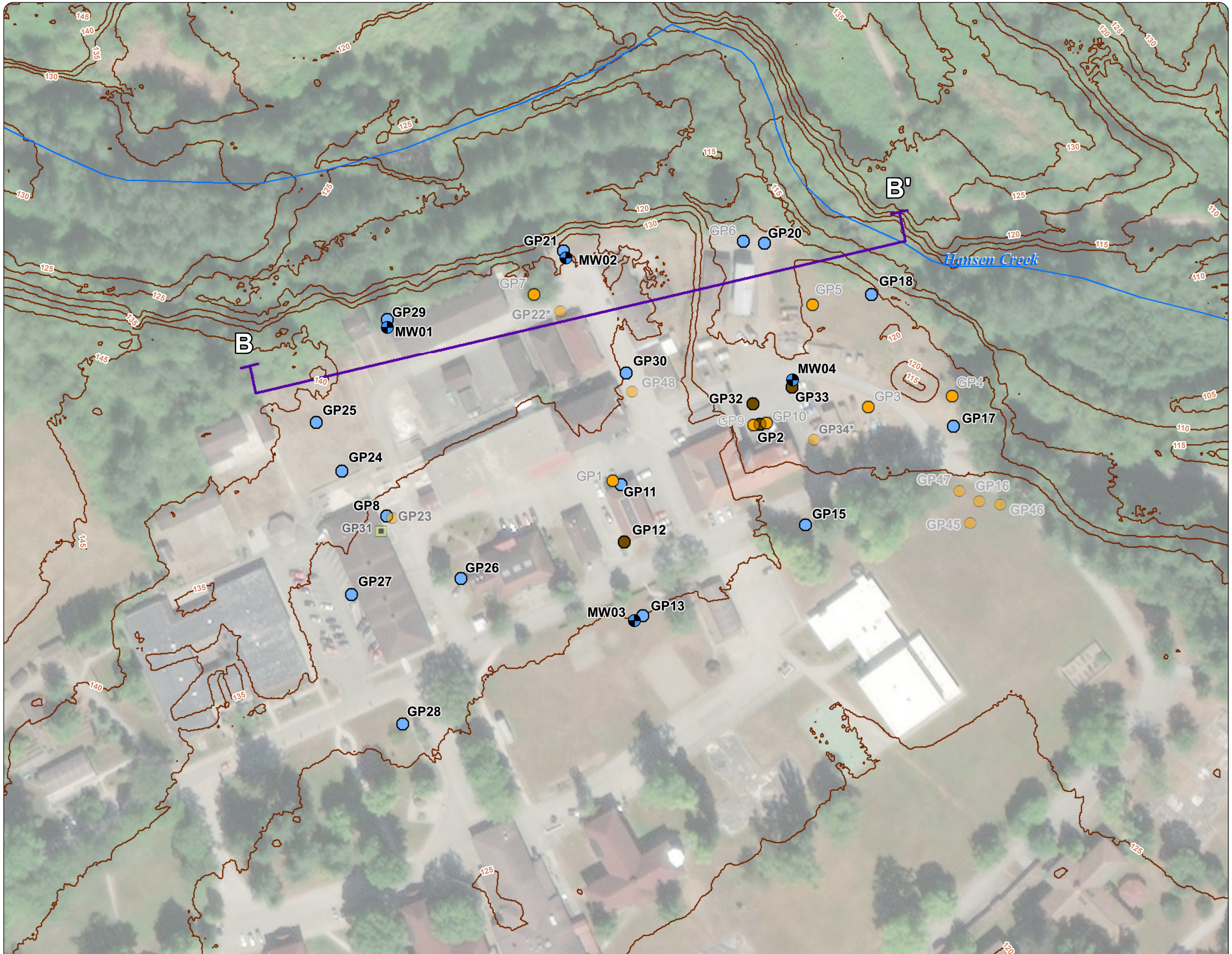

Figure 4-4
Cross Section Transect

Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Legend

- Monitoring Well Location
- Boring Location (Groundwater)
- Boring Location (Soil and Groundwater)
- Boring Location (Soil)
- Sub-Slab Vapor Probe (Approximate)
- Transect Line
- Topographic Surface Contours (5-foot)

NOTE:
All property features are approximate.

0 75 150
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online; streams dataset obtained from Skagit County.

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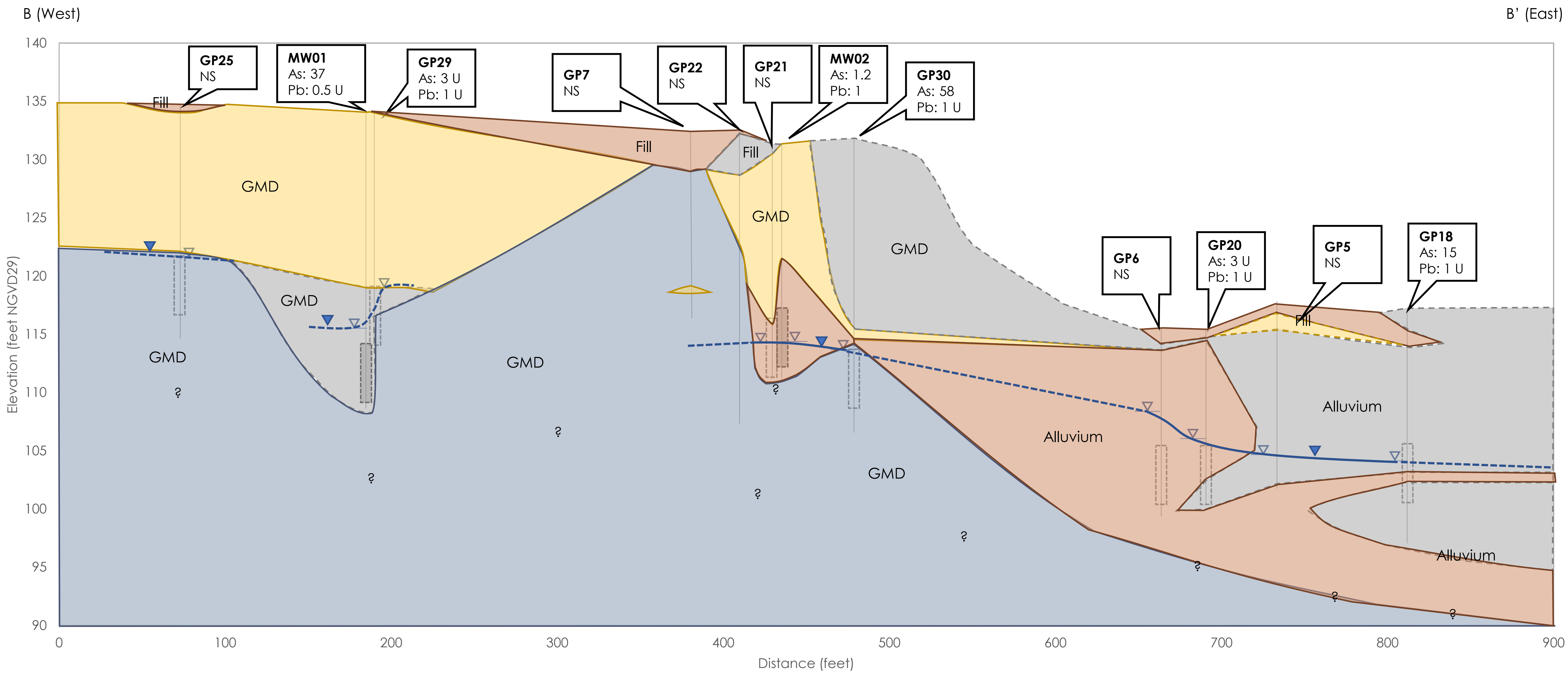
Figure 4-5
Geologic Cross Section
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington



Legend

- Gravelly sand to sandy gravel
- Clay
- Silt
- Silty sand to sandy silt
- Water table
- Water level observed during drilling
- Monitoring well screen interval
- Temporary well screen interval

Location ID
As = dissolved arsenic (ug/L)
Pb = dissolved lead (ug/L)

Notes:
Dissolved lead and arsenic concentrations in groundwater samples.
All feature locations are approximate.
Units and water table are dashed where inferred.
Water levels shown were observed during drilling.
2.5x vertical exaggeration.
GMD = glaciomarine drift.
NGVD 29 = National Geodetic Vertical Datum of 1929.
U = not detected at or above the reporting limit.
ug/L = micrograms per liter.

APPENDIX A

SAMPLING AND ANALYSIS PLAN/ QUALITY ASSURANCE PROJECT PLAN

SAMPLING AND ANALYSIS PLAN/QUALITY ASSURANCE PROJECT PLAN

NORTHERN STATE MULTI SERVICE CENTER
SEDRO-WOOLLEY, WASHINGTON

Prepared for
PORT OF SKAGIT
March 15, 2021
Project No. 0624.04.17

Prepared by
Maul Foster & Alongi, Inc.
1329 N State Street, Suite 301, Bellingham, WA 98225

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ALONGI

SAMPLING AND ANALYSIS PLAN/QUALITY ASSURANCE PROJECT PLAN
NORTHERN STATE MULTI SERVICE CENTER

SEDRO-WOOLLEY, WASHINGTON

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

MAUL FOSTER & ALONGI, INC.

Phil Wiescher, PhD
Senior Environmental Scientist

Carolyn R. Wise, LG
Project Geologist

James J. Maul, LHG
Principal Hydrogeologist

CONTENTS

TABLES IV

ACRONYMS AND ABBREVIATIONS V

1 INTRODUCTION 1
1.1 SAP/QAPP OBJECTIVES 1

2 PROJECT AND TASK ORGANIZATION 2
2.1 PROJECT TEAM ORGANIZATION 2
2.2 DOCUMENTS 5

3 SPECIAL TRAINING AND CERTIFICATION 5

4 DATA GENERATION AND ACQUISITION 6
4.1 DATA QUALITY OBJECTIVES AND DECISION CRITERIA 6
4.2 SAMPLING PROCESS DESIGN 8
4.3 SAMPLING METHODS 8
4.4 MANAGEMENT OF INVESTIGATION-DERIVED WASTE 12
4.5 SAMPLE HANDLING AND CUSTODY 12
4.6 ANALYTICAL METHODS 15
4.7 QUALITY CONTROL 15
4.8 INSTRUMENT AND EQUIPMENT TESTING, INSPECTION, AND MAINTENANCE 18
4.9 INSTRUMENT AND EQUIPMENT CALIBRATION AND FREQUENCY 18
4.10 INSPECTION AND ACCEPTANCE OF SUPPLIES AND CONSUMABLES 18
4.11 SAMPLE EQUIPMENT DECONTAMINATION 18
4.12 NONDIRECT MEASUREMENTS 19
4.13 DATA MANAGEMENT 19

5 DATA VALIDATION AND USABILITY 19
5.1 DATA REVIEW, VERIFICATION, AND VALIDATION 19
5.2 DATA REVIEW, VERIFICATION, AND VALIDATION METHODS 20

6 ASSESSMENT AND OVERSIGHT 21
6.1 QUALITY ASSURANCE ASSESSMENT AND RESPONSE ACTIONS 21
6.2 QUALITY ASSURANCE REPORTS TO MANAGEMENT 22

LIMITATIONS

REFERENCES

TABLES

APPENDIX
SOIL VAPOR AND AMBIENT AIR SAMPLING STANDARD OPERATING PROCEDURES

TABLES

FOLLOWING PLAN:

2-1 CONTACT LIST

4-1 SOIL: ANALYTICAL METHODS AND PERFORMANCE CRITERIA

4-2 GROUNDWATER: ANALYTICAL METHODS AND PERFORMANCE CRITERIA

4-3 VAPOR: ANALYTICAL METHODS AND PERFORMANCE CRITERIA

4-4 CONTAINERS, PRESERVATION, AND HOLDING TIMES

4-5 QC SAMPLE REQUIREMENT SUMMARY

ACRONYMS AND ABBREVIATIONS

AO	Agreed Order DE 16309
COC	chain-of-custody
DQO	data quality objective
Ecology	Washington State Department of Ecology
FSDS	field sampling data sheets
HASP	health and safety plan
IDW	investigation-derived waste
LCS	laboratory control sample
LDS	laboratory duplicate sample
MFA	Maul Foster & Alongi, Inc.
MS/MSD	matrix spike and matrix spike duplicate
the Port	Port of Skagit
Property	2070 Northern State Road in Sedro-Woolley, Washington
QA	quality assurance
QAM	quality assurance manager
QC	quality control
RI	remedial investigation
RPD	relative percent difference
SAP/QAPP	sampling and analysis plan and quality assurance project plan
Site	Northern State Multi Service Center
USEPA	U.S. Environmental Protection Agency
XRF	x-ray fluorescence
WAC	Washington Administrative Code

1 INTRODUCTION

Maul Foster & Alongi, Inc. (MFA) has prepared this Sampling and Analysis Plan/Quality Assurance Project Plan (SAP/QAPP) for the Port of Skagit (the Port) to guide the collection of samples supporting the remedial investigation (RI) at the Northern State Multi Service Center (former Northern State Hospital) site (Site). The Site is generally located at 2070 Northern State Road in Sedro-Woolley, Washington (the Property, see Figure 1-1 of the RI work plan, to which this SAP/QAPP is an appendix). Historically, the Property operated as a self-sustaining mental hospital that included on-site patient and staff housing, a laundry, maintenance shops, a power house, and a fueling station. The Property is now owned by the Port and leased to multiple tenants, including the Cascade Job Corps, the Pioneer Center, and the National Guard, by the Washington State Department of Enterprise Services.

The work described in this SAP/QAPP is being conducted through Agreed Order DE 16309 (AO) between the Port and the Washington State Department of Ecology (Ecology).

This SAP/QAPP has been prepared consistent with the following guidance:

- Ecology:
  - Ecology's Guidance on Sampling and Data Analysis Methods (Ecology, 1995)
  - Guidance for Preparing Quality Assurance Project Plans for Environmental Studies (Ecology, 2004)
  - 1993 Model Toxics Control Act (Washington Administrative Code Chapter 173-340-820).
- U.S. Environmental Protection Agency:
  - Guidance for Quality Assurance Project Plans (USEPA, 2002)
  - Requirements for Quality Assurance Project Plans (USEPA, 2001)
  - Brownfield Grant Recipients' Road Map to Understanding Quality Assurance Project Plans (USEPA, 2012)

1.1 SAP/QAPP Objectives

The purpose of this SAP/QAPP is to outline requirements for field sampling and laboratory analytical activities associated with the RI work plan. This SAP/QAPP supplements and is provided as an appendix to RI work plan, which provides Property-specific background information, discusses proposed cleanup standards, and defines the scope of the RI work to be completed under the AO.

This SAP/QAPP is designed to ensure that:

- The investigation meets goals and produces complete and accurate environmental data sets that have high precision and low bias.
- Environmental data can be shown to be representative of Site conditions.
- The quality assurance (QA) and quality control (QC) process allows for comparability of environmental data sets so that the Site can be characterized and assessed.

This SAP/QAPP describes methods that will be used for sampling environmental media, decontaminating equipment, and managing investigation-derived waste (IDW). It also includes procedures for collecting, analyzing, evaluating, and reporting useful data. This SAP/QAPP includes QA procedures for field activities, QC procedures, and data validation.

2 PROJECT AND TASK ORGANIZATION

2.1 Project Team Organization

This section provides the organizational structure, lines of authority, and responsibilities of key project individuals. Project activities will be performed within the framework of the organization and functions presented in this section. The organizational structure described in this section provides lines of responsibility and authority, based on the following objectives:

- Identify appropriate lines of communication and coordination.
- Monitor project schedules and performance of contractors.
- Coordinate support functions, such as laboratory analysis and data management.
- Provide progress QA reports.
- Provide corrective actions to rectify deficiencies.

This SAP/QAPP provides the general structure for environmental field sampling and laboratory analytical activities described in the RI work plan. Table 2-1 provides the contact information for the personnel listed in the following sections.

2.1.1 Port of Skagit Project Manager Responsibilities

Heather Rogerson is the project manager for the Port, which is the grant recipient. She is responsible for budget and schedule control, contracting, and coordination between and among the Port, Ecology, and the environmental consultant, MFA. She is responsible for preparing progress reports and final reporting as required by the grant agreement and the AO.

2.1.2 Washington Department of Ecology Project Manager Responsibilities

Tena Seeds is the Ecology site manager. Because the Site is currently under an agreed order, Ecology will provide formal review of environmental documents. Ecology staff will provide recommendations and guidance to the Port and its consultant on conducting remedial investigation activities in accordance with Washington State cleanup regulations and Ecology requirements. This Ecology guidance does constitute a formal agency opinion on the Site.

2.1.3 MFA Program Manager Responsibilities

Michael Stringer is the MFA program manager. He will be responsible for planning for technical and administrative components of work completed by the Port. Mr. Stringer will oversee the following functions for the Port:

- Development of scope, schedule, and budget
- Administration of these assignments via contracts with service providers
- Management of data and products developed throughout the course of the work
- Reporting to the Port and Ecology

Mr. Stringer will be supported by Ms. Carolyn Wise, MFA's project manager. Mr. Stringer and Ms. Wise will regularly communicate with the Port on progress and significant issues.

2.1.4 MFA Project Manager Responsibilities

Ms. Wise will be the project manager for the RI at the Property. She will be responsible for all aspects of implementation of assignments and will lead the investigation outlined in the RI work plan and this SAP/QAPP. Ms. Wise will report to Mr. Stringer.

2.1.5 Field Team Leader/On-Site Safety Officer Responsibilities

Amanda Bixby will be the field team leader. Ms. Bixby will be responsible for overseeing field activities and making sure that samples are collected properly; verifying that procedures for field activities related to characterization or remediation are properly executed; and ensuring that all activities are properly documented, the prescribed scope of work is completed, and communication protocols are met. Ms. Bixby will also act as the on-site safety officer and will be responsible for ensuring that the site-specific health and safety plan (HASP) is followed by MFA personnel working on site. Ms. Bixby will report directly to Ms. Wise.

2.1.6 Project Scientist/Geologist

MFA scientists or geologists will be assigned based on availability and relevant skills and experience. The scientists or geologists will work under the field team leader and will be responsible for conducting investigation activities in accordance with the RI work plan and this SAP/QAPP.

2.1.7 Quality Assurance Manager Responsibilities

Mary Benzinger of MFA has been identified as the quality assurance manager (QAM). Ms. Benzinger will provide QA oversight for both the field sampling and laboratory programs, ensuring that samples are collected and documented appropriately, coordinating with the analytical laboratories, ensuring data quality, overseeing data validation, and supervising project QA coordination. Ms. Benzinger will report directly to the MFA project manager.

2.1.8 Database Manager/Project Chemist Responsibilities

Ms. Benzinger has also been identified as the database manager and project chemist. Ms. Benzinger will be responsible for uploading analytical results to the project EQuIS database and for ensuring that samples are documented appropriately. She will also coordinate with the analytical laboratories and oversee data validation. Ms. Benzinger will also oversee the management and transferring of analytical, well, and boring logs; spatial analyses; and any other data generated during the project. Ms. Benzinger will report directly to the MFA project manager.

2.1.9 Procurement and Administrative Personnel

Ms. Rogerson will be responsible for contract administration, including development and management of requests for proposals and bids, and contract documents for contractors providing services to the Port. The contract administrator will be in close contact with the project manager.

2.1.10 Contractor Responsibilities

Contractors will perform work in strict compliance with this SAP/QAPP and the appropriate contract specifications. Contractors are responsible for implementation of work assignments under the direction of the project managers.

The following describes the laboratory contractor's responsibilities:

- Performing the test methods described in this SAP/QAPP or the RI work plan, including methods referenced for each analytical procedure
- Holding and maintaining accreditation for applicable analyses under the Washington State Environmental Laboratory Accreditation Program
- Following documentation, custody, and sample logbook procedures
- Meeting all reporting and QA/QC requirements
- Providing electronic data files as specified
- Meeting turnaround times for deliverables as specified
- Allowing the QA/QC contractor to perform laboratory and data audits

2.2 Documents

2.2.1 Work Plan

The RI work plan and appendices (SAP/QAPP and HASP) prepared by MFA identifies key project personnel; describes the project and conceptual site model used to inform the study design, goals of the study, and data quality objectives (DQOs); provides health and safety information; and discusses the sampling and analysis approach, including analytical methods and matrices. The Port will submit a draft RI work plan for Ecology approval. The draft RI work plan will be revised in response to Ecology comments to produce the final RI work plan, which will be submitted for Ecology review and approval before work activities begin. The final RI work plan will also be submitted by the Port to Ecology.

2.2.2 Data Validation Memoranda

Data validation memoranda will be prepared by the MFA project chemist. The contents of the data validation memoranda are discussed in Section 5. Data validation memoranda will be submitted by the Port to Ecology with the final reports.

2.2.3 Final Reports

MFA will prepare final reports describing field measurement data collected; investigative and QC samples collected; investigation results, including the location and extent of any contamination identified; a summary of any QA issues and corrective actions taken; and an interpretation of the analytical results. The Port will submit the final reports to Ecology.

3 SPECIAL TRAINING AND CERTIFICATION

All personnel performing work at the Property will be health- and safety-trained as specified in the HASP. The HASP describes the specialized training and certification required for personnel and requisite documentation of this training.

Laboratories shall be certified to provide analytical laboratory services for the specific methods and matrices, when applicable, under the Washington State Environmental Laboratory Accreditation Program. Methods and matrices are presented in the RI work plan.

4 DATA GENERATION AND ACQUISITION

4.1 Data Quality Objectives and Decision Criteria

The DQO process is used to establish performance and acceptance criteria, which serve as the basis for designing a plan for collecting data of sufficient quality and quantity to support the goals of the study (USEPA, 2006). The seven steps of the DQO process outlined by the USEPA are:

1. **State the problem**—Define the problem; identify members of the planning team; define the budget and schedule.
2. **Identify the goal of the study**—State how environmental data will be used to meet study objectives and solve the problem; identify study questions; define alternative outcomes.
3. **Identify information inputs**—Identify data and information needed to answer study questions.
4. **Define the boundaries of the study**—Specify target population and characteristics of interest; define spatial and temporal limits; define scale of inference.
5. **Develop the analytic approach**—Define parameters of interest; specify type of inference; develop logic for drawing conclusions from findings.
6. **Specify performance or acceptance criteria**—Specify criteria for new data collection (performance metrics) and decision making (probability limits).
7. **Develop the plan for obtaining data**—Develop the SAP/QAPP.

This SAP/QAPP for environmental data collection was developed using the DQO process and presents performance metrics for collection and analysis of soil and groundwater, the environmental media that will be sampled.

Screening and action levels include Ecology's Model Toxics Control Act cleanup levels. Applicable cleanup levels are presented in the RI work plan, as required.

4.1.1 Data Precision

Precision is the measure of agreement among repeated measurements of the same property under identical or substantially similar conditions, calculated as either the range or the standard deviation (USEPA, 2002). Precision is measured by making repeated analyses on the same analytical instrument (laboratory duplicates) or replicate collections of samples in the field (field duplicates). Precision criteria are expressed as the relative percent difference (RPD) between the primary and duplicate samples. The acceptance limits for RPD are based on the sample matrix and the analytical method used.

The RPD is calculated using the equation:

$$RPD = \frac{2(x_s - x_d)}{x_s + x_d} \times 100\%$$

Where:

x_s = result for primary sample
x_d = result for duplicate sample

4.1.2 Data Bias

Bias is defined as the systematic or persistent distortion of a measurement process that causes error in one direction (USEPA, 2002). Data bias is addressed in the field and the laboratory by calibrating equipment, collecting and analyzing QC blank samples, and analyzing QC standard samples.

4.1.3 Data Accuracy

Accuracy is defined as the measure of the overall agreement of a measurement to a known value and includes a combination of random error (precision) and systematic error (bias) components of both sampling and analytical operations (USEPA, 2002). Inasmuch as the "true" concentration of sampled media is not known, the degree of accuracy in the measurement is inferred from recovery data determined by sample spiking and/or the analyses of reference standards. The criterion for accuracy is expressed as the percent recovery of the sample spiking. The acceptance limits for percent recovery are based on the analytical method used.

Percent recovery is calculated using the equation:

$$Percent\ Recovery = \frac{x_{ss} - x_s}{T} \times 100\%$$

Where:

x_{ss} = result for spiked sample
x_s = result for sample
T = true value of added spike

4.1.4 Data Completeness

Data completeness is defined as a measure of the amount of valid data needed from a measurement system (USEPA, 2002). It is measured as the total number of samples collected, for which the valid analytical data are obtained, divided by the total number of samples collected, and multiplied by 100. Criteria for data completeness are provided in Tables 4-1 through 4-3.

4.1.5 Data Representativeness

Data representativeness is a qualitative term that expresses "the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition" (USEPA, 2002). Data representativeness is evaluated by assessing the accuracy and precision of the sampling program. The criterion for evaluating representativeness will be satisfied by confirming that the sample collection procedures are consistently followed. Sampling procedures are referenced in the RI work plan.

4.1.6 Data Comparability

Data comparability is a qualitative term that expresses the measure of confidence with which one data set can be compared to another and can be combined for decision-making purposes (USEPA, 2002). Data comparability will be achieved by using standard sampling and operating procedures and analytical methods. Data comparability will be assessed through documentation of QA/QC procedures.

4.1.7 Data Sensitivity

Data sensitivity is defined as the capability of a method or instrument to discriminate between measurement responses representing different levels of the variable of interest (USEPA, 2002). The method reporting limits specified through the DQO process are provided in Tables 4-1 through 4-3. Results measured between the reporting limits and the method detection limits will be reported for all analytes and assigned the appropriate qualifier.

4.2 Sampling Process Design

The Port will submit the RI work plan for USEPA and Ecology review and approval before work activities begin. The Port will also submit the final RI work plan to Ecology before RI work plan activities begin.

4.3 Sampling Methods

All samples will be collected consistent with the requirements for the media being sampled and the analytes of interest. Samples will be collected in containers supplied by the analyzing laboratory in order to ensure that the container has been properly cleaned and that sufficient sample material is collected. Specific sample container and preservation requirements for contaminants are listed in Table 4-4. Sampling methods for media of interest are described below in general detail. Specific sampling methods are provided in the RI work plan.

4.3.1 Soil Sampling

Soils may be sampled from the surface (0 to 1 foot below ground surface [bgs]) or subsurface (greater than 1 foot bgs). Anticipated samples depths and specific sampling methods are identified in the RI work plan.

4.3.1.1 Surface Soil—Discrete Sampling

Surface soils will be collected by hand, using decontaminated stainless-steel tools or a thin-walled tube sampler in the top foot of soil. To guide surface soil collection for lead analysis, a handheld x-ray fluorescence (XRF) meter may be used in the field. XRF instruments produce real-time results and, therefore, can guide the collection and analysis of soil in the field. Prior to collecting XRF readings on soil samples, a calibration check will be performed to ensure that the XRF is reading within the correct limits of the test specimen provided by the manufacturer. If the XRF passes the calibration check, it will be used to guide soil sample collection. The soil sample will be placed in a sealed plastic bag and homogenized to ensure the sample is evenly distributed for the XRF to collect a representative reading. Samples screened using the XRF will have results recorded on field sampling data sheets (FSDS). If a soil sample is selected for laboratory analysis based on the results of the XRF, the same volume of sample used for the XRF reading will be placed in a laboratory-provided jar and submitted to the laboratory. In addition to the manufacturer calibration check, at least one discrete soil sample will be submitted for analysis for direct comparison of field results using the lead results using the XRF meter.

4.3.1.2 Soil Borings

Soil borings will be advanced with a direct-push drill rig and in accordance with industry-standard sampling techniques. If refusal is met before the desired boring depth is reached (i.e., significant debris, cobbles, or bedrock are encountered), a different drilling technology may be considered.

When a boring is no longer needed, it will be decommissioned with 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, 1998).

Soil samples will be collected for lithologic description, field screening, and chemical analyses, as described below. The sampling intervals, depths, and initial sample analysis schedule are specified in the RI work plan.

Samples will be prepared, handled, and documented as follows:

- Soil-sampling equipment will be decontaminated before it is used at each sampling location (see Section 4.11).
- Samples will be obtained by hand, using a new, uncontaminated glove or with a decontaminated stainless-steel spoon, trowel, or knife.
- If samples are analyzed for volatile organic compounds, they will be transferred directly from freshly exposed soil into laboratory-supplied containers, using the appropriate USEPA 5035A sampling procedures. The samples will be placed in 40-milliliter vials. Depending on the soil type, 5 milligrams of soil will be added to the prepared vials, preserved with sodium bisulfate monohydrate or methanol. A soil sample will also be collected in an unpreserved glass jar to be analyzed for petroleum hydrocarbons, heavy metals, and other analytes, as specified in the RI work plan.

- Large particles (i.e., larger than 0.25 inch) may be removed before the sample is placed in a laboratory-supplied container.
- Soil samples will be transferred directly from the sampling device into laboratory-supplied glass jars by hand, using a new, uncontaminated glove or with a decontaminated stainless-steel spoon, trowel, or knife.
- Sample containers will be labeled, packed in iced shipping containers with chain-of-custody (COC) documentation, and delivered or shipped to the laboratory (see Section 4.5).
- Sampling information will be recorded in a field notebook, on an FSDS, and on the COC form.
- Generally, one duplicate soil sample will be collected for every 20 samples collected.

4.3.2 Water Sampling

Water samples will be collected from reconnaissance borings and monitoring wells. Anticipated water sampling locations are specified in the RI work plan.

4.3.2.1 Monitoring Well Installation and Development

Monitoring wells, if constructed, will be constructed according to the Washington State well construction standards (Chapter 173-160 WAC) and as described below:

- Monitoring wells will be constructed with 2-inch-diameter polyvinyl chloride pipe and screened sections. The well screens will consist of 0.010-inch machine slots. The monitoring wells may be constructed with prepacked well screen with 10 x 20 washed silica sand or by placing materials downhole, following the WAC regulation listed above.
- Additional filter pack may be placed around the prepacked screen. The additional filter pack will consist of graded 10 x 20 washed silica sand and will extend a maximum of 1 foot below the bottom of the screen and 3 feet above the top of the screen. A weighted line will be used to monitor the level of the filter pack during installation. The filter pack may be surged during installation.
- Bentonite grout or hydrated chips (e.g., 0.75-inch minus) will be used to seal the annulus above the filter pack. A weighted line will be used to measure the top of the bentonite chips as they are poured into place. Potable water will be used to prepare the bentonite grout (if used) or hydrate the bentonite chips after they are poured into place.
- At least 24 hours after installation of a well, the well will be developed by surging, bailing, or pumping to remove sediment that may have accumulated during installation and to improve the hydraulic connection with the water-bearing zone.
- Water quality field parameters such as specific conductance, pH, temperature, and turbidity will be measured during well development, as deemed appropriate. The wells will be developed until the turbidity measurements are 10 nephelometric turbidity units or less, or

until there is no noticeable decrease in turbidity. To the extent practical, water quality field parameters will be considered stable when the specific conductance is within 10 percent of the previous reading, pH is within 0.1 standard unit of the previous reading, and temperature is within 0.1 degree Celsius of the previous reading.

4.3.2.2 Monitoring Well Groundwater Sampling

A peristaltic pump or other suitable low-flow purging method (e.g., Waterra pump) will be used to collect groundwater samples, using standard low-flow sampling techniques. New, disposable tubing will be used at each monitoring location.

Before collection of groundwater samples, the water level will be measured, and the well will be purged. The well should be purged at a low flow rate (e.g., 0.1 to 0.5 liter per minute). A minimum of one well volume will be purged before sample collection, or purging will continue until selected water quality field parameters (e.g., dissolved oxygen, oxygen reduction potential, temperature, specific conductance, pH, turbidity) have stabilized. If the well goes dry during purging, a sample can be collected once the well recharges enough water. During purging, the flow rates, water levels, and water quality parameters will be recorded on an appropriate field form or in the field notes. Groundwater will be transferred directly into laboratory-supplied containers specific to the analysis required.

4.3.2.3 Reconnaissance Groundwater Sampling

A disposable polyvinyl chloride (PVC) temporary well screen will be placed in the boring. Temporary screen lengths will be either 5- or 10-feet in based on the thickness of the water-bearing unit. If significant fines are present at the boring location, a longer screen length (e.g., 15-feet) may be used to ensure adequate sample volume. New tubing will be used for each boring. Reconnaissance groundwater samples will be collected using low-flow sampling methods (e.g., peristaltic pump). Before groundwater sampling, the borehole will be purged to minimize solids and ensure that a representative sample is collected. Field parameters (e.g., e.g., dissolved oxygen, oxygen reduction potential, temperature, specific conductance, pH, and turbidity) will be collected during purging. A minimum of one pore volume will be purged prior to sample collection. Purging will continue until turbidity values are below 10 NTUs for sample collection. If turbidity values are below 50 NTUs and at least three pore volumes have been removed or purging has continued for 30 minutes, a sample may be collected. If turbidity values are above 50 NTUs and at least five pore volumes have been removed or purging has continued for 45 minutes, a sample may be collected

Groundwater will be transferred directly into laboratory-supplied containers specific to the analysis required, as outlined in Table 4-4. If there is enough water, water quality field parameters (e.g., temperature, specific conductance, pH, turbidity) will be measured.

4.3.3 Soil Vapor and Air Sampling

Indoor and outdoor air samples will be collected in 6-liter, stainless steel canisters (Summa© canisters) with an 8-hour flow controller. Air samples will be placed 3 to 5 feet above the floor or ground surface. Detailed sampling procedures are provided in the Standard Operating Procedure, Ambient Air Sampling (see Appendix).

MFA will collect sub-slab soil gas samples from the space immediately below building slabs. The samples will be collected in 1-liter, stainless steel canisters (Summa© canisters). Detailed sampling procedures are provided in the Standard Operating Procedure, Soil Vapor Sampling (see Appendix).

MFA will record field data before and after the sampling, including the sampling start and stop times, the initial and final canister vacuum readings, temperature, relative humidity, barometric pressure, wind speed and direction, and observations of conditions that may influence sampling results (e.g., industrial activities and presence or use of chemicals in the vicinity). The sample will be rejected if the initial canister pressure is not at least -25 inch of mercury or if the final canister pressure is greater than -0.1 inch of mercury.

4.4 Management of Investigation-Derived Waste

Investigation-derived wastes (IDW) will include unsaturated and saturated soil cuttings, purged groundwater, and decontamination fluids. The IDW will be segregated (e.g., soil and water will be containerized separately). Drums (tops and sides) will be labeled with their contents, the volume of material, the date of 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. Handling procedures are detailed in the RI work plan.

4.5 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 sample integrity from collection in the field through laboratory analysis and data reporting.

4.5.1 Sample Identification

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

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

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

In order to maintain sample identification consistency in the project database, the unique sample identification code will be assigned according to the following convention: Unique sample number—

matrix type—depth (if applicable). The following codes and information will be included in the sample identification code:

- Matrix type codes include the following:
  - S = soil
  - W = groundwater
  - V = vapor
- Depth below ground surface: the sample collection midpoint will be used.
- Field duplicate samples will include "DUP" in the ID (e.g., DUP-1, DUP-2, etc.).

For example, a soil sample collected from boring at location four at 7 feet bgs would have the following sample ID: GP4-S-7.0. A groundwater sample collected from monitoring well MW09 at 15 feet below ground surface would be MW09-W-7.5, and a field duplicate of the groundwater sample would be DUP-1. The investigation sample IDs that correspond to field duplicate samples will be recorded in field sampling documentation.

4.5.2 Sample Custody

The field investigation personnel and the analytical laboratory contractor will be responsible for following sample custody procedures during sampling and analysis, as well as for providing sample tracking. Sample custody procedures will be used to document the history of samples from the time of sample collection through shipment, analysis, and disposal. Samples and sample documentation will be maintained in the physical possession of authorized field personnel or under control in a secure location.

4.5.2.1 Sample Custody in the Field

The field investigation personnel will be responsible for completing the chain-of-custody (COC) forms upon sample collection. Each COC form will contain, at a minimum, the following information:

- Project number
- Project name
- Project manager
- Unique sample identification code
- Time and date of collection
- Field personnel sampler's name
- Separate shipping papers
- Signature and printed name of all persons having custody of samples, organization name, date and time of transfer

- Sample matrix
- Quantity of sample containers
- Requested analyses for each sample
- Requested analytical turnaround time
- Any additional information on requested analysis—holding time, specific matrix spike and matrix spike duplicate (MS/MSD) samples, etc.

4.5.2.2 Sample Packaging and Shipment

Persons in possession of the samples will be required to sign and date the COC form whenever samples are transferred between individuals or organizations (with the exception of freight carriers).

Samples will be delivered to the laboratory by ground transportation (laboratory courier or field personnel), and the following custody procedures will be followed: samples will be packed in the appropriate shipping containers. The top copy of the COC form will accompany the samples. If transportation is by courier, the laboratory courier will retain a second copy of the COC and shipping forms to allow sample tracking. The COC form will accompany the samples from point of release from the Property to the laboratory. If transported to the laboratory by field personnel, COCs will be signed and copies distributed at the time of sample delivery to the laboratory.

The laboratory will implement its in-house custody procedures, which begin when sample custody is transferred to laboratory personnel.

4.5.2.3 Sample Custody in the Laboratory

The analytical laboratory contractor's sample custodian will be responsible for handling and documentation of samples received at the laboratory. The designated sample custodian will accept custody of the received samples and will verify that the COC form matches the samples received. The shipping container, or set of containers, will be given a laboratory identification number, and each sample will be assigned a unique sequential identification number.

4.5.3 Sample Documentation and Records

4.5.3.1 Field Logbooks and Forms

Field investigation 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 logbook or on paper or electronic field data sheets. A separate entry will be made for each sample collected. Field logbooks and forms will be included in the project files at the end of field activities to provide a record of sampling. The investigation sample IDs that correspond to field duplicate samples will be recorded in field sampling documentation.

4.5.3.2 Equipment Calibration Log

Field investigation 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 logbook notes for a specific date and activity.

4.6 Analytical Methods

All analytical methods used will comply with relevant requirements of applicable state or federal programs, or other, USEPA-approved, methods. Ecology-preferred analytical methods specific to this SAP/QAPP are provided in Tables 4-1 through 4-3.

4.7 Quality Control

The quality of data will be monitored and verified by maintaining logs, documenting field activities, and collecting and analyzing field and laboratory QC samples. Table 4-5 summarizes the field and laboratory QC samples, along with the required collection frequency, for each sample matrix. The required field QC samples will be matrix-specific.

4.7.1 Field Quality Control Samples

The field QC samples will be used to assess the accuracy and precision of the field sample collection and handling activities.

4.7.1.1 Equipment Rinsate Blanks

Analysis of equipment rinsate blanks is not anticipated, as field equipment used during sampling will be dedicated. However, if nondedicated equipment is used, equipment blanks will be used to assess the efficiency of field equipment decontamination procedures in preventing cross-contamination of samples. Rinsate blanks used to assess the efficiency of field equipment decontamination procedures will be collected at the end of each day of field sampling. Equipment rinsate blanks will be collected by pouring certified distilled or deionized water over or through decontaminated (clean) sampling equipment used in the collection of investigative samples and, subsequently, collected in prepared sampling containers. Additives or preservatives will be included in the equipment rinsate blanks as required for analysis. The rinsate blank will be shipped with the associated field samples.

For each sample matrix, if a rinsate blank is collected it will be analyzed at a minimum frequency of one equipment rinsate blank per 20 samples for each day of sample collection. Rinsate blanks will also be collected from precleaned, disposable equipment for each lot of disposable equipment used to demonstrate the cleanliness of the equipment lot. The rinsate blanks will be analyzed for the same parameters as the investigative samples.

The criterion for field rinsate blanks is that analyte concentrations must be below the method reporting limits. Consistent with USEPA data validation guidelines, analytical results for investigative samples will be qualified if the analyte is detected in the rinsate blank (USEPA, 2017a,b).

4.7.1.2 Trip Blanks

Trip blanks are collected for volatile organic compound sample analysis to assess the contamination of samples during transport to the Property, during collection of the sample, and during transport to the laboratory. Trip blanks are prepared in the laboratory using analyte-free water. Trip blanks should be inspected for air bubbles by both the laboratory (before shipping) and the field team. Any vials containing visible air bubbles should be discarded. One trip blank is included for each sample cooler collected for analysis of volatile organic compounds and shipped to the laboratory. The criterion for trip blanks is that target analyte concentrations must be below the method reporting limits. Consistent with USEPA data validation guidelines, analytical results for investigative samples will be qualified if the target analyte is detected in the trip blank (USEPA, 2017b).

4.7.1.3 Field Duplicate Samples

Field duplicate samples are collected to assess reproducibility of field procedures. One duplicate sample will be collected per twenty (or fewer) samples per soil and aqueous matrix.

4.7.1.4 Temperature Blank

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

4.7.2 Laboratory Quality Control Samples

The laboratory QC samples will be used to assess the accuracy and precision of the field sample collection and handling activities. Laboratory QC samples will be analyzed at the required frequency described in Table 4-5, as applicable, based on analytical method and sample matrix.

4.7.2.1 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 was outside control limits will be reanalyzed.

4.7.2.2 Matrix Spike/Matrix Spike Duplicate

MS samples are analyzed to assess the matrix effects on the accuracy of analytical measurements. MS/MSD samples will be 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 the accuracy and precision in the analytical method by measuring how well the analytical method recovers the target compounds in the investigative matrices. For each matrix type, at least one set of MS/MSD samples will be analyzed for each batch of samples for every 20 (or fewer) samples received. The MS/MSD samples will be designated on the COC form.

The criteria for acceptable percent recovery and RPD for MS/MSD samples are presented in Tables 4-1 through 4-3.

4.7.2.3 Surrogate Spikes

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. Surrogate spike percent recovery acceptance limits are determined by the analytical method. The surrogate spike percent recovery results will be reported by the laboratory.

4.7.2.4 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 for every analytical batch.

The method blank results are used to verify that 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 results outside acceptance limits will be qualified as appropriate by the QAM.

4.7.2.5 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. The criteria for acceptable percent recovery of LCSs are presented in Tables 4-1 through 4-3.

4.7.2.6 Laboratory Duplicate Samples

Laboratory duplicate samples (LDSs) 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 RPD of the primary investigative sample and the respective LDS are used to measure precision in the analytical method and laboratory performance. For nonaqueous matrices, sample heterogeneity may affect the measured precision for the LDS. The criteria for acceptable RPD of LDSs are presented in Tables 4-1 through 4-3.

4.8 Instrument and Equipment Testing, Inspection, and Maintenance

Instruments for field parameter measurements will follow this SAP/QAPP protocol and manufacturers' recommendations for testing, inspection, and maintenance. Field equipment used for obtaining samples will be decontaminated as required and stored in a clean and secure location.

Laboratory instruments and equipment will comply with the contracted laboratories' QA/QC procedures for testing, inspection, and maintenance. Laboratory instrument and equipment testing, inspection, and maintenance documentation will be provided to the QAM if requested.

4.9 Instrument and Equipment Calibration and Frequency

Instruments for field parameter measurements will follow manufacturers' recommendations for calibration. Calibration will be conducted at the beginning of each sampling event. Calibration checks will be conducted at the beginning of each sampling day. Calibration may be conducted again during a sampling event, as necessary, based on the results of the calibration check. Calibration records will be recorded in the field logbooks.

4.10 Inspection and Acceptance of Supplies and Consumables

The supplies and consumables that will be used during field operations include, although are not limited to, the following: decontamination fluids, preservatives, reagent water for equipment blanks, equipment tubing, and filters. No materials will be used after the manufacturers' expiration dates. Only water certified by the manufacturer will be used to prepare equipment blanks. If contamination is visible in materials, the item will be discarded. In accordance with Section 4.11, nondedicated field equipment will be decontaminated prior to use.

The analytical laboratory will inspect supplies and consumables before their use in analysis. The materials description in the analytical methods will be used as a guideline for establishing acceptance criteria. Purity of reagents will be evaluated through analysis of LCSs and method blank samples. The laboratory shall maintain an inventory of supplies and consumables.

4.11 Sample Equipment Decontamination

Sampling equipment and reusable materials that contact sample media will be decontaminated between uses. Decontamination will generally involve the following:

- Tap-water rinse (may consist of an equivalent high-pressure, hot-water rinse)
- Nonphosphate detergent wash, consisting of a dilute measure of Liqui-Nox or Simple Green and tap water
- Distilled water rinse

- Methanol solution rinse (1:1 solution with distilled water)
- Final distilled water rinse

4.12 Nondirect Measurements

Nondirect measurements are defined as existing data obtained from nonmeasurement sources, such as literature files or existing databases. To assess data usability, historical data will be reviewed for accordance with project-specific DQOs and QA/QC criteria.

4.13 Data Management

4.13.1 Field Data

Field data may be recorded in a bound logbook or on paper or electronic field data sheets. Hard copies of all field data will be scanned and saved electronically. Field data collected on paper or electronic field data sheets may be imported into an EQuIS database. In the event that field data are entered by hand into an electronic format before they are imported into EQuIS, the data will be reentered and reviewed for data entry errors by separate, qualified individuals.

4.13.2 Laboratory Data

The laboratory shall record the results of each analysis in a Laboratory Information Management System in accordance with the contracted laboratory's QA plan. Data will be provided to MFA as electronic data deliverables, which will be imported directly into an EQuIS database used for data storage. Validated laboratory results will be exported and provided as part of the final report for each project.

5 DATA VALIDATION AND USABILITY

5.1 Data Review, Verification, and Validation

Data verification is confirmation by examination and provision of objective evidence that specified requirements have been fulfilled (USEPA, 2001). Data verification is the process of evaluating the completeness, correctness, and compliance of a specific data set against the method, procedural, or contractual specifications (USEPA, 2002). Data validation is confirmation by examination and provision of objective evidence that the particular requirements for specific, intended use have been fulfilled (USEPA, 2001). Data validation is an analyte- and sample-specific process that extends the evaluation of data beyond method, procedural, or contractual compliance (i.e., data verification) to the analytical quality of a specific data set (USEPA, 2002).

5.2 Data Review, Verification, and Validation Methods

The specific data reduction, verification, and reporting procedures and assigned personnel will vary for each laboratory; however, all procedures will be completed in accordance with the laboratory's QA plan and standard operating procedures.

The laboratories will provide a level 2 laboratory report for Stage 2A (S2AVM) data validation. Refer to USEPA (2009) guidance for Stage 2A data validation and verification requirements.

5.2.1 Data Verification Methods

5.2.1.1 Laboratory Data Verification Methods

The laboratory will be responsible for the reduction of raw data generated at the laboratory bench and verification that data reduction performed by the laboratory instrument or the Laboratory Information Management System is correct.

QC checks for data verification that will be performed for all generated data are as follows:

- Verify that batch QC and field samples were analyzed at the specified frequency.
- Verify calibrations and calibration checks for compliance with laboratory criteria.
- Verify that holding times for extraction and analyses and sample preservation were met.
- Verify that the quantitation limits and method detection limits were met.
- Verify that all project and QC sample results were properly reported and flagged.
- Review COC documentation to verify completeness of the sample set for each data package submitted.
- Assess the impact of laboratory and field QC results.

These QC checks will be performed by laboratory analysts, the assigned laboratory project manager or supervisor, laboratory QC specialists, or a combination of these personnel. After the data reports have been reviewed and verified, the laboratory reports will be signed and released for distribution.

5.2.1.2 Field Data Verification Methods

Data collected during field activities will be evaluated for usability by conducting a QA review that consists of checking procedures used and comparing the data to previous measurements. Field QC samples will be evaluated to ensure that field measurements and sampling protocols have been observed and followed.

The field data verification process will be performed at two levels. The first level will be conducted at the time of collection and consists of following standard procedures and QC checks. The second level will be performed during compilation of field data and will include checks for data anomalies.

Inconsistent data or anomalies will be resolved by seeking clarification from field personnel responsible for collecting the data and the resolution will be documented during the data verification process.

5.2.2 Data Validation Methods

Validation of the analytical data produced under this SAP/QAPP will be performed by an MFA chemist, independent of the analytical laboratory contractor(s) generating the data reports. The data validator will review laboratory performance criteria and sample-specific criteria.

The data validation review of sample-specific criteria will be performed on all data report packages for each analysis type generated by each analytical laboratory contractor. The independent data validation review will include review of the following items from the Stage 2A laboratory data reports: consistency with the COC, holding times, surrogate recoveries, MS recoveries, field duplicate agreement, MSD and laboratory duplicate precision, and method blank analyses. Refer to USEPA (2009) for S2AVM level data validation and verification requirements.

The purpose of this independent review will be to verify that the laboratory QC program is adequate and that the laboratory met the performance criteria. The data validator will review data and assign data qualifiers to sample results, following parts of the USEPA procedures for inorganic data (USEPA, 2017a), organic data (USEPA, 2017b), and method-specific guidelines.

Data qualifiers are used to classify sample data in terms of their conformance to QC requirements. The most common qualifiers are listed below:

- J—Estimate, qualitatively correct but quantitatively suspect.
- R—Reject, data not suitable for any purpose.
- U—Not detected at a specified detection limit.

Poor surrogate, blank contamination, or calibration problems, among other things, can require qualification of the sample data. Whenever sample data are qualified, the reasons for the qualifications will be stated in the data validation report. QC criteria not defined in the guidelines for evaluating analytical data are adopted, where appropriate, from the analytical method.

6 ASSESSMENT AND OVERSIGHT

6.1 Quality Assurance Assessment and Response Actions

The project manager is responsible for developing and initiating corrective action if the data verification and validation identify unacceptable data or conditions. The project manager will notify the QAM if the project issues are significant.

Corrective action may include:

- Reanalyzing samples, if holding time criteria permit
- Resampling and analyzing
- Amending sampling procedures

6.2 Quality Assurance Reports to Management

If significant QA issues arise, the QAM will be responsible for completion of QA progress reports to provide a summary of the project performance and data quality. The QA progress reports will be submitted to the program and project managers on a situation-specific basis. They will focus on a summary of specific QA problems encountered and corrective actions implemented. The QA progress reports may include the following:

- QA issues requiring corrective actions; status of corrective actions
- Assessment of completeness of measurement data, including a summary of data qualified as rejected during data verification and validation
- Assessment of representativeness of measurement data and compliance with the project DQOs
- Results of performance audits

A summary of QA issues and implemented corrective actions will also be provided in the final report. A field sampling report will be generated, summarizing the investigative samples and QC samples collected. A data report that will summarize sampling and field measurement data and results of the data verification and validation will also be generated.

LIMITATIONS

The services undertaken in completing this plan 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 plan is solely for the use and information of our client unless otherwise noted. Any reliance on this plan by a third party is at such party's sole risk.

Opinions and recommendations contained in this plan 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 plan.

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TABLES

Table 2-1
Contact List
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

MAUL FOSTER ALONGI

Contact Name	Title	Organization	E-mail	Telephone
Ms. Heather Rogerson	Remedial Action Grant Recipient	Port of Skagit	heatherr@portofskagit.com	360-757-9828
Ms. Tena Seeds	Ecology Site Manager	Ecology	tsee461@ecy.wa.gov	425-457-3143
Mr. Jim Maul	Program and Contract Administration Manager	MFA	jmaul@maulfoster.com	206-858-7617
Ms. Carolyn Wise	Project Manager	MFA	cwise@maulfoster.com	360-594-6255
Ms. Emily Curtis	Health and Safety Coordinator	MFA	ecurtis@maulfoster.com	503-501-5233
Ms. Amanda Bixby	Field Team Leader/On-Site Safety Officer	MFA	abixby@maulfoster.com	360-594-6258
Ms. Mary Benzinger	Quality Assurance Manager/Database Management/Project Chemist	MFA	mbenzinger@maulfoster.com	503-501-5247

NOTES:

Ecology = Washington State Department of Ecology.

MFA = Maul Foster & Alongi, Inc.

Table 4-1
Soil: Analytical Methods and Performance Criteria
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Analyte	Preliminary Screening Level[a]	MRL (mg/kg)[b]	Preferred Analytical Method	MS Accuracy (Percent)[c]	Precision (RPD)[c]	LCS Accuracy (Percent)[c]	Completeness (Percent)
Total Metals							
Arsenic	10	0.125	EPA 6020B	75-125	20	80-120	90
Barium	83	0.125	EPA 6020B	75-125	20	80-120	90
Cadmium	1	0.050	EPA 6020B	75-125	20	80-120	90
Chromium	101	0.125	EPA 6020B	75-125	20	80-120	90
Copper	76.1	0.125	EPA 6020B	75-125	20	80-120	90
Lead	14	0.050	EPA 6020B	75-125	20	80-120	90
Mercury	0.1	0.005	EPA 7471B	75-125	20	80-120	90
Selenium	0.26	0.125	EPA 6020B	75-125	20	80-120	90
Silver	2	0.125	EPA 6020B	75-125	20	80-120	90
Zinc	86	0.5	EPA 6020B	75-125	20	80-120	90

NOTES:
CUL = cleanup level.
EPA = U.S. Environmental Protection Agency.
LCS = laboratory control sample.
mg/kg = milligrams per kilogram.
MRL = method reporting limit.
MS = matrix spike.
MTCA = Model Toxics Control Act.
NV = no value.
RPD = relative percent difference.
[a]Lowest applicable screening level value of Method A, Method B, and ecological receptors (or background level if higher than screening levels)
[b]MRL based on values received from OnSite Environmental, Inc. Actual MRL may differ, based on percent moisture, sample matrix, and/or dilutions.
[c]MS accuracy, precision, and LCS accuracy acceptance criteria are performance-based and may be updated by the laboratory.

Table 4-2
Groundwater: Analytical Methods and Performance Criteria
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Analyte	Screening Level (ug/L)[a]	MRL (ug/L)[b]	Preferred Analytical Method	MS Accuracy (Percent)[c]	Precision (RPD)[c]	LCS Accuracy (Percent)[c]	Completeness (Percent)
Total/Dissolved Metals							
Arsenic	5[d]	3.0	EPA 6020B	75-125	20	80-120	90
Lead	2.5	1.0	EPA 6020B	75-125	20	80-120	90
Redox Chemicals							
Total Organic Carbon	--	1,000	SM 5310B	80-124	12	80-124	90
Manganese	--	10	EPA 6020B	75-125	20	80-120	90
Nitrate	--	50	EPA 353.2	89-123	15	90-119	90
Sulfate	--	5,000	ASTM D516-11	61-148	11	86-116	90

NOTES:
Parameters measured in the field are not included in this table (such as dissolved oxygen, pH, oxidation reduction potential, and ferrous iron).
-- = not applicable.
EPA = U.S. Environmental Protection Agency.
LCS = laboratory control sample.
MRL = method reporting limit.
MS = matrix spike.
MTCA = Model Toxics Control Act.
NV = no value.
RPD = relative percent difference.
ug/L = micrograms per liter.
[a]Lowest applicable screening level value of Method A, Method B, and surface water ARARs.
[b]MRL based on values received from OnSite Environmental, Inc. Actual MRL may differ, based on sample matrix and/or dilutions.
[c]MS accuracy, precision, and LCS accuracy acceptance criteria are performance-based and may be updated by the laboratory.
[d] MTCA Method A CUL used for surface water ARAR based on Washington State background conditions Table 720-1 of Washington Administrative Code 173-340-900.

Table 4-3
Vapor: Analytical Methods and Performance Criteria
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

Analyte	Air		Sub-Slab		Preferred Analytical Method	Precision (RPD)	LCS Accuracy (Percent)	Completeness (Percent)
	Preliminary Screening Level (ug/m^3)[a]	MRL (ug/m^3)[b]	Preliminary Screening Level (ug/m^3)[a]	MRL (ug/m^3)[b]				
1,1-Dichloroethene	91	0.4	3000	1.2	TO-15 SIM	20	70-130	90
1,2-Dichloroethane	0.096	0.04	3.2	0.12	TO-15 SIM	20	70-130	90
cis-1,2-Dichloroethene	NV	0.4	NV	1.2	TO-15 SIM	20	70-130	90
Tetrachloroethene (PCE)	9.6	6.8	320	20	TO-15 SIM	20	70-130	90
trans-1,2-Dichloroethene	NV	0.4	NV	1.2	TO-15 SIM	20	70-130	90
Trichloroethene (TCE)	0.33	0.27	11	0.81	TO-15 SIM	20	70-130	90
Vinyl chloride	0.28	0.26	9.5	0.78	TO-15 SIM	20	70-130	90

NOTES:

Screening levels obtained from Ecology, CLARC data tables, dated August 2020.

CLARC = Cleanup Levels and Risk Calculation.

CUL = cleanup level.

LCS = laboratory control sample.

MRL = method reporting limit.

NA = not applicable.

NV = no value.

RPD = relative percent difference.

SIM = selected ion monitoring.

TO = Toxic Organics.

ug/m^3 = micrograms per cubic meter.

[a]Lowest applicable screening level value of Method B is provided for preliminary screening.

[b]MRL based on values received from Friedman & Bruya, Inc. Actual MRL may differ, based on sample matrix and/or dilutions. Air and sub slab samples will be collected using 6 liter and 1-liter canisters, respectively. Air samples will be collecte for a duration of 8 hours,

Table 4-4
Containers, Preservation, and Holding Times
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

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Matrix	Method	Analysis	Field Container Preservative	Holding Time (Days)	Sample Container
Discrete and Composite Soil	EPA 6020B	Total Metals[(a)]	4 deg C	180	8 oz glass jar
	EPA 7471B	Mercury		28	
Composite Soil for Bioassays	Early Seedling Growth Protocol for Soil Toxicity Screening (Ecology Publication No. 96-324)	Plant Toxicity	4 deg C	180	32 oz glass jar (2)
	Earthworm Bioassay Protocol for Soil Toxicity Screening (Ecology Publication No. 96-327)	Earthworm Toxicity	4 deg C	180	32 oz glass jar (2)
Groundwater	EPA 6020B	Total Metals[(b)]	HNO3 to pH < 2	180	250 mL Poly bottle
	EPA 6020B	Dissolved Metals[(c)]	Field Filter, HNO3 to pH <2	180	250 mL Poly bottle
	SM 5310B	Total Organic Carbon	4 deg C, HCl pH <2	28	250 mL Poly bottle
	EPA 353.2	Nitrate	4 deg C	2	250 mL Poly bottle
	ASTM D516-11	Sulfate	4 deg C	28	250 mL Poly bottle
Vapor	ASTM D1946	Helium	None	30	1 L Summa Canister
	TO-15 SIM	cVOCs	None	30	1L, 6 L Summa Canister[(d)]

Table 4-4
Containers, Preservation, and Holding Times
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

NOTES:

ASTM = ASTM International.

cVOCs = chlorinated volatile organic compounds.

deg C = degrees Celsius.

EPA = U.S. Environmental Protection Agency.

HCl = hydrochloric acid.

HNO3 = nitric acid.

mL = milliliter.

SIM = selected ion monitoring.

[a]Total metals includes arsenic, barium, cadmium, chromium, copper, lead, selenium, silver, and zinc.

[b]Total metals includes arsenic, lead, and manganese.

[c]Dissolved metals includes arsenic and lead.

[d]Air will be collected in 6 liter summa canister. Sub-slab soil vapor will be collected in 1 liter summa canister.

Table 4-5
QC Sample Requirement Summary
Former Northern State Hospital
Port of Skagit
Sedro-Woolley, Washington

MAUL FOSTER ALONGI

QC Check Sample	Sample Matrix			Frequency
	Soil	GW	Vapor	
Equipment Rinsate Blanks	Yes	Yes	No	One per every 20 samples (or fewer) each day of sample collection
Filter Blank (Aqueous)	No	Yes	No	One per every 20 samples (or fewer)
Field Duplicate Samples	Yes	Yes	No	One per every 20 samples (or fewer) per sample matrix
Temperature Blank	Yes	Yes	No	One per sample cooler
Matrix Spike/Matrix Spike Duplicate	Yes	Yes	No	Each analytical batch of samples of every 20 (or fewer) samples received
Surrogate Spiking	Yes	Yes	Yes	Added to all project and QC samples (for organic analyses only)
Method Blanks	Yes	Yes	Yes	Each analytical batch of samples of every 20 (or fewer) samples received
Laboratory Control Sample	Yes	Yes	Yes	Each analytical batch of samples of every 20 (or fewer) samples received
Laboratory Duplicate Sample	Yes	Yes	No	Each analytical batch of samples of every 20 (or fewer) samples received

NOTES:
GW = groundwater.
QC = quality control.

APPENDIX

SOIL VAPOR AND AMBIENT AIR SAMPLING STANDARD OPERATING PROCEDURES

MAUL FOSTER ALONGI

STANDARD OPERATING PROCEDURE

Soil Vapor Sampling

SOP Number: 16
Date: 3/9/2021
Revision Number: 0.1

SCOPE AND APPLICATION

This standard operating procedure (SOP) describes the methods for collecting soil vapor samples from temporary or permanent equipment installed in unsaturated subsurface soil. Sample collection may require drilling through concrete or asphalt to gain access to subsurface soils.

EQUIPMENT AND MATERIALS REQUIRED

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- Measuring tape, Teflon™ tape, wrenches
- Laboratory-supplied sample canister (e.g., Summa), manifolds, and flow controllers
- Leak-detection equipment (helium tank, two-stage regulator, and gas-flow-control valve; and helium leak detector)
- Vacuum (purge) pump
- Laboratory chain-of-custody form
- Equipment decontamination supplies if vapor-sampling equipment[instruments?] will be reused between sample locations (see SOP 1 for equipment decontamination procedures)
- Soil vapor field sampling datasheet and notebook

METHODOLOGY

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

Complete the attached questionnaire before beginning vapor-sampling activities. The intent of this questionnaire is to document potential sources of vapors that could require the collection of vapor samples that are not representative of vapors present in subsurface soil.

General Sampling Procedure:

Sample collection from a temporary or permanent boring

- Installation of the sample point may be completed manually or by a drilling subcontractor. See SOPs 7 and 8 for drilling procedures.
- Vapor point construction details, including screen length and depth placement, annular material, and seal specifications, may be project-specific and should be described in the project SAP.
- Clear the ground surface of brush, root mat, grass, leaves, and other debris.
- Remove soil to the target depth, verify that the sample depth is correct, and record the depth in the field notebook and the boring log (see SOP 2).
- Assemble and attach the sampling equipment as described below. Before sampling, temporary sampling points must equilibrate for at least 30 minutes. Permanent points should equilibrate for at least 48 hours.

Sample collection from a subslab sample point

Subslab soil-gas sampling points consist of a Cox-Colvin & Associates, Inc. (Cox-Colvin) Vapor Pin™ system. The procedures developed by Cox-Colvin for installing and removing the Vapor Pin system, including the secure cover, are attached.

Assembly and attachment of sampling equipment

- Connect the sampling equipment as shown in the attached figure such that the equipment can be purged, leak tested, shut-in tested, and sampled in the field.
- The vapor pin installed in an asphalt or cement slab will be connected to the ¼ turn Swagelok® ball valve (Valve #1—sampling valve), using appurtenant stainless steel or Tygon® tubing. The sampling valve is connected to a vacuum gauge, which is attached to the flow controller.
- At the flow controller, a Swagelok tee connection will be fitted to the canister and to a second ¼ turn Swagelok ball valve (Valve #2—purge valve) used to isolate the purging equipment during actual sampling.
- The canister has a built-in valve that allows isolation of the canister during purging and leak-checking activities. On the other side of the purge valve (#2), a vacuum pump will be connected in order to induce vacuum for purging and shut-in testing.

Leak detection

- Helium will be contained around the sampling apparatus and sampling pin to serve as a leak-check compound. Helium will be released into a small structure (shroud) that is placed over the sampling pin and sampling train.
- With the canister valve closed, a sample of the soil gas collected during purging (described below) will be contained in a Tedlar® bag.
- A field helium detector will be used to sample the air purged through the sampling train to verify the presence or absence of helium. A helium concentration greater than 10 percent of the concentration in the containment structure indicates that a leak is occurring.
- If a leak is detected, the sampling and purging train fittings will be tightened and the leak check will be repeated.
- The absence of helium during the purging process verifies the integrity of the sampling system before the sample is collected.
- The canister will also be analyzed for helium by the analytical laboratory as a quality assurance measure.

Sampling

- After the sampling train is purged and no leaks are detected in the sampling train, close the valve leading to the vacuum pump (Valve #2—purge valve), open the valve leading to the sampling pin (Valve #1—sample valve), and then open the valve on the canister to collect the sample over a 30-minute period or the duration of time required for the specific test.
- Record field data during the sampling on the soil vapor field sampling datasheet, including the sampling start and stop times, the initial and final canister vacuum readings, and weather conditions.
- The sample will be rejected if the initial canister pressure is not at least -25 inch of mercury or if the final canister pressure is greater than -0.1 inch of mercury. The final canister pressure is recommended at or near -5 inch of mercury.

Data Recording

In a field log notebook and soil vapor field sampling datasheet, record the following:

- Project name, sample date, sampling location, canister serial number, initial vacuum reading, final pressure reading, and sampling time.
- Weather conditions during sampling (temperature, barometric pressure, humidity, sunny/cloud cover, wind).
- Date and amount of most recent prior rainfall.

Abandonment of Sampling Points

- Temporary Borings: Abandon each borehole in accordance with local and state regulations/procedures. See SOPs 7 and 8 for borehole abandonment procedures. The abandonment procedure typically consists of filling the boring with granular bentonite and hydrating the bentonite with water. Match the surface completion to the surrounding materials.
- Subslab Vapor Pin: The subslab vapor pin will be properly decommissioned consistent with the attached Cox-Colvin procedure. The slab borehole will be filled with grout and/or concrete. Surface restoration may include a follow-up visit for final sanding and finish work to restore the floor slab, and associated coverings, to their original condition as required.

QUESTIONNAIRE

Preparer's Name:____

Date/Time Prepared: ____

Preparer's Affiliation:____

1. OCCUPANT:

Last Name:__________________First Name:_____________________

Building / Suite:____

Number of occupants/persons at this location:___________________

2. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. **Are petroleum-powered machines or vehicles stored in the building or attached garage?** (e.g., lawnmower, ATV, car) Y / N

Please specify ____________________

b. **Has the building ever had a fire?** Y / N

When?__________________________

c. **Is a kerosene or unvented gas space heater present?** Y / N

Where & Type?____

d. **Is there a workshop or hobby/craft area?** Y / N

Where & Type?_______________

e. **Is there smoking in the building?** Y / N

Frequency?___________________________

f. **Have cleaning products been used recently?** Y / N

When & Type?_________________________

g. **Have cosmetic products been used recently?** Y / N

When & Type?_________________________

h. **Has painting/staining been done in the last 6 months?** Y / N

Where & When? ______________________

i. **Is there new carpet, drapes, or other textiles?** Y / N

Where & When?_______________________

j. **Have air fresheners been used recently?** Y / N

When & Type?_________________________

k. **Is there a kitchen exhaust fan?** Y / N

If yes, where vented?___________________

QUESTIONNAIRE

l. **Is there a bathroom exhaust fan?** Y / N

If yes, where vented?__________________

m. **Is there a clothes dryer?** Y / N

If yes, is it vented outside? Y / N

n. **Has there been a pesticide application?** Y / N

When & Type?________________________

o. **Are there odors in the building?** Y / N

If yes, please describe:____

p. **Do any of the building occupants use solvents or volatile chemicals at work?** (e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide applicator, cosmetologist, carpet installer) Y / N

If yes, what type of solvents are used? _________________________

If yes, are the occupants' clothes washed at work? Y / N

3. PRODUCT INVENTORY FORM

List specific products in the building that may contain petroleum hydrocarbons. Please note that MFA will visit the site to help complete the product inventory.

Location	Product Description	Size (units)	Condition*

***Describe the condition of the product containers as unopened, used, or deteriorated.**

Standard Operating Procedure
Installation and Extraction of the Vapor Pin™

May 20, 2011

Scope:

This standard operating procedure describes the installation and extraction of the Vapor Pin™[1] for use in sub-slab soil-gas sampling.

Purpose:

The purpose of this procedure is to assure good quality control in field operations and uniformity between field personnel in the use of the Vapor Pin™ for the collection of sub-slab soil-gas samples.

Equipment Needed:

- Assembled Vapor Pin™ [Vapor Pin™ and silicone sleeve (Figure 1)];
- Hammer drill;
- 5/8-inch diameter hammer bit (Hilti™ TE-YX 5/8" x 22" #00206514 or equivalent);
- 1½-inch diameter hammer bit (Hilti™ TE-YX 1½" x 23" #00293032 or equivalent) for flush mount applications;
- ¾-inch diameter bottle brush;
- Wet/dry vacuum with HEPA filter (optional);
- Vapor Pin™ installation/extraction tool;
- Dead blow hammer;
- Vapor Pin™ flush mount cover, as necessary;
- Vapor Pin™ protective cap; and
- VOC-free hole patching material (hydraulic cement) and putty knife or trowel.

Figure 1. Assembled Vapor Pin™.

Installation Procedure:

1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.

2) Set up wet/dry vacuum to collect drill cuttings.

3) If a flush mount installation is required, drill a 1½-inch diameter hole at least 1¾-inches into the slab.

4) Drill a 5/8-inch diameter hole through the slab and approximately 1-inch into the underlying soil to form a void.

5) Remove the drill bit, brush the hole with the bottle brush, and remove the loose cuttings with the vacuum.

6) Place the lower end of Vapor Pin™ assembly into the drilled hole. Place the small hole located in the handle of the extraction/installation tool over the Vapor Pin™ to protect the barb fitting and cap, and tap the Vapor Pin™ into place using a

[1] Cox-Colvin & Associates, Inc., designed and developed the Vapor Pin™; a patent is pending.

dead blow hammer (Figure 2). Make sure the extraction/installation tool is aligned parallel to the Vapor Pin™ to avoid damaging the barb fitting.

Figure 2. Installing the Vapor Pin™.

For flush mount installations, unscrew the threaded coupling from the installation/extraction handle and use the hole in the end of the tool to assist with the installation (Figure 3).

Figure 3. Flush-mount installation.

During installation, the silicone sleeve will form a slight bulge between the slab and the Vapor Pin™ shoulder. Place the protective cap on Vapor Pin™ to prevent vapor loss prior to sampling (Figure 4).

Figure 4. Installed Vapor Pin™.

7) For flush mount installations, cover the Vapor Pin™ with a flush mount cover.

8) Allow 20 minutes or more (consult applicable guidance for your situation) for the sub-slab soil-gas conditions to equilibrate prior to sampling.

9) Remove protective cap and connect sample tubing to the barb fitting of the Vapor Pin™ (Figure 5).

Figure 5. Vapor Pin™ sample connection.

10) Conduct leak tests [(e.g., real-time monitoring of oxygen levels on extracted sub-slab soil gas, or placement of a water

dam around the Vapor Pin™) Figure 6]. Consult your local guidance for possible tests.

Figure 6. Water dam used for leak detection.

11) Collect sub-slab soil gas sample. When finished sampling, replace the protective cap and flush mount cover until the next sampling event. If the sampling is complete, extract the Vapor Pin™.

Extraction Procedure:

1) Remove the protective cap, and thread the installation/extraction tool onto the barrel of the Vapor Pin™ (Figure 7). Continue turning the tool to assist in extraction, then pull the Vapor Pin™ from the hole (Figure 8).

Figure 7. Removing the Vapor Pin™.

Figure 8. Extracted Vapor Pin™.

2) Fill the void with hydraulic cement and smooth with the trowel or putty knife.

3) Prior to reuse, remove the silicone sleeve and discard. Decontaminate the Vapor Pin™ in a hot water and Alconox® wash, then heat in an oven to a temperature of 130° C.

The Vapor Pin™ to designed be used repeatedly; however, replacement parts and supplies will be required periodically. These parts are available on-line at www.CoxColvin.com.

Replacement Parts:

Vapor Pin™ Kit Case - VPC001
Vapor Pins™ - VPIN0522
Silicone Sleeves - VPTS077
Installation/Extraction Tool - VPIE023
Protective Caps - VPPC010
Flush Mount Covers - VPFM050
Water Dam - VPWD004
Brush - VPB026

Standard Operating Procedure
Use of the Vapor Pin™ Drilling Guide and Secure Cover

July 16, 2012

Scope:

This standard operating procedure (SOP) describes the methodology to use the Vapor Pin™ Drilling Guide and Secure Cover to install and secure a Vapor Pin™ in a flush mount configuration.

Purpose:

The purpose of this SOP is to detail the methodology for installing a Vapor Pin™ and Secure Cover in a flush mount configuration. The flush mount configuration reduces the risk of damage to the Vapor Pin™ by foot and vehicular traffic, keeps dust and debris from falling into the flush mount hole, and reduces the opportunity for tampering. This SOP is an optional process performed in conjunction with the SOP entitled "Installation and Extraction of the Vapor Pin™". However, portions of this SOP should be performed prior to installing the Vapor Pin™.

Equipment Needed:

- Vapor Pin™ Secure Cover (Figure 1);
- Vapor Pin™ Drilling Guide (Figure 2);
- Hammer drill;
- 1½-inch diameter hammer bit (Hilti™ TE-YX 1½" x 23" #00293032 or equivalent);
- 5/8-inch diameter hammer bit (Hilti™ TE-YX 5/8" x 22" #00226514 or equivalent);
- assembled Vapor Pin™;
- #14 spanner wrench;
- Wet/Dry vacuum with HEPA filter (optional); and
- personal protective equipment (PPE).

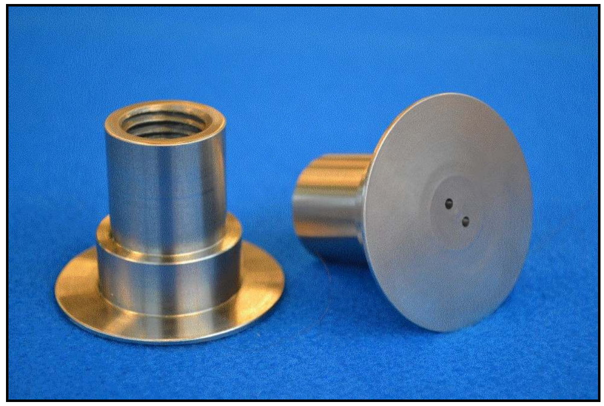


Figure 1. Vapor Pin™ Secure Cover.

Figure 2. Vapor Pin™ Drilling Guide.

Installation Procedure:

1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.

2) Set up wet/dry vacuum to collect drill cuttings.

3) While wearing PPE, drill a 1½-inch diameter hole into the concrete slab to a

depth of approximately 1 3/4 inches. Pre-marking the desired depth on the drill bit with tape will assist in this process.

4) Remove cuttings from the hole and place the Drilling Guide in the hole with the conical end down (Figure 3). The hole is sufficiently deep if the flange of the Drilling Guide lies flush with the surface of the slab. Deepen the hole as necessary, but avoid drilling more than 2 inches into the slab, as the threads on the Secure Cover may not engage properly with the threads on the Vapor Pin™.

Figure 3. Installing the Drilling Guide.

5) When the 1½-inch diameter hole is drilled to the proper depth, replace the drill bit with a $^{5}/_{8}$-inch diameter bit, insert the bit through the Drilling Guide (Figure 4), and drill through the slab. The Drilling Guide will help to center the hole for the Vapor Pin™, and keep the hole perpendicular to the slab.

6) Remove the bit and drilling guide, clean the hole, and install the Vapor Pin™ in accordance with the SOP "Installation and Extraction of the Vapor Pin™.

Figure 4. Using the Drilling Guide.

7) Screw the Secure Cover onto the Vapor Pin™ and tighten using a #14 spanner wrench by rotating it clockwise (Figure 5). Rotate the cover counter clockwise to remove it for subsequent access.

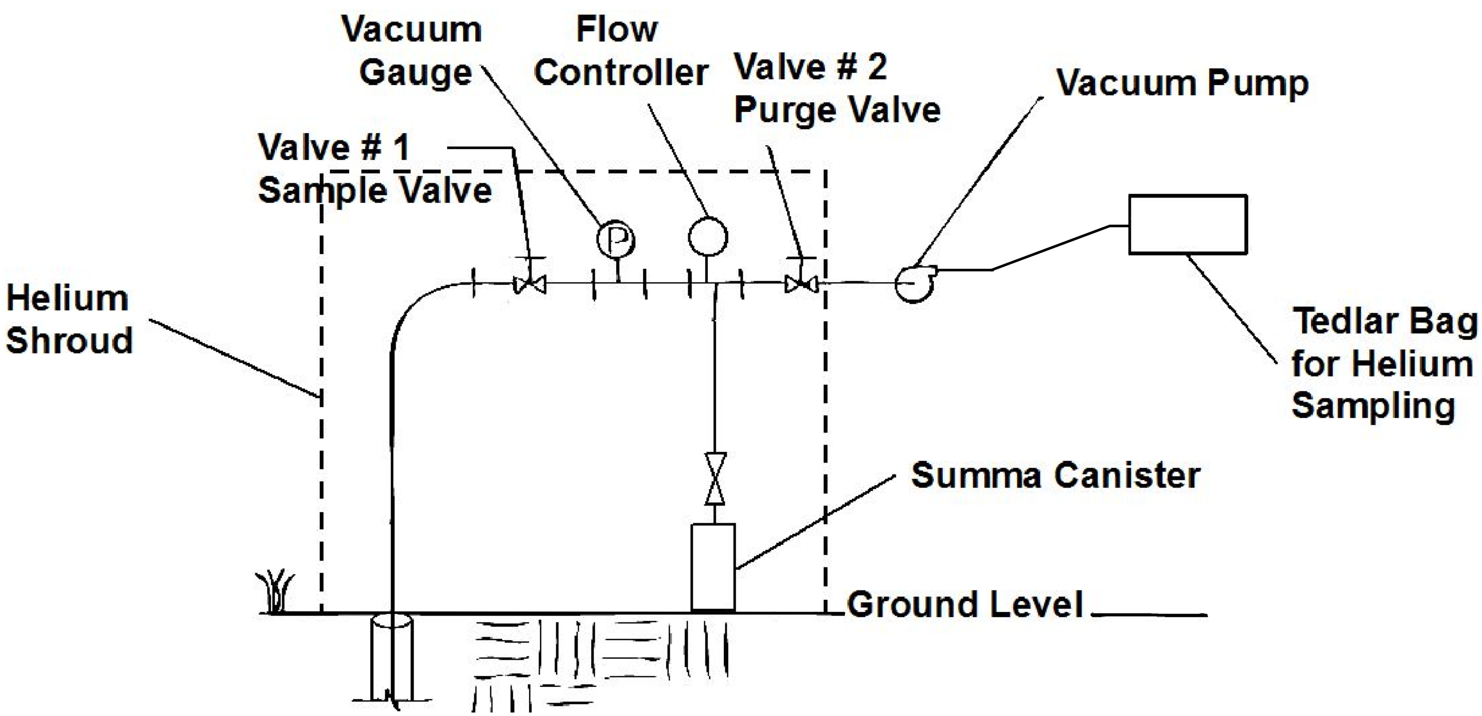
Figure 5. Tightening the Secured Cover.

<u>Limitations:</u>

On slabs less than 3 inches thick, it may be difficult to obtain a good seal in a flush mount configuration with the Vapor Pin™.

Figure
Sub-Slab Soil Gas Sampler System

Former Office Building
Port of Astoria
Astoria, Oregon



Source: CH2MHill, Corvallis Applied Sciences Laboratory

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

Project: 0475.02 Produced By: rroberts Approved By: M. Murray Print Date: 8/17/2016 Path: X:\0475.02 Port of Astoria\Projects\Vapor Intrusion Assessment\Fig1_Subslab Soil Gas Sampler System Diagram.mxd

STANDARD OPERATING PROCEDURE

Ambient Air Sampling

SOP Number: 17
Date: 3/9/2021
Revision Number: 0.1

SCOPE AND APPLICATION

This standard operating procedure (SOP) describes the methods for collecting ambient air samples, using laboratory-supplied canisters with flow controllers.

EQUIPMENT AND MATERIALS REQUIRED

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- Measuring tape, Teflon™ tape, wrenches
- Identification placards to inform the public (as needed)
- Straps/chains to secure outdoor samples
- Laboratory-supplied sample canister (e.g., Summa) and flow controllers
- Laboratory chain-of-custody form
- Decontamination materials
- Field forms or notebook for documenting the sampling procedures

METHODOLOGY

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

Complete the attached questionnaire before beginning indoor ambient air sampling activities.

General Sampling Procedure:

- Identify potential sources of target or interfering compounds from inside the building or from the product inventory portion of the questionnaire; remove these before beginning sampling.

- Place sample containers for indoor sampling between 3 and 5 feet above the floor to represent sampling from a typical human breathing zone. Protect containers from disturbance for the duration of the sampling.

- Record field data before and after the sampling, including the sampling start and stop times, the initial and final canister vacuum readings, temperature, relative humidity, and observations of conditions that may influence sampling results (e.g., presence or use of petroleum products, open windows/doors). The sample will be rejected if the initial canister pressure is not at least -25 inch of mercury or if the final canister pressure is greater than -0.1 inch of mercury.

- Slowly open the control valve to allow collection of the sample. Return to the sampler before the programmed sample duration so that some vacuum remains in the container. Close the sample container valve and process the sampling container for shipment to the analytical laboratory.

- Other items to record in the field notebook/form include the sampling location, canister serial number, and weather conditions (temperature, barometric pressure, humidity, sunny/cloudy, wind).

QUESTIONNAIRE

Preparer's Name:____

Date/Time Prepared: ____

Preparer's Affiliation:____

1. OCCUPANT:

Last Name:__________________First Name:______________________

Building / Suite:____

Number of occupants/persons at this location:___________________

2. FACTORS THAT MAY INFLUENCE AIR QUALITY

a. **Are petroleum-powered machines or vehicles stored in the building attached garage?** (e.g., lawnmower, ATV, car) Y / N
Please specify ____________________

b. **Has the building ever had a fire?** Y / N
When?_________________________

c. **Is a kerosene or unvented gas space heater present?** Y / N
Where & Type?____

d. **Is there a workshop or hobby/craft area?** Y / N
Where & Type?_______________

e. **Is there smoking in the building?** Y / N
Frequency?___________________________

f. **Have cleaning products been used recently?** Y / N
When & Type?_________________________

g. **Have cosmetic products been used recently?** Y / N
When & Type?_________________________

h. **Has painting/staining been done in the last 6 months?** Y / N
Where & When? ______________________

i. **Is there new carpet, drapes, or other textiles?** Y / N
Where & When?_______________________

j. **Have air fresheners been used recently?** Y / N
When & Type?_________________________

k. **Is there a kitchen exhaust fan?** Y / N
If yes, where vented?__________________

QUESTIONNAIRE

l. **Is there a bathroom exhaust fan?** Y / N
If yes, where vented?___________________

m. **Is there a clothes dryer?** Y / N
If yes, is it vented outside? Y / N

n. **Has there been a pesticide application?** Y / N
When & Type?_________________________

o. **Are there odors in the building?** Y / N
If yes, please describe:____

p. **Do any of the building occupants use solvents or volatile chemicals at work?** (e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide applicator, cosmetologist, carpet installer) Y / N

If yes, what type of solvents are used? __________________________

If yes, are the occupants' clothes washed at work? Y / N

3. PRODUCT INVENTORY FORM

List specific products in the building that may contain petroleum hydrocarbons. Please note that MFA will visit the site to help complete the product inventory.

Location	Product Description	Size (units)	Condition*

***Describe the condition of the product containers as unopened, used, or deteriorated.**

APPENDIX B

HEALTH AND SAFETY PLAN

HEALTH AND SAFETY PLAN

NORTHERN STATE MULTI SERVICE CENTER
(FORMER NORTHERN STATE HOSPITAL)
2070 NORTHERN STATE ROAD
SEDRO-WOOLLEY, WASHINGTON

Prepared for
PORT OF SKAGIT
March 15, 2021
Project No. 0624.04.17

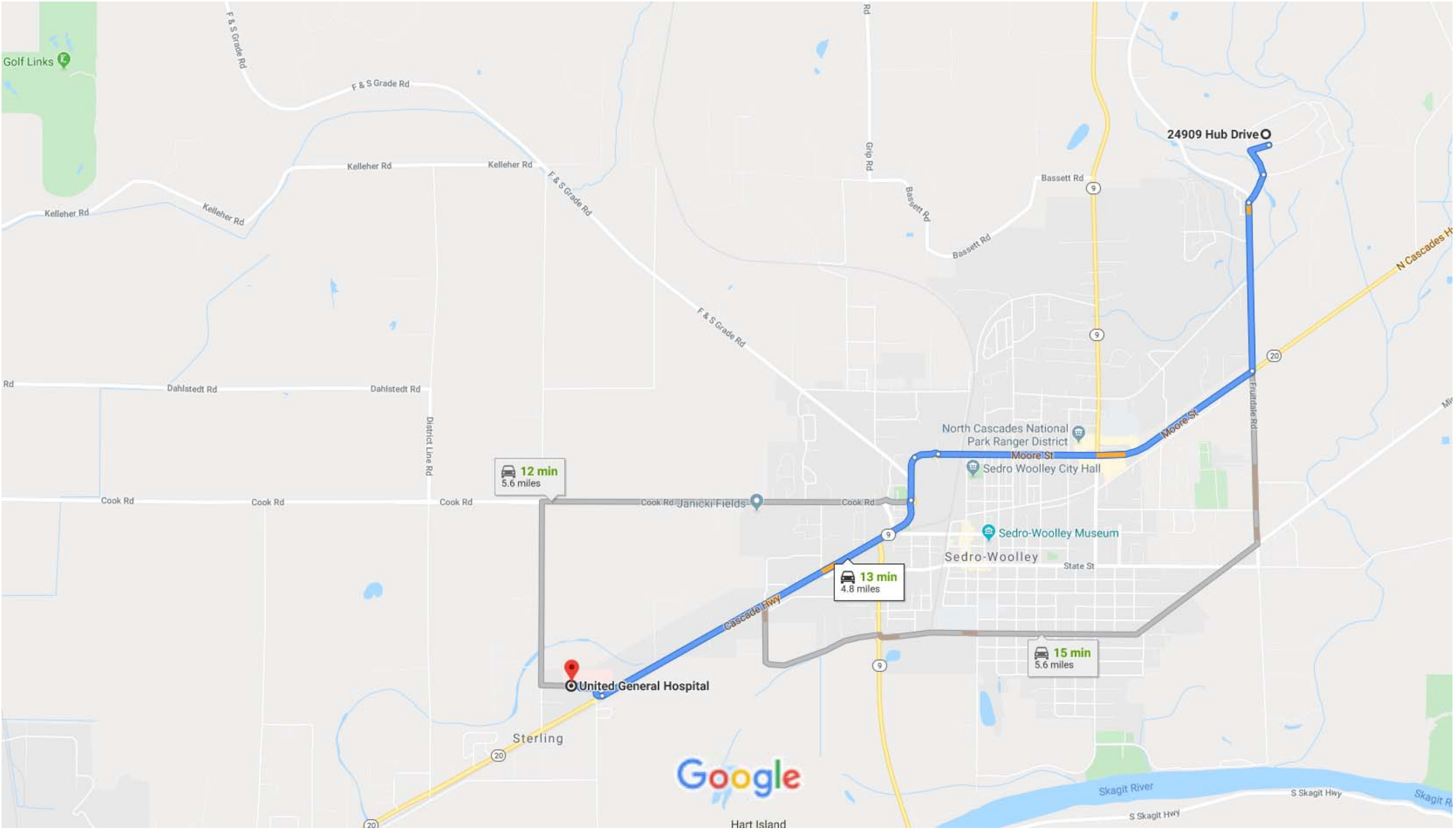
MAUL
FOSTER
ALONGI

Prepared by
Maul Foster & Alongi, Inc.
1329 N State Street, Suite 301, Bellingham WA 98225

Google Maps

24909 Hub Dr, Sedro-Woolley, WA 98284 to United General Hospital, Sedro-Woolley, WA

Drive 4.8 miles, 13 min



Map data ©2019 Google 2000 ft

24909 Hub Dr

Sedro-Woolley, WA 98284

Take Fruitdale Rd to WA-20 W/Moore St

3 min (1.1 mi)

1. Head west on Hub Dr toward Thompson Dr

0.2 mi

2. Continue onto Thompson Dr

0.1 mi

3. Turn left onto Fruitdale Rd

0.8 mi

Follow Moore St and WA-20 W to Hospital Dr

8 min (3.5 mi)

4. Turn right onto WA-20 W/Moore St

1.5 mi

5. At the traffic circle, continue straight onto W Moore St

0.1 mi

6. Continue onto Bingham St/Borseth St
   Continue to follow Borseth St

0.2 mi

7. At the traffic circle, continue straight onto WA-20 W/Borseth St
   Continue to follow WA-20 W

1.7 mi

Drive to Hospital Dr in Sedro-Woolley

1 min (0.2 mi)

8. Turn right onto Hospital Dr

312 ft

9. Turn left toward Hospital Dr

367 ft

10. Turn right toward Hospital Dr

43 ft

11. Turn left onto Hospital Dr

213 ft

United General Hospital

Sedro-Woolley, WA 98284

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

HEALTH AND SAFETY PLAN
NORTHERN STATE MULTI SERVICE CENTER
(FORMER NORTHERN STATE HOSPITAL SITE)
2070 NORTHERN STATE ROAD
SEDRO-WOOLLEY, WASHINGTON

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

MAUL FOSTER & ALONGI, INC.

Carolyn R. Wise

Carolyn R. Wise, LG
Project Geologist

Phil Wiescher, PhD
Senior Environmental Scientist

CONTENTS

1	NEAREST HOSPITAL/EMERGENCY MEDICAL CENTER	1
	1.1 NEAREST HOSPITAL	1
	1.2 ROUTE TO HOSPITAL FROM SITE	1
	1.3 EMERGENCY PHONE NUMBERS	2
2	PLAN SUMMARY	2
3	KEY PROJECT PERSONNEL	3
4	SITE DESCRIPTION AND BACKGROUND	3
	4.1 TYPE OF SITE	3
	4.2 BUILDING/STRUCTURES	3
	4.3 TOPOGRAPHY	3
	4.4 GENERAL GEOLOGIC/HYDROLOGIC SETTING	4
	4.5 SITE STATUS	4
	4.6 GENERAL SITE HISTORY	4
	4.7 AREAS OF CONCERN	4
5	HAZARD EVALUATION	5
	5.1 SITE TASKS AND OPERATIONS	5
	5.2 CHEMICAL HAZARD EVALUATION	5
	5.3 PHYSICAL HAZARDS	6
	5.4 UTILITY CLEARANCE	6
6	HEALTH AND SAFETY TRAINING	10
7	SAFETY EQUIPMENT	10
	7.1 PERSONAL PROTECTIVE EQUIPMENT	10
	7.2 SAFETY EQUIPMENT	11
	7.3 COMMUNICATIONS EQUIPMENT	11
8	DECONTAMINATION PROCEDURES	12
	8.1 PARTIAL DECONTAMINATION PROCEDURE	12
	8.2 FULL DECONTAMINATION PROCEDURES	12
9	MEDICAL SURVEILLANCE	12
10	AIR MONITORING	13
	10.1 AIR MONITORING ACTION LEVELS	13
	10.2 EXPLOSION HAZARD ACTION LEVELS	14
	10.3 INSTRUMENT CALIBRATIONS	14
11	SITE CONTROL MEASURES	14
12	EMERGENCY RESPONSE / SPILL CONTAINMENT / CONFINED SPACE	15
13	PRE-ENTRY BRIEFING	15
14	PERIODIC EVALUATION	15
15	SAFE WORK PRACTICES	15
16	ACKNOWLEDGMENT	16

CONTENTS (CONTINUED)

APPENDIX A
JOB HAZARD ANALYSES

APPENDIX B
CHEMICALS OF CONCERN

APPENDIX C
AIR MONITORING ACTION LEVELS

APPENDIX D
INCIDENT REPORT FORM

APPENDIX E
TAILGATE SAFETY MEETING CHECKLIST

1 NEAREST HOSPITAL/EMERGENCY MEDICAL CENTER

1.1 Nearest Hospital

United General Hospital
2000 Hospital Drive
Sedro-Woolley, WA 98284

Phone: (360) 856-6021

Distance: 4.7 miles

Travel Time: 11 minutes

1.2 Route to Hospital from Site

See map on first page of this document.

1.2.1 Driving Directions to Hospital from Site

1. Head west on Hub Drive toward Thompson Drive
2. Continue straight onto Thompson Drive
3. Turn left onto Fruitdale Road
4. Turn right onto WA-20 West/East Moore Street
5. At the traffic circle continue straight onto West Moore Street
6. Continue onto WA-20 West/Bingham Street/Borseth Street
7. At the traffic circle, continue straight onto WA-20
8. Turn right onto Hospital Drive

1.3 Emergency Phone Numbers

Ambulance, Police, Fire	Dial 911
Carolyn Wise Project Manager	Phone: (360)594-6255 Cell: (360)690-5982
James Maul Project Director	Phone: (360)433-0224 Cell: (360)903-8633
Emily Curtis Health and Safety Coordinator	Phone: (503)501-5233 Cell: (503)410-1524

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 Northern State Multi Service Center (former Northern State Hospital) site (Site). This Site is generally located at the Sedro-Woolley Innovation for Tomorrow Center (SWIFT Center) property at 2070 Northern State Road in Sedro-Woolley, Washington (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 Site are responsible for understanding and adhering to this HASP. Before fieldwork begins, a site safety officer (SSO) who is familiar with health and safety procedures and with the Site will be designated by the on-site personnel. Safety deficiencies should be immediately communicated to the SSO and, if necessary, to MFA's health and safety coordinator (HSC).

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

If MFA employees work on the Site for more than a year, this HASP will be reviewed at least annually. The plan will be updated as necessary to ensure that it reflects the known hazards, conditions, and requirements associated with the Site.

MFA personnel who will be working on the Site 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
James Maul	Project Director
Carolyn Wise	Project Manager
Amanda Bixby	Field Personnel/SSO
Evelyn Lundeen	Field Personnel
Emily Curtis	Health and Safety Coordinator

4 SITE DESCRIPTION AND BACKGROUND

4.1 Type of Site

The Site is located in section 8 of township 35 north and range 5, east of the Willamette Meridian. The approximately 225-acre Property includes four tax parcels identified by the Skagit County Assessor: two rectangular-shaped parcels to the north with the same parcel number and a combined area of 143.23 acres (parcel number P38607); a square-shaped, 39.37-acre parcel (parcel number 39356) to the south; and two irregularly shaped parcels to the east (33.57-acre parcel number P100632 to the north and 9.81-acre parcel number P100646 to the south).

4.2 Building/Structures

The Site is currently zoned urban reserve public open space and is located within the Sedro-Woolley, Washington, city limits.

The Site currently comprises over 80 buildings and structures. Several buildings have been demolished on the Site, and the debris from a few of the buildings, reportedly, has been buried and/or disposed of on-site, as determined through interviews of maintenance staff at the Site.

4.3 Topography

The Site is located on a small plateau with a slight downward topographic slope toward the east, south, and southwest toward Hanson Creek and Brickyard Creek.

4.4 General Geologic/Hydrologic Setting

According to the Geologic Map of the Sedro-Woolley North and Lyman 7.5-minute quadrangles, the Site and vicinity are underlain by Quaternary glaciomarine drift.[1] The glaciomarine deposits typically consist of, "…poorly sorted, poorly compacted diamicton consisting of silty, sandy, gravelly clay to clayey gravel; moderately well- to well-sorted sandy silt, sandy clay, clayey silt, and clay…"[1]

Groundwater was encountered during previous investigations at depths between 6 and 18 feet bgs.[2] Groundwater across the northern portion of the Site was determined to flow towards the east. Due to the large size of the Site and the limited area represented by the monitoring wells, it is possible that the groundwater flow direction varies throughout the Site. It is inferred that groundwater in other areas of the Site flows either southeast, due to the gradual topographic slope of the area toward the Skagit River Valley; west towards Brickyard Creek; or east towards Hansen Creek, depending on the location at the Site.

4.5 Site Status

The Site is currently managed by the Port of Skagit County (The Port), with buildings leased to multiple tenants, including Cascade Job Corps, for on-site housing and educational services; the Pioneer Center North, for a drug and alcohol treatment facility; and the Washington Military, for a vehicle storage, maintenance, and fueling facility.

4.6 General Site History

The Site was developed in 1909 and operated as a treatment and residence facility and hospital for the mentally ill until its closure in 1973. The approximately 225-acre campus, which includes the former treatment and residence facility, hospital, and grounds, was designed to be self-sustaining and included on-site patient and staff housing, dedicated water supply reservoirs and an associated potable water treatment facility, a fueling station for on-site vehicles, maintenance and paint shops, and a laundry facility. After the facility's closure, the Site was transferred from the Department of Social and Health Services to the General Services Administration (known today as the Department of Enterprise Services). On July 1, 2018, the Port took title to the Property from DES.

4.7 Areas of Concern

Given the analytical results of prior investigations conducted on the Site, environmental impacts associated with the following areas of concern (AOCs) were identified:[2]

- AOC 1: Former Laundry Building—tetrachloroethene and associated daughter products in shallow soil, groundwater, and soil vapor near the former laundry building.

---

[1] Dragovich et al. 1999. Geologic map of the Sedro-Woolley North and Lyman 7.5-minute quadrangles, Western Skagit County, Washington. Geology and Earth Resources, Washington Division.

[2] MFA. 2018. Phase II environmental site assessment work plan, former Northern State Hospital, Sedro-Woolley, Washington. Maul Foster & Alongi, Inc., Bellingham, Washington. October 29.

- AOC 2: Power House Building—heavy oil-range organics and carcinogenic polycyclic aromatic hydrocarbons in surface soil and heavy oils in groundwater in the area to the north and northeast of the Power House.
- AOC 3: Lead—lead in shallow soil adjacent to historic buildings and in the athletic field.
- AOC 4: Arsenic—arsenic in soil in the athletic field and near the former Ward building.
- AOC 5: Property-Wide Metals in Soil—slightly elevated and relatively consistent metals concentrations were detected in soil throughout the Site
- AOC 6: Maintenance Building—benzene, toluene, ethylbenzene, and total xylenes and gasoline in subsurface soil and groundwater adjacent to the maintenance building.
- AOC 7: Lead and Arsenic in Groundwater—lead and arsenic in groundwater in the northeastern portion of the Site.

These AOCs are considered preliminary and may be refined through the development of and screening to cleanup levels and additional background assessment and/or site characterization.

5 HAZARD EVALUATION

5.1 Site Tasks and Operations

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

- General work near heavy equipment
- Collecting soil samples
- Collecting groundwater samples
- Collecting indoor air, outdoor air, and sub-slab vapor samples
- Working in and near the public right-of-way, i.e., near vehicle traffic

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

5.2 Chemical Hazard Evaluation

Chemicals of concern and detected concentrations on the Site are summarized in Appendix B. Action levels and associated controls are specified in Appendix C.

5.3 Physical Hazards

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

5.3.1 Noise

In addition to interference with oral communication, job performance, and safety, the effects of noise on humans include physiological effects, particularly temporary and permanent hearing loss. The factors that affect the degree and extent of hearing loss are intensity or loudness of the noise, type of noise, period of exposure, and distance from the noise source. When working in close proximity to operating equipment or other loud noise sources, personnel should use hearing protection.

5.3.2 Heavy Equipment and Falling Loads

Working around heavy equipment potentially presents physical hazards. Always be aware that a large turning radius and the height of certain equipment create blind spots for the operator. Use of excavating equipment also poses overhead hazards when materials are lifted. Do not stand near heavy equipment. Other than the authorized equipment operator, personnel are prohibited from riding on equipment for any reason. Be alert for inattentive equipment operators at the job site, and make eye contact with equipment operator before approaching the work area. Be aware of the potential for falling objects or loads associated with heavy equipment. To reduce the risk associated with excavating, all personnel working around the excavator should wear a hard hat, steel-toed boots, eye protection, and, if needed, hearing protection.

5.4 Utility Clearance

5.4.1 Underground Utilities

Whenever intrusive activities are conducted, the threat of encountering underground utilities exists. These include electrical, gas, and sewage utilities. Before the execution of any intrusive activities, a utility clearance must be completed and an assessment of the presence of underground utilities must be made. The utility clearance agency should be notified, and the utility companies should mark existing utilities. The clearance reference number should be recorded and kept current.

5.4.2 Overhead Utilities

Adequate clearance should be established and maintained for all overhead utilities. These include utilities crossing waterways in and around the site. Before work starts in the areas where overhead utilities exist, a field inspection should be conducted to verify that adequate distances will be maintained for all equipment intended for use in that location. A minimum clearance distance between equipment and overhead utilities should be identified in the site-specific HASP or as determined by the equipment operator.

5.4.3 Inclement Weather

Field personnel should be equipped for the normal range of weather conditions. The designated contractor SSO should be aware of current weather conditions and of the potential for those conditions to pose a hazard to the field crew. The contractor SSO should observe the current weather conditions, both in the morning and again in the afternoon, and document them in the field notebook.

Heat, rain, cold, wind, snow, ice, flooding, and lightning are natural phenomena that complicate work activities and increase risk. The potential for physical hazards must be considered for tasks that expose personnel to inclement weather. Seasonal conditions must be considered during project planning. The following subsections present specific hazards and potential control measures for these hazards.

5.4.3.1 Lightning

Thunderstorms are more likely to develop during spring and summer but can occur year-round. Pay attention to the weather forecasts for the day and to early signs of thunderstorms: high winds, dark clouds, and darkening skies. Lightning can strike as far as 10 miles from the area where it is raining. If you can hear thunder, you could potentially be within striking distance. Seek safe shelter immediately.

Lightning tends to strike higher ground and prominent objects, especially materials that are good conductors of electricity, such as metal. The safest place to be in a thunderstorm is in a safe building. A safe building is one that is fully serviced and enclosed. The next best source of shelter is an enclosed metal car, truck, or van. When inside the vehicle during a lightning storm, it is recommended that you roll up the windows and sit with hands in lap, waiting out the storm. Don't touch any part of the metal frame or any wired device in the vehicle (including the steering wheel or plugged-in cellular phone). Be aware of any downed power lines that may be touching your vehicle.

If a shelter is not available, you can take shelter in low-lying areas, such as valleys or ditches, but watch for flooding. In a forest, seek shelter in a low-lying area under a thick growth of small trees or bushes. If you are caught in an area far from shelter and you feel your hair stand on end, lightning may be about to strike you. Crouch down on the balls of your feet immediately, with feet together; place your arms around your knees; and bend forward. Be the smallest target possible and minimize your contact with the ground. Do not lie flat on the ground.

Lightning-strike victims do not carry an electrical charge, are safe to touch, and need urgent medical attention.

5.4.3.2 Heat Stress Conditions

Heat stress is a significant potential hazard during summer months. An individual exhibiting signs of heat stress should be provided appropriate treatment immediately. Use of impermeable clothing reduces the cooling ability of the body because of evaporation reduction. This may lead to heat stress. To minimize the effects of heat stress, appropriate work-rest cycles should be maintained, and water or electrolyte-rich liquids should be available.

Never leave employees who are experiencing heat-related problems by themselves; if they do not respond quickly to cooling attempts, immediately call emergency medical services. If a coworker is having difficulty, do not hesitate to bring this to the attention of the supervisor or lead worker.

The following is a brief description of common heat-related conditions and their treatment.

5.4.3.2.1 Heat Exhaustion

Signs and symptoms of heat exhaustion include headache, nausea, vertigo, and weakness. This condition responds readily to prompt treatment, such as cooling and rehydration. Workers suffering from heat exhaustion should be removed from the environment and provided fluids and adequate rest.

5.4.3.2.2 Heat Stroke

The primary signs and symptoms of heat stroke are confusion and irrational behavior; loss of consciousness; hot, dry skin; and abnormally high body temperature. For any worker exhibiting heat stroke symptoms, professional medical treatment should be obtained immediately, as the body has lost its ability to cool itself. The worker should be placed in a cool area, and the outer clothing should be removed. The worker's skin should be cooled to the extent possible until emergency services arrive.

5.4.3.2.3 Cold Stress

Adverse climate conditions such as cold weather are important considerations in planning and conducting site activities. Potential hazards in cold environments include immersion (trench) foot, frostbite, and hypothermia, as well as slippery surfaces. The effects of low temperatures are further exacerbated by the proximity of the river.

When working in cold environments, the following specific steps should be taken to lessen the chances of cold-related injuries:

- Protect exposed skin surfaces with appropriate clothing (such as face masks, hand wear, and footwear)
- Shield the work area with windbreaks to reduce the cooling effects of the wind
- Have extra insulated clothing on site

5.4.3.2.4 Hypothermia

Hypothermia is an abnormal lowering of the core body temperature caused by exposure to a cold environment. When exposed to cold temperatures, the body begins to lose heat faster than it can be produced. The result is hypothermia. A body temperature that is too low affects the brain, making the victim unable to think clearly or move well. Wind chill, as well as wetness or water immersion, can play a significant role.

Typical early signs of hypothermia include shivering, fatigue, loss of coordination, confusion, and disorientation. Late symptoms of hypothermia include blue skin, no shivering, dilated pupils, slowed pulse and breathing, and loss of consciousness.

Body temperatures below 90°F require immediate treatment to restore the temperature to normal. The following steps can be taken to treat personnel with hypothermia:

- Alert the SSO and request medical assistance.
- Move the victim into a warm room or shelter. If shelter is not available, a sleeping bag, blankets, and body heat from an individual can be used to help raise body temperature.
- Remove any wet clothing.
- Warm the center of the body first – chest, neck, head, and groin, using skin-to-skin contact under loose, dry layers of blankets, clothing, towels, or sheets.
- If the victim does not respond, begin cardiopulmonary resuscitation.

5.4.3.2.5 Frostbite

Frostbite is an injury to the body that is caused by freezing. Frostbite causes a loss of feeling and color in the affected areas. It most often affects the nose, ears, cheeks, chin, fingers, or toes. Symptoms of frostbite include numbness; tingling or stinging; and bluish or pale, waxy skin.

The following steps can be taken to treat personnel with frostbite:

- Move into a warm area as soon as possible.
- Unless absolutely necessary, do not allow the person to walk on frostbitten feet.
- Do not rub or massage the frostbitten area; doing so may cause more damage.
- Do not use a heating pad or other heat source for warming. Affected areas are numb and can easily be burned.

5.4.3.2.6 Immersion (Trench) Foot

Trench foot is an injury of the feet resulting from prolonged exposure to wet and cold conditions. Trench foot can occur at temperatures as high as 60°F if the feet are constantly wet. Injury occurs because wet feet lose heat 25 times faster than dry feet. Personnel suffering from trench foot should remove boots and wet socks, and then dry the feet. Avoid walking, as this may cause tissue damage.

6 HEALTH AND SAFETY TRAINING

MFA personnel working on site and who could be exposed to COPCs will have completed training consistent with the HAZWOPER requirements in 29 Code of Federal Regulations (CFR) 1910.120(e). The training will include:

- Identity of site safety and health personnel
- Safety and health hazards identified on the Site
- Proper use of required PPE
- Safe work practices required on the Site, e.g., fall protection, confined space entry procedures, hot work permits, general safety rules
- Safe use of engineering controls and equipment on the Site
- Medical surveillance requirements, including the recognition of signs and symptoms that might indicate overexposure to hazards
- The site emergency response plan/spill containment plan

The HSC will oversee training for site personnel. Training records, including an outline, sign-offs, and competency records, will be maintained by the HSC.

7 SAFETY EQUIPMENT

7.1 Personal Protective Equipment

PPE must be worn by individuals on the Site to protect against physical hazards. PPE required on the Site is modified Level D, which consists of:

- Type 1 hard hat
- High-visibility vest
- Work boots
- Safety glasses with side shields
- Nitrile gloves or equivalent when handling known or potentially impacted media
- Work gloves (if handling materials that 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:

- Hearing protection (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, a visible sheen, etc. The SSO and, if necessary, the HSC will be contacted as soon as possible after the discovery of unexpected contamination, and the SSO and/or the HSC will determine the need for additional controls and/or training.

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

Project personnel are not permitted to reduce the level of specified PPE without approval from the SSO or the HSC.

7.2 Safety Equipment

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

- Soap and water for decontamination
- Caution tape, traffic cones, and/or barriers
- First-aid kit
- Fire extinguisher
- Fluids for hydration, e.g., drinking water or sports drink

7.3 Communications Equipment

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

8 DECONTAMINATION PROCEDURES

8.1 Partial Decontamination Procedure

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

- Remove outer gloves. Inspect and discard in a container labeled for disposable items if ripped or damaged.
- Wash hands and face with soap and water.

8.2 Full Decontamination Procedures

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

- Remove work boots and put on street shoes. Place work boots in a plastic bag or container for later reuse.
- 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.

9 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 site contaminants will be offered medical surveillance consistent with Washington Administrative Code (WAC) 296-843-21005.

MFA will ensure that its employees who are authorized to wear respirators are medically evaluated 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.

10 AIR MONITORING

Based on site conditions, air monitoring is not anticipated. In the case that workers encounter conditions that indicate the presence of unexpected contamination, such as unusual odors, discolored media, or a visible sheen, workers will exit the area and contact the SSO and, as needed, the HSC. If necessary, MFA will use air monitoring equipment to evaluate the conditions and determine if additional controls and/or training are required. Action levels and follow-up actions are provided in Appendix C.

Air monitoring, if conducted, must be performed by individuals familiar with the calibration, use, and care of the required instruments. Measurements shall be documented, and the records should include the following information:

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

10.1 Air Monitoring Action Levels

If air monitoring is conducted, the results will be compared to the action levels provided in Appendix C. The air monitoring action levels are established to comply with OSHA Permissible Exposure Levels, American Conference of Governmental Industrial Hygienists threshold limit values, and NIOSH recommendations for the chemicals that may be encountered on the Site. The action levels are also adjusted for the relative response of common PID instruments to motor-fuel vapors.

10.2 Explosion Hazard Action Levels

MFA employees working on site 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 LEL. When measurements exceed this level, MFA employees on site 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 and the HSC.
4. At the instruction of the HSC and after waiting 15 minutes for explosive gases to dissipate, the SSO may use the combustible gas meter to approach the worksite to measure combustible gases in the work area. The SSO shall not enter (or allow any personnel to enter) any area where the combustible gas meter readings exceed the explosivity action level, nor shall 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.

10.3 Instrument Calibrations

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

11 SITE CONTROL MEASURES

Access to the Site will be controlled as part of the site preparation. Control measures may include fencing, gates, and signs limiting access to everyone except authorized personnel. Work zones and contaminant reduction zones will be designated by the SSO at the start of onsite work.

MFA requires the "buddy system" if personnel conduct operations that may involve exposure to site hazards. The buddy system may involve working with non-MFA personnel.

12 EMERGENCY RESPONSE / SPILL CONTAINMENT / CONFINED SPACE

MFA employees on site will follow the emergency response, spill response, and confined space procedures described in the MFA Health and Safety Manual. Incidents will be documented on the incident report form included with Appendix D.

13 PRE-ENTRY BRIEFING

MFA employees on site will conduct pre-entry briefings, e.g., tailgate meetings, before starting work on the Site and/or as the scope of work changes throughout the project to ensure that employees are familiar with the HASP and that the plan is being followed (see Appendix E). Attendance and discussion topics will be documented on sign-in sheets, which will be maintained by the SSO. Protocols for mitigating safety concerns associated with COVID-19 are included in Appendix E.

14 PERIODIC EVALUATION

The project manager or designee will evaluate the effectiveness of this HASP. As part of the evaluation, the project manager or designee will track 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 the HASP. HASPs will be reviewed and updated at least annually. Updating the plan as necessary ensures that it reflects the known hazards, conditions, and requirements associated with the Site. MFA will maintain periodic evaluation records and will track all HASP revisions.

15 SAFE WORK PRACTICES

The following safe work practices are provided to supplement the other information included with 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. Field personnel will, whenever practicable, remain upwind of drilling rigs, open excavations, and other site-disturbing activities.
3. Subsurface work shall 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.

16 ACKNOWLEDGMENT

MFA cannot guarantee the health or safety of any person entering the Site. Because of the potentially hazardous nature of visits to active sites, it is not possible to discover, evaluate, and provide protection against all possible hazards that may be encountered. Strict adherence to the health and safety guidelines set forth herein will reduce, but not eliminate, the potential for injury and illness at the Site. The health and safety guidelines in this plan were prepared specifically for the Site 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 Site 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 plan available for review by contracted or subcontracted personnel for information only. This plan does not cover the activities performed by employees of any other employer on the Site. All contracted or subcontracted personnel are responsible for implementing their own health and safety program, including generating and using their own plan.

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

Job Hazard Analysis (JHA)

Task/Operation: Working Near Heavy Equipment		
Project Number: 0624.04.17	**Location/Site Where Task/Operation Performed:** *Former Northern State Hospital Property* *Sedro-Woolley, Washington*	
Date Prepared: 11/13/2019	**Employee Preparing this JHA:** Evelyn Lundeen	
Date Reviewed: 11/25/2019	**Employee Reviewing and Certifying this JHA:** Carolyn Wise	
Job/Task Description		
Employees will conduct work such as overseeing drilling operations and collecting soil and groundwater samples. This will require occasionally working in close proximity to drilling equipment.		
Physical Hazards		
Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Bodily harm or death	Heavy equipment operating on site creates a potential for site workers to be struck, crushed, or impacted by moving parts.	Stay a safe distance from equipment and maintain eye contact with equipment operators. Wear a safety vest for enhanced visibility.
Eye injury	Construction debris (e.g., soil) coming into contact with eyes.	Wear eye protection with side shields.
Head injury	Heavy equipment and/or tools impacting the head.	Wear a hard hat.
Penetration of feet	Sharp objects that could be stepped on; large objects falling on feet.	Wear steel-toe boots with steel shank.
Hearing loss	Noise generated by heavy equipment/machinery.	Wear hearing protection such as ear plugs or ear muffs.
Injury to bystanders	Pedestrians in the locality of work.	Use cones and caution tape to cordon off the immediate work area. Watch for and escort pedestrians away from work area. Pause work if necessary.
Hand injury	Pinch points.	Wear protective gloves whenever possible. Avoid placing hands near operating equipment.
Biological and Chemical Hazards		
Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
None	None specific to this JHA. Chemical hazards related to the site are described in the Chemical Hazards Summary Table.	None
Additional Control Measures and Guidance		
Engineering Controls: No engineering controls specified.		

Task/Operation: Working Near Heavy Equipment
General Safe-Work Practices and Guidance: Personnel should stay upwind and out of the impact area of the heavy equipment, if feasible. Cones, barrier tape, or other equivalent methods will be used to establish the impact area, if feasible. Work conducted in the impact area must be coordinated with the equipment operator using pre-established methods of communication, such as direct eye contact, hand signals, and/or verbal communication.
Personal Protective Equipment (PPE): Hard hat, steel-toe work boots, high-visibility safety vest or outer garment, safety glasses with side shields, nitrile gloves, and hearing protection, i.e., ear plugs or ear muffs.

Job Hazard Analysis (JHA)

Task/Operation: Work Near Traffic	
Project Number: 0624.04.17	**Location/Site where Task/Operation Performed:** *Former Northern State Hospital Property* *Sedro-Woolley, Washington*

Date Prepared: 11/13/2019	**Employee Preparing this JHA:** Evelyn Lundeen
Date Reviewed: 11/25/2019	**Employee Reviewing and Certifying this JHA:** Carolyn Wise

Job/Task Description

Employees will conduct work such as overseeing drilling operations and collecting confirmation soil and groundwater samples. This will require occasional work in close proximity to internal circulation roads and vehicle traffic on the Site.

Physical Hazards

Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Bodily injury	Vehicles moving on or around site.	Wear a reflective safety vest for enhanced visibility. Use cones and/or barriers to designate traffic patterns.
Eye injury	Debris (e.g., soil) contacting eyes due to vehicle movement.	Wear eye protection with side shields.
Head injury	Vehicles moving on or around site.	Wear a hard hat.
Foot injury	Vehicles moving on or around site.	Wear steel-toe boots with steel shank.
Hearing loss	Noise generated by vehicles moving on or around site.	Wear hearing protection such as ear plugs or ear muffs.

Biological and Chemical Hazards

Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
None	None specific to this JHA. Chemical hazards related to the site are described in the Chemical Hazards Summary Table.	None

Additional Control Measures and Guidance

Engineering Controls: No engineering controls specified.

General Safe-Work Practices and Guidance: Personnel will stay upwind and out of heavy traffic areas, if feasible. Cones, signage, barrier tape, or other equivalent methods will be used to establish traffic-control patterns, if feasible. Personnel should monitor traffic hazards before entering locations with potential vehicle movement.

Personal Protective Equipment (PPE): Hard hat, steel-toe work boots, high-visibility safety vest or outer garment, safety glasses with side shields, nitrile gloves, and hearing protection, i.e., ear plugs or ear muffs.

Job Hazard Analysis (JHA)

<table>
<tr><th colspan="3">Task/Operation: Groundwater Sampling</th></tr>
<tr><td colspan="2">Project Number:
0624.04.17</td><td>Location/Site Where Task/Operation Performed:
Former Northern State Hospital Property
Sedro-Woolley, Washington</td></tr>
<tr><td>Date Prepared:
11/25/2019</td><td colspan="2">Employee Preparing this JHA:
Carolyn Wise</td></tr>
<tr><td>Date Reviewed:
12/03/2019</td><td colspan="2">Employee Reviewing and Certifying this JHA:
Evelyn Lundeen</td></tr>
<tr><th colspan="3">Job/Task Description</th></tr>
<tr><td colspan="3">Employees will conduct work such as collecting groundwater samples from reconnaissance borings and monitoring wells. This will require occasionally working in close proximity to groundwater with concentrations of contaminants of concern.</td></tr>
<tr><th colspan="3">Physical Hazards</th></tr>
<tr><td>Physical Hazard/Risk</td><td>Source of Hazard/Risk</td><td>Hazard/Risk Mitigation</td></tr>
<tr><td>Heat/Cold/Sunburn</td><td>Weather</td><td>Wear sunscreen on exposed skin. Stop work if an employee feels symptoms of dehydration, overheating, or heat stroke. Move to a shaded area and consume water.
During cold conditions, wear adequate clothing to reduce the potential for hypothermia.</td></tr>
<tr><td>Eye injury</td><td>Construction debris and splashes (e.g., soil, water) coming into contact with eyes.</td><td>Wear eye protection with side shields.</td></tr>
<tr><td>Physical Stress</td><td>Heavy lifting of equipment and bailing water.</td><td>Use proper lifting techniques and take breaks and rest as needed.</td></tr>
<tr><td>Accidents with equipment/tools</td><td>Sample-collection equipment/tools.</td><td>Only use appropriate equipment for its intended use. Secure equipment in vehicle with netting or straps—do not leave loose.</td></tr>
<tr><th colspan="3">Biological/Chemical Hazards</th></tr>
<tr><td>Biological/Chemical Risk</td><td>Source of Hazard/Risk</td><td>Hazard/Risk Mitigation</td></tr>
<tr><td>Chemical</td><td>See table of chemicals of concern for specific chemicals and concentrations.</td><td>The personal protective equipment (PPE) described below should be used during groundwater sampling to minimize direct contact with groundwater.</td></tr>
</table>

Task/Operation: Groundwater Sampling		
Biological—Animals	No unique source of biological hazards warranting specific controls. However, check immediate area for the presence of biological hazards such as insects, poison ivy, spiders, and snakes.	When necessary, use bug repellent. Use snake chaps or shin guards when grass is above the ankle. Use a bar to clear spiders and/or snakes from objects and/or vegetation.

Additional Control Measures and Guidance
Engineering Controls: No engineering controls specified.
Chemical or Biological Concerns Specific to this JHA: None.
General Safe-Work Practices and Guidance: • Do not eat or drink in the immediate area where sampling is being conducted. • Wash hands and face before eating or drinking. • Dispose of used nitrile gloves in an appropriate container. • Avoid working with breathing zone directly above the opening of the well casing. When possible, work upwind of the well casing. • If work is conducted in or near traffic areas, wear high visibility vests. Use cones, flagging, or other devices to mark out the work area. • Always carry a cellular phone while working in remote areas.
Personal Protective Equipment (PPE): Work boots, high-visibility vest, safety glasses with side shields, and disposable nitrile gloves. Avoid direct contact with groundwater.

Job Hazard Analysis (JHA)

Task/Operation: Outdoor Air Sampling	
Project Number: 0624.04.17	**Location/Site where Task/Operation Performed:** *Former Northern State Hospital Property* *Sedro-Woolley, Washington*
Date Prepared: 10/15/20	**Employee Preparing this JHA:** Evelyn Lundeen
Date Reviewed: 10/20/20	**Employee Reviewing and Certifying this JHA:** Carolyn Wise

Job/Task Description

Employees will conduct work such as outdoor air sampling with Summa canisters.

Physical Hazards

Hazard/Risk	Source of Hazard/Risk	Hazard/Risk Mitigation
Physical stress	Heavy lifting of sampling equipment, compressed gas cylinders, sample coolers; kneeling on hard or gravel surfaces.	Use proper bending/lifting techniques by bending and lifting with legs and not with back. Do not twist at the waist when turning. Use buddy system for heavy objects. Use knee pads or kneeling pad. Take breaks and rest as needed.
Accidents with equipment/tools	Sample-collection equipment/tools.	Verify you have the appropriate equipment/tools for your tasks. Use equipment/tools as intended by the manufacturer. Stow all tools in vehicle properly and use appropriate cases and bags. Secure equipment (including compressed gas cylinders) in vehicle with netting, straps, and/or chains—do not leave loose—doing so can cause property damage or serious injuries to others or yourself.
Noise	Roto-hammer.	Wear proper ear protection.

Biological and Chemical Hazards

Hazard/Risk	Source of Hazard/Risk	Hazard/Risk Mitigation
Chemical	None specific to this JHA. Chemical hazards related to the site are described in the Chemical Hazards Summary Table.	None
Biological—Animals	Stinging insects, spiders, and snakes.	Use bug repellent as necessary. Use snake chaps or shin guards when grass is above the ankle. Use a bar to clear out objects and/or vegetation, as well as spiders and/or snakes (do not use your hands or feet).

Task/Operation: Outdoor Air Sampling
Additional Control Measures and Guidance
Engineering Controls: No engineering controls specified.
General Safe-Work Practices and Guidance: • Always wear nitrile gloves when handling samples and sampling equipment. • Secure compressed gas cylinder appropriately during transport and use. • Attach regulator and hose to compressed gas cylinder in appropriate manner. • Grasp or secure hose when in use—do not allow to whip.
Personal Protective Equipment (PPE): Hard hat (if overhead hazard is present), work boots (if working near heavy equipment), high-visibility vest, safety glasses, disposable nitrile gloves, and hearing protection (i.e., ear plugs or ear muffs) as needed.

Job Hazard Analysis (JHA)

Task/Operation: Soil Sampling	
Project Number: 0624.04.17	**Location/Site where Task/Operation Performed:** *Former Northern State Hospital Property* *Sedro-Woolley, Washington*

Date Prepared: 11/13/2019	**Employee Preparing this JHA:** Evelyn Lundeen
Date Reviewed: 11/25/2019	**Employee Reviewing and Certifying this JHA:** Carolyn Wise

Job/Task Description
Employees will conduct work such as overseeing drilling of borings and collecting soil samples. This will require occasional work in close proximity to heavy equipment and soil with concentrations of contaminants of concern.

Physical Hazards		
Physical Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Eye injury	Construction debris and splashes (e.g., soil, water) coming into contact with eyes.	Wear eye protection with side shields.
Injuries caused by improper lifting	Equipment, core sampler, sample coolers.	Use proper bending/lifting techniques by bending and lifting with legs and not with back. Do not twist at the waist when turning the core sampler. Use buddy system for heavy objects.
Accidents with equipment/tools	Sample-collection equipment/tools.	Verify you have the appropriate equipment/tools for tasks. Use equipment/tools only as intended by the manufacturer. Stow all tools in vehicle properly; use appropriate cases and bags. Secure equipment in vehicle with netting or straps—do not leave loose.
Falls/cave-ins	Open excavation.	Stay a safe distance from excavation area. Signs, cones, barrier tape, or other equivalent methods will be used to mark open excavations.

Biological/Chemical Hazards		
Biological/Chemical Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**

Task/Operation: Soil Sampling		
Biological—Animals	Stinging insects, spiders, and snakes.	Use bug repellent and sunscreen as necessary. Use snake chaps or shin guards when grass is above the ankle. Use a bar to clear out objects and/or vegetation, as well as spiders and/or snakes (do not use your hands or feet).
Chemical	Personnel performing tasks may come into direct contact with contaminated materials in the soil.	See Chemical Hazards Summary Table for applicable chemical hazards. Wear the appropriate PPE, including nitrile gloves, during sampling to prevent direct contact with contaminants in soil. If appropriate, use of a half-face respirator may be necessary.

Additional Control Measures and Guidance
Engineering Controls: No engineering controls specified.
General Safe-Work Practices and Guidance: • Triple-rinse sampling equipment using distilled or deionized water and alconox for first rinse, and distilled water for second and third rinses. • Always clean materials between locations at the site to avoid cross-contamination. • Do not bring equipment back to the office without proper decontamination.
Personal Protective Equipment (PPE): Hard hat, work boots, high-visibility vest, safety glasses with side shields, nitrile gloves, hearing protection if sampling using a drill-rig, and respiratory protection if necessary.

Job Hazard Analysis (JHA)

Task/Operation: Sub-Slab Vapor Sampling and Indoor Air Sampling	
Project Number: 0624.04.17	**Location/Site where Task/Operation Performed:** *Former Northern State Hospital Property* *Sedro-Woolley, Washington*

Date Prepared: 10/15/20	**Employee Preparing this JHA:** Evelyn Lundeen
Date Reviewed: 10/22/20	**Employee Reviewing and Certifying this JHA:** Carolyn Wise

Job/Task Description
Employees will conduct work such as conducting sub-slab soil gas sampling and indoor air sampling. This will require occasional work in close proximity to drilling equipment and pressurized gases.

Physical Hazards		
Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Asphyxiation	Helium gas.	Do not place head inside Helium shroud.
Eye injury	Construction debris coming into contact with eyes	Wear eye protection with side shields.
Physical stress	Heavy lifting of sampling equipment, compressed gas cylinders, sample coolers; kneeling on hard or gravel surfaces.	Use proper bending/lifting techniques by bending and lifting with legs and not with back. Do not twist at the waist when turning. Use buddy system for heavy objects. Use knee pads or kneeling pad. Take breaks and rest as needed.
Accidents with equipment/tools	Sample-collection equipment/tools.	Verify you have the appropriate equipment/tools for your tasks. Use equipment/tools as intended by the manufacturer. Stow tools in vehicle properly; use appropriate cases and bags. Secure equipment in vehicle with netting and straps—do not leave loose—doing so can cause property damage or serious injuries to others or yourself.
Noise	Roto-hammer.	Wear proper ear protection

Biological and Chemical Hazards		
Hazard/Risk	**Source of Hazard/Risk**	**Hazard/Risk Mitigation**
Chemical	None specific to this JHA. Chemical hazards related to the site are described in the Chemical Hazards Summary Table.	None

Task/Operation: Sub-Slab Vapor Sampling and Indoor Air Sampling		
Biological—Animals	Spiders and rodents.	Use nitrile gloves and a mask when working in enclosed areas where rodent droppings are present. Do not touch mouth, eyes, nose, or open wounds when working near rodent droppings.

Additional Control Measures and Guidance
Engineering Controls: No engineering controls specified.
General Safe-Work Practices and Guidance: • Always wear nitrile gloves when handling samples and sampling equipment. • Do not eat or drink in the immediate area where sampling is conducted. • Wash hands and face before eating or drinking. • Used nitrile gloves should be disposed of in a container labeled for disposable items. • During transport and use, properly secure compressed gas cylinders. • Attach regulator and hose to compressed gas cylinder in appropriate manner. • Grasp or secure hose when in use—do not allow to whip. • Employees should use caution when working around rodent droppings. If possible, use shop vac to remove rodent droppings before commencing work. • Secure equipment in vehicle with netting or straps; do not leave loose.
Personal Protective Equipment (PPE): Hard hat (if overhead hazard is present), work boots (if working near heavy equipment), high-visibility vest, safety glasses, disposable nitrile gloves, and hearing protection (i.e., ear plugs or ear muffs) as needed.

APPENDIX B
CHEMICALS OF CONCERN

Table
Chemical Hazards Summary
Former Northern State Hospital
Sedro-Woolley, Washington

MAUL FOSTER ALONGI

Analyte	OSHA PEL (TWA)	ACGIH TLV (TWA)	NIOSH IDLH[a]	LEL (%)	IP (eV)	Other Hazard
VOCs						
1,1-Dichloroethane	100 ppm	100 ppm	3000 ppm	5.4	11.06	
1,2-Dichloroethane	50 ppm	NE	50 ppm	6.2	11.05	
cis-1,2-Dichloroethene	200 ppm	NE	1000 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
Metals						
Arsenic	0.01 mg/m^3	0.01 mg/m^3	5 mg/m^3	NA	NA	C, P
Barium	0.5 mg/m^3	0.5 mg/m^3	NE	NA	NA	R, P
Cadmium	0.0050 mg/m^3	0.002 mg/m^3	9 mg/m^3	NA	NA	C
Chromium	1 mg/m^3	0.5 mg/m^3	250 mg/m^3	NA	NA	R, P
Copper	1 mg/m^3	0.2 mg/m^3	100 mg/m^3	NA	NA	
Lead	0.05 mg/m^3	0.05 mg/m^3	100 mg/m^3	NA	NA	C, P
Mercury	0.1 mg/m^3 (Ce)	0.01 mg/m^3	2 mg/m^3	NA	NA	R, P
Selenium	0.2 mg/m^3	0.2 mg/m^3	1 mg/m^3	NA	NA	R, P
Silver	0.01 mg/m^3	0.1 mg/m^3	10 mg/m^3	NA	NA	R, P
Zinc	10 mg/m^3	2 mg/m^3	500 mg/m^3	NA	NA	

NOTES:

IDLH values taken from http://www.cdc.gov/niosh/idlh/intridl4.html.

ACGIH = American Conference of Governmental Industrial Hygienists.®

C = carcinogen.

Ce = ceiling concentration.

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.

NIOSH = National Institute for Occupational Safety and Health.

OSHA = Occupational Safety and Health Administration.

P = poison.

PEL = permissible exposure level.

R = reactive.

TLV = threshold limit value.

TPH = total petroleum hydrocarbons.

TWA = time-weighted average.

APPENDIX C

AIR MONITORING ACTION LEVELS

Air Monitoring Procedures and Toxicity Action Levels

Instrument	Action Level	Initial Action	Follow Up Action
FID or PID[a]	Detection of **1 part per million (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 **10 ppm or greater benzene**, leave exclusion zone. Return only if levels decrease to below 10 ppm.	Ventilate area, always work upwind.
FID or 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.
CGI[b]	At or above 10 percent of the lower explosive limit.	Cease activities, turn off all potential sources of ignition. Evacuate.	Determine source of flammable vapors.
Dust Meter	0.05 milligrams per cubic meter of air	Dust suppression, e.g., misting.	Adjust operations.

[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]See Section 10.2 for complete explosion hazard action levels.

APPENDIX D

INCIDENT REPORT FORM

MAUL FOSTER & ALONGI, INC. HEALTH & SAFETY INCIDENT REPORT

THIS REPORT MUST BE COMPLETED IN FULL AND SUBMITTED WITHIN 24 HOURS TO THE MFA HEALTH AND SAFETY COORDINATOR

Project Name: ______________________________

Project Number: ______________________________

Date of Incident: ______________________________

Time of Incident: ______________________________

Location: ______________________________

Type of Incident (Check all applicable items)

☐ Illness	☐ Health & Safety Infraction	☐ Vehicular Accident
☐ Injury	☐ Fire, Explosion, Flash	☐ Electric Shock
☐ Property Damage	☐ Unexpected 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.

INCIDENT REPORTER

______________________	______________________	______________________
PRINT NAME	SIGNATURE	DATE

Site Safety Officer must deliver this report to the Health & Safety Coordinator within 24 hours. Reviewed by:

______________________	______________________	______________________
MFA Health & Safety Coordinator PRINT NAME	MFA Health & Safety Coordinator SIGNATURE	DATE

APPENDIX E

TAILGATE SAFETY MEETING CHECKLIST

HASP/SAFE WORK PLAN SUPPLEMENT:
COVID-19 EXPOSURE CONTROL, MITIGATION, AND RECOVERY PLAN

BACKGROUND

The novel coronavirus disease 2019 (COVID-19) is a respiratory illness that can spread from person to person. The SARS-CoV-2 virus, which causes COVID-19, is thought to spread primarily between and among people who are in close contact with one another (within approximately 6 feet) through respiratory droplets produced when an infected person coughs or sneezes. There is evidence that smaller respiratory droplets that can remain suspended may increase the risk of transmission. It also may be possible to contract COVID-19 by touching a virus-impacted surface or object and then touching one's own mouth, nose, and/or eyes. People with COVID-19 have reported a wide range of symptoms—from mild symptoms to severe illness. Symptoms may appear **two to 14 days after exposure to the virus.** People with the following symptoms or combinations of these symptoms may have COVID-19:

- Fever or chills
- Cough
- Shortness of breath
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

The virus may also lead to pneumonia, multiorgan failure, and/or death.

COVID-19 POLICIES AND PROCEDURES

To help prevent the spread of COVID-19 and comply with measures issued by public health agencies and government officials, Maul Foster & Alongi, Inc. (MFA) is implementing the following policies and procedures.

General

- Employees are prohibited from working in our offices or conducting fieldwork if they:
  - Have returned from international travel in the last 14 days;
  - Are experiencing symptoms consistent with COVID-19 based on current Centers for Disease Control and Prevention (CDC) guidance;
  - Have had close contact with someone diagnosed with COVID-19 within the past 14 days of planned fieldwork. "Close contact" means having been within 6 feet of someone for an extended time and/or being exposed to their cough or sneeze;

- Have been advised by a health care provider to self-quarantine and the self-quarantine has not yet been completed; or
- In the past 14 days have cared for an individual who is subject to a quarantine/isolation order related to COVID-19.

- Be mindful that deliveries, including sample bottles and lab pickups, will have to be rerouted and that extra coordination with all subcontractors and vendors is appropriate.

Social Distancing

- Maintain social distancing protocols (i.e., at least 6 feet of distance from other persons) during work and related travel, preparation, and demobilization.
- To ensure social distancing, MFA personnel cannot drive or ride in a vehicle with another person.
- Work-related air travel is not allowed until further notice.
- Only single-occupancy rooms are allowed for work-related hotels / lodging. While at hotels, disinfect your own room with disposable bleach wipes, and use the NO HOUSEKEEPING sign. Keep the number of people coming in and out of your room to a minimum.

Hygiene and Sanitation

- **Wash your hands frequently.** Use soap and water for at least 20 seconds, getting the whole hand—including the back of the hand, between your fingers, and under your nails. Alcohol-based hand sanitizers with more than 60 percent ethanol or 70 percent isopropanol can also be used, but they do not replace the water requirement.
  - If handwashing facilities are not readily available on or near the site, then project managers will arrange for a portable handwashing station.
  - Portable handwashing stations may be used only for washing hands, i.e., no equipment decontamination or disposal of materials. Buckets with tight-fitting lids will be provided for transport-related use. Spent handwashing water may be discharged into a sanitary drain, e.g., the MFA warehouse sink, with approval from the project manager.
- **Cover your nose and mouth with a tissue when you cough or sneeze** and then place the used tissue into a wastebasket. If you don't have a tissue, cough or sneeze into your upper sleeve or elbow, not your hands. Remember to wash your hands after coughing or sneezing. Avoid touching your eyes, nose, and mouth with unwashed hands, and avoid touching other surfaces with unwashed hands after touching these areas of your face.
- **Routinely clean frequently touched surfaces.** Use disposable disinfectant wipes, e.g., Clorox® bleach wipes, to wipe down touched surfaces in field vehicles and the equipment warehouse before and after entry.

Personal Protective Equipment

- Wear eye protection and gloves when conducting activities on site. The type of glove worn should be appropriate to the task. If gloves are not typically required for the task, then any type of glove is acceptable, including nitrile gloves.

- Cloth face coverings or respiratory protection is required when working in the presence of others.. See "Frequently Asked Question" No. 2 for more information about cloth face coverings.

Symptom Monitoring

- Stay home if you have COVID-19 symptoms or other illnesses. If you start experiencing COVID-19 symptoms in the field, leave the site as soon as practicable, avoid contact with others, and notify MFA's social distancing point of contact and/or HR.
- MFA personnel should take their temperature before their work begins each day. An employee whose temperature is 100.4°F or higher should immediately notify the site safety officer (SSO) or designee and should stay home. An employee whose temperature reaches 100.4°F or higher during the workday should cease work, notify the SSO or designee, and return home.
- The SSO should ask each person before the start of each workday if they have reviewed and are complying with this Safe Work Plan and are fit for work (e.g., no fever or symptoms / combination of symptoms consistent with COVID as described at the beginning of this document).
- If in the field, MFA personnel should report to the SSO or designee if they develop a fever or symptoms/combination of symptoms consistent with COVID-19 as described at the beginning of this document. If symptoms develop during work, the person should be immediately sent home. If symptoms develop while the person is not working, the person should not return to work until they have been evaluated by a healthcare provider.
- Consistent with CDC guidance, MFA may not treat every employee with a single, nonspecific symptom (e.g., a headache) as a suspected case of COVID-19.[1] MFA, in consultation with the employee, will exercise discretion based on the perceived likelihood that the symptom or symptoms are due to other reasons, such as allergies.[2]

Incident Reporting, Exposure Response Procedures, Decontamination Procedures, and Recovery Plan

- A person who reports feeling sick should be sent home. See "Frequently Asked Questions" No. 4.
- HR will coordinate with management to ensure that the area where the person worked is promptly cordoned off and disinfected.
- Promptly notify HR or a coach if you experience symptoms consistent with COVID-19. HR will inform you of protections available to you and ask what worksites you have frequented and any individuals you may have had close contact with at those worksites.
- HR will coordinate communications with people who may have had close contact with a confirmed or probable case of COVID-19.

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[1] https://www.cdc.gov/coronavirus/2019-ncov/community/general-business-faq.html
[2] https://www.aaaai.org/Aaaai/media/MediaLibrary/Images/Promos/Coronavirus-Symptoms.pdf

- The decision to conduct COVID-19 testing should be guided by advice from state and local health departments and healthcare providers.

COVID-19 Safety Training and Information

- Conduct or participate in a tailgate meeting (maintaining social distance) at the start of the workday and at least weekly to explain the exposure-control measures.
- The SSO or designee should record the attendance so attendees do not need to pass along a sign-in sheet.
- These procedures must be posted in a visible location on construction sites in Washington. Posting these procedures is encouraged for project sites beyond Washington.

FREQUENTLY ASKED QUESTIONS

1. Should I wear a respirator?

The short answer is "no." N95 respirators are in short supply, so public health experts and government agencies suggest that we reserve them for healthcare providers. Respirators with exhalation valves, such as half-face respirators typically used by MFA personnel, allow respiratory droplets to escape, so they would not protect people around you if you were infected.

2. Should I wear a cloth face covering?

Face coverings prevent the person wearing the mask from spreading respiratory droplets when talking, sneezing, or coughing. If everyone wears a face covering outside their homes, the risk of exposure to SARS-CoV-2 can be reduced for the community. If you wear a face covering, you are potentially protecting others from your own secretions, and another person's face covering is potentially protecting you from their secretions.

Face coverings are required by most public health authorities, although specific requirements may differ by area.

Staying apart from others is the best protection against COVID-19. **The most important ways of preventing COVID-19 continue to be frequent handwashing, avoiding touching your face, staying away from ill people, staying home, and avoiding all nonessential activities and contact with others. A face covering <u>does not</u> replace the need to follow these important precautions to prevent illness!**

When selecting a cloth face covering, consider designs that:

- Fit snugly but comfortably against the side of the face.
- Are secured with ties or ear loops.
- Include multiple layers of fabric.
- Do not use materials such as vacuum bags or furnace filters, as the manufacturing process may have resulted in loose fibers that could be inhaled.
- Allow for breathing without restriction.

- Use materials that are disposable or that can be laundered and machine dried without damage or change to shape.

Avoid touching your face as much as possible. Keep the covering clean. Clean hands with soap and water or alcohol-based hand sanitizer immediately before putting on, after touching or adjusting, and after removing the cloth face covering. Do not share it with anyone else unless it is washed and dried first. You should be the only person handling your covering. Laundry instructions will depend on the cloth used to make the face covering. In general, cloth face coverings should be washed regularly (e.g., daily and whenever soiled) using water and a mild detergent, dried completely in a hot dryer, and stored in a clean container or bag.

3. What should I do if I think I've come into contact with a person who has COVID-19?

It is frightening to think that you've been exposed, so it's important to make decisions based on your actual risk. The CDC has issued guidance to help public health authorities assess and manage the risk of potential exposure to COVID-19.

For example, if your exposure was to a person in the same building but not within 6 feet for a prolonged time, and you had no direct contact, such as being coughed on, the CDC recommends that you watch for fever, cough, or difficulty breathing and follow CDC guidance if symptoms develop.

4. What should I do if I am sick with COVID-19 or suspect that I am infected with the virus that causes COVID-19?

You should stay home except to get medical care. Call ahead before visiting your doctor to say that you have been or are being evaluated for COVID-19.

Try to separate yourself from other people and animals in your home. You should wear a facemask when you are around other people or pets (such as sharing a room or vehicle) and before you enter a healthcare provider's office. If you are not able to wear a facemask (for example, because it causes trouble breathing), then people who live with you should not stay in the same room with you, or they should wear a facemask if they enter your room.

Cover your nose and mouth during coughs and sneezes, wash your hands often, clean surfaces frequently, and monitor your symptoms.

Seek prompt medical attention if your illness is worsening, e.g., breathing is becoming increasingly difficult. Put on a facemask before you enter the medical facility to help the healthcare provider's office protect other people in the office or waiting room from infection or exposure. Most medical offices have masks available at their entrances for this reason.

If you have a medical emergency and need to call 911, notify the dispatch personnel that you have been or are being evaluated for COVID-19. If possible, put on a facemask before emergency medical services arrive.

Patients with confirmed COVID-19 should remain under home isolation precautions until their doctor and the state and local health departments determine that the risk of secondary transmission to others is low. For reference, the Clark County Health Department suggests that people who develop

COVID-19 symptoms after close contact with COVID-19 patients discontinue home isolation under the following conditions:

- At least three days (72 hours) have passed since recovery, which is defined as resolution of fever (without the use of fever-reducing medications) and improvement in respiratory symptoms (e.g., cough, shortness of breath); AND,
- At least ten days have passed since symptoms first appeared.

5. Where can I get more information?

The following list provides some helpful links to reliable information:

1. CDC: https://www.cdc.gov/coronavirus/2019-ncov/index.html
2. World Health Organization: https://www.who.int/emergencies/diseases/novel-coronavirus-2019
3. Washington Department of Health: https://www.doh.wa.gov/Coronavirus/Workplace
4. Oregon Health Authority: https://www.oregon.gov/oha/PH/DISEASESCONDITIONS/DISEASESAZ/Pages/emerging-respiratory-infections.aspx
5. University of Minnesota Center for Infectious Disease Research and Policy: http://www.cidrap.umn.edu/covid-19/information-employers/business

REVISION HISTORY

This document was originally issued as Revision 0. It has been revised as follows:

Date	Revision Details	Revised By:	Revision
4/9/2020	Updated addendum to include frequently asked questions section and information about cloth face coverings.	WHB	1
5/7/2020	Updated to address Washington's construction safety requirements, new COVID-19 symptoms, and information about cloth face coverings. This included the addition of information about handwashing, temperature/symptom screening, tailgate meetings, and the requirement to wear cloth face coverings.	WHB	2
5/21/2020	Removed reference to K. Lombardi and A. Clary. Updated to reference the social distancing point of contact, the health and safety coordinator (E. Curtis).	EMC	3
7/22/2020	Updated symptoms to be consistent with CDC guidance. Updated response to question #2 regarding face coverings (removed references to outdated rules). Updated symptom monitoring guidance to make it consistent with MFA's COVID plan. Clarified that out-of-office meetings should be approved by HSC. Added revision history.	WHB	4

Date	Revision Details	Revised By:	Revision
2/22/2021	Removed requirement to coordinate with social distancing coordinator prior to conducting fieldwork. Removed requirement to coordinate with analytical laboratories prior to conducting fieldwork. Removed requirement to carry letter of essential workforce for Washington.	KJL	5
2/23/2021	Update personal protective equipment section to clarify cloth face covering requirements.	EMC	6

Tailgate Safety Meeting Checklist

MAUL FOSTER ALONGI

Client Name:	Port of Skagit
Project No.:	0624.04.17
Communicated By:	
Date:	

Yes	NA	Information Reviewed
☐	☐	Emergency 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: ____

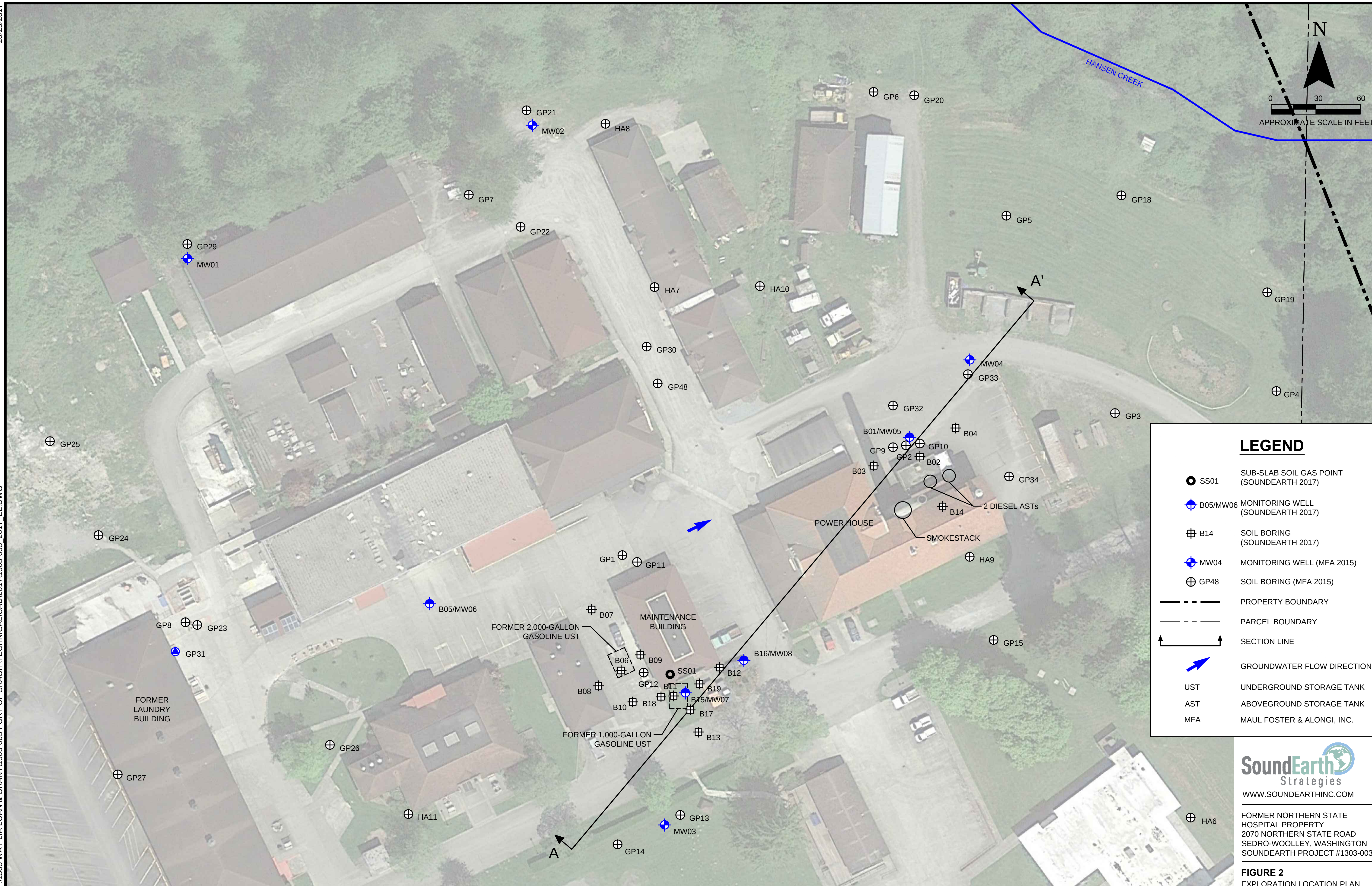
Suggestions to Improve HS Practices

Attendees

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

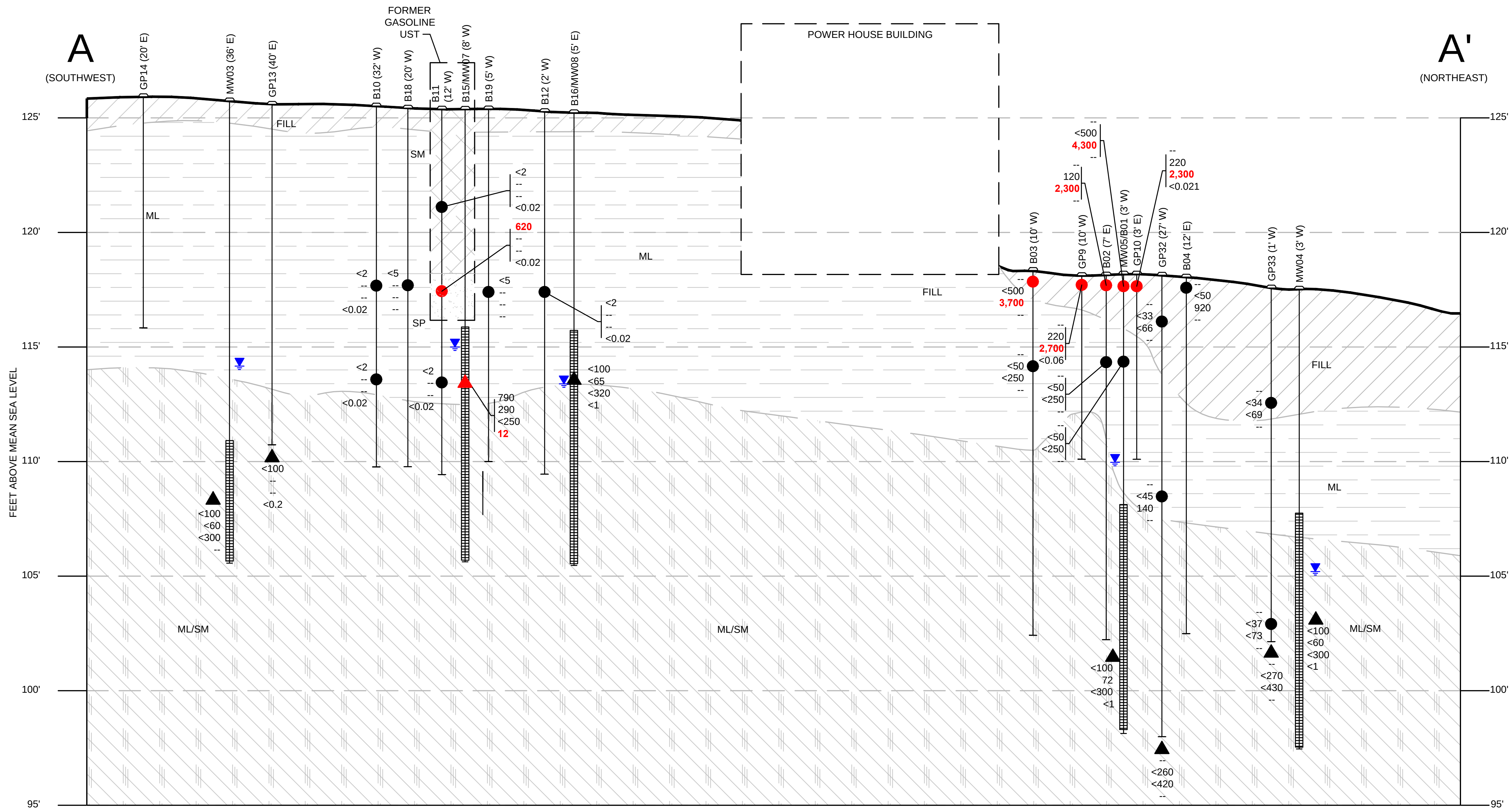
APPENDIX C
PLIA CROSS SECTION

10/25/2017



P:\1303 WA PLIA LOAN & GRANT\1303-003 PORT OF SKAGIT\TECHNICAL\CAD\2017\1303-003_2017_EL.DWG

10/26/2017



LEGEND

- SOIL SAMPLE
- GROUNDWATER SAMPLE
- GROUNDWATER LEVEL (9/1/17)
- MONITORING WELL
- FILTER SCREEN

SOIL (mg/kg) AND GROUNDWATER (µg/L) RESULTS:

<2	**GRPH:** GASOLINE-RANGE PETROLEUM HYDROCARBONS
<50	**DRPH:** DIESEL-RANGE PETROLEUM HYDROCARBONS
<250	**ORPH:** OIL-RANGE PETROLEUM HYDROCARBONS
<0.02	**BENZENE**
RED	DENOTES CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVELS FOR GROUNDWATER OR SOIL
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
UST	UNDERGROUND STORAGE TANK

FILL SILTY SAND OR GRAVEL WITH ASPHALT, BRICK, & CONCRETE

ML SILT WITH TRACE FINE SAND, TAN TO BROWN

ML/SM SILT TO CLAYEY SILT WITH INTERBEDDED SAND, GRAY

SM SILTY SAND (TANK BACKFILL)

SP: COARSE SAND (TANK BACKFILL)

0 20 40
APPROXIMATE SCALE IN FEET

SoundEarth Strategies
WWW.SOUNDEARTHINC.COM

FORMER NORTHERN STATE HOSPITAL PROPERTY
2070 NORTHERN STATE ROAD
SEDRO-WOOLLEY, WASHINGTON
SOUNDEARTH PROJECT #1303-003

FIGURE 6
CROSS SECTION A-A'

P:\1303 WA PLIA LOAN & GRANT\1303-003 PORT OF SKAGIT\TECHNICAL\CAD\2017\1303-003_2017_XAA.DWG

APPENDIX D
INADVERTANT DISCOVERY PLAN

INADVERTENT DISCOVERY PLAN

April 2020

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

Project Title: **Investigation and Cleanup, Northern State Multi Service Center**
Project Proponent: **Maul Foster & Alongi, Inc. on behalf of the Port of Skagit**
Remedial Action Grant Agreement No.: **TCPRA-1921-SkagiCp-00077**
County: **Skagit**
Address: **2070 Northern State Road, Sedro-Woolley, WA**
Section **08**, Township **35N**, Range **5E**

1. INTRODUCTION

This Inadvertent Discovery Plan (IDP) outlines procedures to perform in the event of discovering cultural resources or human remains, in accordance with Washington State preservation laws. These laws concern historic preservation, archaeology, human remains and cemeteries.

2. RECOGNIZING CULTURAL RESOURCES

A cultural resource discovery could be prehistoric or historic. Examples include:

a. An accumulation of shell, burned rocks, or other food related materials.
b. Bones or small pieces of bone.
c. An area of charcoal or very dark stained soil with artifacts.
d. Stone tools or waste flakes (i.e. an arrowhead. or stone chips).
e. Clusters of tin cans or bottles, logging or agricultural equipment that appears to be older than 50 years.
f. Buried railroad tracks, decking, or other industrial materials.

When in doubt, assume the material is a cultural resource. See cultural resource images in Appendix A.

3. ON-SITE RESPONSIBILITIES

STEP 1: *Stop Work.* If any employee, contractor or subcontractor believes that he or she has discovered a cultural resource, leave it in place and stop work in the area (about a 100 foot radius). Notify the appropriate party(s). Do not allow vehicles, equipment, and unauthorized personnel to traverse the discovery area. Delineate and secure the area to protect the integrity of the discovery.

Upon encountering cultural resources within a boring, discontinue all further work within that boring.

STEP 2: *Notify Archaeological Monitor or Licensed Archaeologist.* If there is an Archaeological Monitor for the project, notify that person. If there is a monitoring plan in place, the monitor will follow the outlined procedure.

Licensed Archaeologist for Project: Garth L. Baldwin, M.A., RPA 16248 (360) 739-3921 garth@draytonarchaeology.com	

STEP 3: *Notify the Project Manager* of this project and contact the Ecology Staff Project Manager, or other applicable contacts:

Project Manager: Carolyn Wise (360) 594-6255 cwise@maulfoster.com	Assigned Project Manager Alternate: Phil Wiescher (503) 594-6267 pwiescher@maulfoster.com

The Project Manager or alternate will make all calls and necessary notifications.

If human skeletal remains are encountered, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection and to shield them from being photographed. **Do not call 911 or speak with the media. Do not take pictures. Follow the procedure described in Section 5.**

4. PROJECT MANAGER RESPONSIBILITIES UPON DISCOVERY OF POTENTIAL CULTURAL RESOURCES

a. *Protect Potential Find*: Ensure no work occurs within the discovery area (about a 100-foot radius around potential find) delineate and secure the discovery area to protect the integrity of the discovery. Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery site. Work in the immediate area will not resume until treatment of the discovery has been completed following provisions for treating archaeological/cultural material as set forth in this document.

b. *Direct Sampling/Construction Activities Elsewhere*: Direct sampling/construction activities away from the discovery area prior to contacting the concerned parties.

c. *Contact the Department of Ecology*: Maintain regular communications until treatment of the discovery is completed as set forth in this IDP:

Department of Ecology (Ecology) Contacts:

Project Manager Tena Seeds, P.E. (425) 649-7008 tena.seeds@ecy.wa.gov	Cultural Resource Specialist Donna Podger (360) 407-7016 donna.podger@ecy.wa.gov

d. *Provide Archaeological Examination*: Ensure that a qualified professional archaeologist examines the find. If the archaeologist determines that the find:
   - Is not archaeological or historical material, or human remains/funerary objects; work may proceed with no further delay.
   - Is archaeological or historical material; contact the Washington Department of Archaeology and Historic Preservation (DAHP), affected Tribes, and involved federal agencies (if any). See contacts below. Document discoveries as described in Section 6.
   - May be human remains or funerary objects, ensure that a qualified physical anthropologist examines the find. **If it is determined to be human remains, follow the procedure described in Section 5.**

e. *Protect Confirmed Find*: The archaeologist may refine the boundaries of the cultural resource discovery area. Do not work in this designated area until treatment of the discovery is completed, following the procedures set forth in this IDP.

DAHP Contacts:

Allyson Brooks, Ph.D. State Historic Preservation Officer 360-586-3066 allyson.brooks@dahp.wa.gov	Rob Whitlam, Ph.D. State Archaeologist Office: 360-586-3080 Cell: 360-890-2615 rob.whitlam@dahp.wa.gov
Alternate: Rob Whitlam, Ph.D. State Archaeologist Office: 360-586-3080 Cell: 360-890-2615 rob.whitlam@dahp.wa.gov	Alternate: Lance Wollwage, Ph.D. Assistant State Archaeologist Office: 360-586-3536 Cell: 360-890-2616 lance.wollwage@dahp.wa.gov

Tribal Contacts:

Lummi Nation Lena Tso, THPO Cultural Resources (360) 312-2257 lenat@lummi-nsn.gov	Samish Indian Nation Jackie Ferry, Cultural Resources (360) 293-6404 x215 jferry@samishtribe.nsn.us
Sauk-Suiattle Indian Tribe Alex Frey, Cultural Resources (360) 436-0333 afrey@sauk-suittle.com	Snoqualmie Indian Tribe Steve Mullen-Moses, Director (425) 292-0249 x2010 steve@snoqualmietribe.us Adam Osbekoff, Assistant Director adam@snoqualmietribe.us

Stillaguamish Tribe of Indians Kerry Lyste, THPO Cultural Resources (360) 652-7362 x226 klyste@stillaguamish.com	Swinomish Indian Tribal Community Larry Campbell, THPO (360) 466-7352 lcampbell@swinomish.nsn.us
Tulalip Tribes Richard Young, Cultural Resources (360) 716-2652 ryoung@tulaliptribes-nsn.gov	Upper Skagit Tribe Scott Schuyler, Cultural Resources (360) 854-7009 sschuyler@upperskagit.com
Confederated Tribes and Bands of the Yakama Nation Kate Valdez, THPO (509) 985-7596 kate@yakama.com	

5. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL REMAINS

If human skeletal remains are encountered, cease all work that may cause further disturbance to the remains, and secure and protect the discovery area. Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect. Do not touch, move, or further disturb the remains and do not take photographs by any means, unless you are pre-approved to do so.

If the project occurs on federal lands or receives federal funding (e.g., national forest or park, military reservation) the provisions of the Native American Graves Protection and Repatriation Act of 1990 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 Manager will comply with applicable state and federal laws, and the following procedure.

Project Manager: immediately call the Skagit County Medical Examiner's Office and the Sedro-Woolley Police Department:

Skagit County Medical Examiner 124 West Gates Street Mount Vernon, WA 98273 (360) 336-9431	Sedro-Woolley Police Department 325 Metcalf Street Sedro-Woolley, WA 98284 (360) 855-0111 or (360) 428-3211 (after business hours)

The medical examiner and law enforcement personnel will determine if the remains are human and whether the discovery site constitutes a crime scene. If the remains constitute a crime scene (forensic), the medical examiner will retain jurisdiction. If they do not constitute a crime scene (non-forensic), the medical examiner will notify DAHP.

DAHP will have jurisdiction over non-forensic remains until provenance of the remains is established.

Sampling/construction in the discovery area may resume only as directed by the medical examiner/law enforcement personnel for forensic remains and by DAHP for non-forensic remains.

6. DOCUMENTATION OF CULTURAL RESOURCES

The Project Manager will ensure the proper documentation and field assessment of any discovered cultural resources in cooperation with all parties: DAHP, Ecology, affected tribes, and a contracted consultant (if any).

All prehistoric and historic cultural material discovered during sampling will be recorded by a professional archaeologist on a cultural resource site or isolate form using standard and approved techniques. Site overviews, features, and artifacts will be photographed; stratigraphic profiles and soil/sediment descriptions will be prepared for minimal subsurface exposures. Discovery locations will be documented on scaled site plans and site location maps.

Cultural features, horizons and artifacts detected in buried sediments may require further evaluation using hand-dug test units. Units may be dug in controlled fashion to expose features, collect samples from undisturbed contexts, or to interpret complex stratigraphy. A test excavation unit or small trench might also be used to determine if an intact occupation surface is present. Test units will be used only when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. Excavations will be conducted using state-of-the-art techniques for controlling provenience, and the chronology of ownership, custody and location recorded with precision.

Spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock will be recorded for each probe on a standard form. Test excavation units will be recorded on unit-level forms, which include plan maps for each excavated level, and material type, number, and vertical provenience (depth below surface and stratum association where applicable) for all artifacts recovered from the level. A stratigraphic profile will be drawn for at least one wall of each test excavation unit.

Sediments excavated for purposes of cultural resources investigation will be screened through 1/8-inch mesh, unless soil conditions warrant ¼-inch mesh.

All prehistoric and historic artifacts collected from the surface and from probes and excavation units will be analyzed, catalogued, and temporarily curated. Ultimate disposition of cultural materials will be determined in consultation with the federal agencies (if any), DAHP, Ecology and the affected tribes.

If field assessment work exposes human skeletal remains, the process described in Section 5 will be followed.

Within 30 days of concluding fieldwork, the Project Manager will provide a technical report summarizing the work and findings of the professional archaeologist to Ecology, the federal agencies (if any), DAHP, and the affected tribes.

7. PROCEEDING WITH WORK

Work outside the designated discovery area may continue while documentation and assessment of the discovery proceeds. A professional archaeologist must determine the boundaries of the discovery location.

Work inside the discovery area may resume only after treatment of the discovery is completed in accordance with this IDP, and with the concurrence of the Project Manager, DAHP, affected tribes, federal agencies (if any), and Ecology. For forensic human remains, the county examiner and law enforcement personnel must concur with resumption of work.

8. IDP AVAILABILITY AND USE

The IDP must be immediately available on-site, be implemented to address any discovery, and be available by request by any party. The IDP must be discussed and reviewed with all personnel performing fieldwork in advance of commencing fieldwork.

APPENDIX A
Cultural Resource Images

Print images in color for accuracy.

Implement the IDP if…

You see chipped stone artifacts.

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

Implement the IDP if…

You see ground or pecked stone artifacts.

- Striations or scratching
- Unusual or unnatural shapes
- Unusual stone
- Etching
- Perforations
- Pecking
- Regularity in modifications
- Variability of size, function, and complexity

Implement the IDP if…

You see bone or shell artifacts.

- Often pointed if used as a tool
- Often wedge shaped like a "shoe horn"
- Often smooth
- Unusual shape
- Carved

Bone Awls from Oregon and Bone Wedge from California

Implement the IDP if…

You see bone or shell artifacts.

- Often smooth
- Unusual shape
- Perforated
- Variability of size

Tooth Pendant and Bone Pendants from Oregon and Washington

Implement the IDP if…

You see fiber or wood artifacts.

- Wet environments needed for preservation
- Variability of size, function, and complexity
- Rare

Artifacts from Mud Bay, Olympia, Washington

Implement the IDP if…

You see historic period artifacts.

Artifacts from Downtown Seattle, Alaskan Way Viaduct (Upper Left and Lower) and Unknown Site (Upper Right)

Implement the IDP if…

You see strange, different or interesting looking dirt, rocks, or

- Human activities leave traces in the ground that may or may not have artifacts associated with them
- “Unusual” accumulations of rock (especially fire-cracked rock)
- “Unusual” shaped accumulations of rock (e.g., similar to a fire ring)
- Charcoal or charcoal-stained soils
- Oxidized or burnt-looking soils
- Accumulations of shell
- Accumulations of bones or artifacts
- Look for the “unusual” or out of place (e.g., rock piles or accumulations in areas with few rock)

Unknown Sites

Implement the IDP if…

You see strange, different or interesting looking dirt, rocks, or

- "Unusual" accumulations of rock (especially fire-cracked rock)
- "Unusual" shaped accumulations of rock (e.g., similar to a fire ring)
- Look for the "unusual" or out of place (e.g., rock piles or accumulations in areas with few rock)

Site on Muckleshoot Indian Reservation, near WSDOT ROW along SR 164

Implement the IDP if…

You see strange, different or interesting looking dirt, rocks, or

- Often have a layered or "layer cake" appearance
- Often associated with black or blackish soil
- Often have very crushed and compacted shells

Site located within WSDOT ROW near Anacortes Ferry Terminal

Implement the IDP if…

You see historic foundations or buried structures.

45KI924, In WSDOT ROW for SR 99 Tunnel