PHASE I INTERIM ACTION REPORT

FORMER CASHMERE MILL SITE

Prepared for

WASHINGTON STATE DEPARTMENT OF ECOLOGY

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

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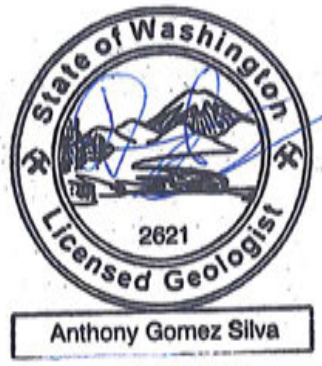

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CONTENTS

CONTENTS (CONTINUED)

TABLES AND ILLUSTRATIONS

FOLLOWING REPORT:

TABLES

FIGURES

ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
City	City of Cashmere, Washington
CUL	cleanup level
Ecology	Washington State Department of Ecology
EIM	environmental information management
GeoEngineers	GeoEngineers, Inc.
GPS	global positioning system
MFA	Maul Foster & Alongi, Inc.
MTCA	Model Toxics Control Act
PAH	polycyclic aromatic hydrocarbon
PCS	petroleum-contaminated soil
PID	photoionization detector
Port	Port of Chelan County, Washington
property	the former Cashmere Mill Site located along Mill Road and Sunset Highway in Cashmere, Washington
RH2	RH2 Engineering, Inc.
Scarsella	Scarsella Brothers, Inc.
site	see "property"

SUMMARY

This summary is not intended as a stand-alone document and must be evaluated in context with the entire document.

On behalf of the Washington State Department of Ecology (Ecology), through a subcontract with GeoEngineers, Inc., Maul Foster & Alongi, Inc. (MFA) has prepared this report summarizing the remedial activities associated with the Phase I Interim Action completed at the former Cashmere Mill Site in Cashmere, Washington (the site or the property). The property is owned by the Port of Chelan County, Washington (Port). In 2012, the Port executed an interagency agreement (C1300049) with Ecology to facilitate remedial actions. Phase I Interim Action activities were performed beginning in April through July 2013.

The former Cashmere Mill Site is 32.5 acres and was used primarily for lumber milling from the 1940s until the late 1970s and for a variety of commercial and light industrial uses thereafter. The site is currently vacant; there are no structures or buildings, and the ground surface is unpaved.

Since 2007, the Port has conducted multiple investigations to evaluate the geotechnical and hydraulic properties, and to characterize the nature and extent of wood waste and potentially contaminated areas in support of removal actions required to better position the site for redevelopment. During investigations conducted prior to the Phase I Interim Action, five areas of concern were identified as containing petroleum-contaminated soil (PCS), and wood waste fill material was found to be present throughout most of the site. The five areas of concern with PCS were labeled PCS Area 1 through PCS Area 5. Petroleum hydrocarbon impacts in shallow groundwater were also documented. In 2011, portions of PCS Areas 1, 3, and 5 were excavated. Soils exceeding the Ecology Model Toxics Control Act (MTCA) Method A cleanup levels (CULs) were also identified in PCS Areas 2 and 4.

The contract for Phase I of the former Cashmere Mill site removal action was awarded to Scarsella Brothers, Inc. (Scarsella) of Kent, Washington. MFA oversaw fieldwork associated with environmental activities; RH2 Engineering, Inc. (RH2) was responsible for oversight of activities associated with preparing the site for redevelopment.

The Phase I Interim Action included:

- Debris removal and off-site disposal. Scarsella removed and disposed of approximately 300 truckloads of previously stockpiled debris material (e.g., gravel, cobbles, and granular fill) to private properties in the vicinity of Cashmere.
- Excavation and off-site disposal of wood waste. Scarsella excavated and disposed of approximately 428 truckloads of wood waste at a private property within the vicinity of Cashmere. Analytical results associated with confirmation soil samples collected from the excavation floor indicated compliance with associated CULs.
- Excavation of soils from PCS Area 2. Scarsella excavated approximately 3,005 cubic yards of PCS. The excavated material was stockpiled south of Mill Road for disposal

under a subsequent phase of the removal action. The depth of the excavation was limited to 2 feet below the water table. In some locations, soils above MTCA Method A CULs remain because of site features limiting excavation.

- Excavation of soils from Storm Line PCS Area. During removal of the existing stormwater conveyance system, PCS soil exceeding MTCA Method A CULs was discovered. Scarsella excavated approximately 665 cubic yards of PCS from the Storm Line PCS Area. The excavated material was stockpiled south of Mill Road for disposal under a subsequent phase of the removal action. The excavation depth was limited to 2 feet below the water table. In some locations, soils above MTCA Method A CULs remain because of the water table limiting excavation and, in one side wall location, because of an oversight during lateral expansion of the excavation area.
- Excavation and disposal of refuse and debris intermixed with soil. Scarsella excavated approximately 336 cubic yards of material and temporarily stockpiled it south of Mill Road before characterizing it and disposing of it at the East Wenatchee Landfill.
- Scarsella backfilled the site with 50,490 tons of structural fill imported from a farm owned by William Burnett and from the Rock Island Road Pit owned by Bremmer Construction.

Additional tasks performed during implementation of the Phase I actions included:

- Discovery, excavation, and off-site disposal of treated-wood posts near the wood waste excavation area.
- Discovery and identification of the No Name Creek bypass culvert and vault, and installation of a riser to the vault to bring it up to the finished grade.
- Decommissioning of a water structure by backfilling with sand and capping with concrete.
- Discovery of a number of buried concrete structures. The concrete structures were left in place at the direction of RH2.
- Replacement of the City of Cashmere-owned water main that transects the site.
- Discovery, removal, and disposal of the stormwater system, associated piping, and structures, and abandonment in place of pipes that were not removed (e.g., the pipes adjacent to Sunset Highway).
- Soil sampling for stockpile characterization.
- PCS Area 4 characterization. MFA oversaw installation of nine reconnaissance borings via direct-push drill methods in PCS Area 4 to better delineate the nature and extent of PCS and groundwater contamination.

1 INTRODUCTION

Maul Foster & Alongi, Inc. (MFA) has prepared this report summarizing the remedial activities associated with the Phase I Interim Action completed at the former Cashmere Mill Site located along Mill Road and Sunset Highway in Cashmere, Washington (the site or the property) (see Figure 1). The property is owned by the Port of Chelan County, Washington (Port). This report has been prepared on behalf of the Washington State Department of Ecology (Ecology) through a subcontract with GeoEngineers, Inc. (GeoEngineers); MFA oversaw the environmental-related components of the Phase I Interim Action through a contract with the Port.

Since 2007, the Port has conducted a number of investigations to evaluate geotechnical and hydraulic properties, and to characterize the nature and extent of wood waste and potentially contaminated areas in support of removal actions required to better position the site for redevelopment. In 2012, the Port executed an interagency agreement (C1300049) with Ecology to facilitate remedial actions. Phase I Interim Action activities were performed in the spring and summer of 2013.

2 SITE HISTORY AND DESCRIPTION

2.1 Site History

The 32.5-acre site is located in the City of Cashmere, Washington (City) (Figure 1). The site is bounded to the north by the Burlington Northern Santa Fe railroad tracks; to the east and south by part of Brender Creek; and to the west by Brender Creek and by residential and light industrial uses. The northern boundary of the site, along the railroad tracks, is less than 100 feet from the Wenatchee River (see Figure 2).

The site was used primarily for lumber milling from the 1940s until the late 1970s and for a variety of commercial and light industrial uses thereafter. The mill primarily produced thin lumber for construction of fruit packing boxes. Reportedly, the mill processed raw (untreated) timber into lumber; no wood-treatment chemicals or processes were documented to have been used at the site.

The Cedarbrook Company, owned by Mr. John Lysaker, purchased the property in 1990 from WI Forest Products, and sold the property to the Port in 2007. Based on anecdotal information, the property has not been used for agricultural-related uses. An accidental fire in 1990 caused some damage to the mill buildings. A large arson-caused fire in 2000 destroyed many of the mill buildings and structures.

Some of the wood wastes produced from mill operations were used to fill in low-lying areas at the site. Based on characterization efforts, wood waste at the site consists of raw wood, lumber, timber,

and sawdust, and is intermixed with granular fill. Wood waste was distributed by site grading that leveled or covered wood waste stockpiles.

According to RH2 Engineering, Inc. (RH2), interviews with several long-time City residents and the Port indicate that fill was also imported to the site for several decades. Three primary areas received fill: (1) south of Mill Road in the former log storage area, (2) the former mill pond north of Mill Road, and (3) the area north of Sunset Highway. Fill materials in these areas have been observed to consist of wood waste; silt, sand, and gravel-size granular fill; and concrete and asphalt. The portion of the site located north of Sunset Highway received fill from the City for a number of years. The material in this area consists primarily of silt, sand, gravel-size granular fill, and building materials, including concrete and asphalt (RH2, 2007).

The site is currently vacant. There are no buildings or structures (except for groundwater monitoring wells and other subsurface infrastructure, including a large, decommissioned water structure) and the ground surface is unpaved. Several debris piles were removed at the start of Phase I activities, and some of the matter excavated during Phase I was placed in stockpiles located south of Mill Road.

2.2 Affected Media and Contaminants of Concern

During activities associated with the geotechnical investigations and site improvements conducted prior to the Phase I Interim Action, five areas of concern were identified as containing petroleum-contaminated soil (PCS), and wood waste fill material was found to be present throughout most of the site. The five areas of concern with PCS were labeled PCS Area 1 through PCS Area 5 (see Figure 2). Petroleum hydrocarbon impacts in shallow groundwater were also documented. The five PCS areas are described in a removal action work plan (RH2, 2013a).

Limited wood waste- and soil-removal actions were completed at the site in 2011 as part of a pilot wood waste interim removal action and during the reconstruction of Sunset Highway. Portions of PCS Areas 1, 3, and 5 were excavated. Soils exceeding the Ecology Model Toxics Control Act (MTCA) Method A cleanup levels (CULs) were identified in PCS Areas 1, 2 and 4 (RH2, 2013a) following the conclusion of Phase I activities by GeoEngineers (GeoEngineers, 2014).

Geotechnical and environmental investigations, and limited interim actions, have been conducted at the site since as early as 1990. Results from environmental site investigations conducted before 2013 are described in the site characterization report (MFA, 2013a).

Petroleum hydrocarbons or wood-treating chemicals may have been present in the wood waste and soil at the site. Wood waste samples collected in August 2012 were analyzed for petroleum hydrocarbons, metals, and chemicals potentially associated with wood-treating activities (e.g., phenols and polycyclic aromatic hydrocarbons [PAHs]), as discussed in the MFA site characterization report.

The contaminants of concern for the PCS, wood waste, and groundwater are described in detail in the removal action work plan for the site (RH2, 2013a) and in an April 2013 memorandum prepared by MFA regarding sampling and analysis plan modifications (see Appendix A).

The contaminants of concern at the site include:

- Petroleum hydrocarbons
- Semivolatile organic compounds
- Pentachlorophenol
- Metals (arsenic, chromium, copper, and lead)

3 REMEDIAL ACTION OBJECTIVES

3.1 Remedial Action Work Plan

The overall project goal is to obtain a No Further Action determination from Ecology through excavation of contaminated soil and wood waste, and backfill with imported structural fill. A number of remedial activities intended to achieve this goal are outlined in the removal action work plan for the site (RH2, 2013a). Economic constraints, the construction season, available resources, and other factors prohibited completion of all of the remedial activities defined in the work plan in 2013. The Port and Ecology prioritized the remedial activities for the 2013 construction season and focused on areas of the site that were deemed more economical and developable. The focused set of remedial actions became the Phase I Interim Action for the project.

3.2 Phase I Interim Action Objectives

The Phase I Interim Action objectives for the 2013 construction season included:

- Debris removal and off-site disposal
- Excavation and off-site disposal of wood waste from the area of the site between Mill Road and Sunset Highway
- Excavation and removal of soils exceeding MTCA Method A CULs from PCS Area 2
- Limited dewatering for the purposes of excavation, material removal, and confirmation soil sample collection
- Decommission, and evaluate removal of, a water structure, including removal of the fence and adjacent tree
- Characterization of PCS Area 4
- Backfilling excavations with imported structural fill and performing site grading

During implementation of the Phase I objectives, additional actions were performed as described in Section 7.2. The interim remedial action and the additional evaluations of discovered impacted areas

were completed within the context of the Ecology MTCA guidance following Washington Administrative Code 173-340.

3.3 Phase I Project Framework

Phase I remedial actions were conducted and overseen by multiple parties. Each party's roles and key members are listed below:

Port: Property Owner
Laura Jaecks

Ecology: Regulatory Agency
Mary Monahan

MFA: Port Consultant/Remedial Work Oversight
Justin Clary
Tony Silva
Lindsey Crosby

RH2: Port Consultant/Redevelopment Work Oversight
Randy Asplund
Adam Neff

GeoEngineers: Ecology Consultant
Bruce Williams
Jodie Lamb

Scarsella Brothers, Inc. (Scarsella): Remediation Contractor
Dennis Sigl
Tiffany Bucher

4 REMEDIAL ACTIONS

4.1 Permitting and Site Preparation

The Port maintains a construction stormwater general permit for the site (No. WAR-011991) issued by Ecology with an effective date of January 1, 2011. In February 2013, Ecology issued a permit coverage letter acknowledging the change in project plans to include initiation of environmental remediation activities at the site (Appendix B).

The Port also has a shoreline substantial development permit (No. 2010-002), which includes a state environmental policy act determination of nonsignificance issued by the City with an effective date of July 12, 2010 (Appendix B). According to RH2, Mr. Mark Botello, director of planning and

building at the City, was contacted by RH2 prior to the interim action to notify him of the remedial plans at the site. The City concluded that the permit was still valid for use because the site had not changed.

Through a competitive bid process, the contract for Phase I (also referred to as Schedule A) of the former Cashmere Mill site removal action was awarded to Scarsella of Kent, Washington. On-site work began in April 2013 and continued into July 2013. During the construction work, project meetings were held, generally on a weekly basis, at City Hall. The meetings provided a platform for increasing communication between parties, providing project updates, and reviewing requests for information and changes in the scope of work.

Northwest Geodimensions, Inc., of Wenatchee, Washington, conducted site surveying before and following the interim remedial action. Sample locations, excavations, and selected site features were recorded during the interim action by MFA staff using a global positioning system (GPS) unit (manufacturer specifications indicate that the GPS meter is capable of accuracy of 10 centimeters under ideal conditions; based on a review of the post-activity processed data, the GPS meter appears to have been accurate to within 1.5 feet during the interim action).

Prior to wood waste and PCS removal activities, above grade debris stockpiles consisting primarily of gravel, cobbles and granular fill (determined by RH2 to not be suitable for structural fill) located in the north and northwest portion of the site between Mill Road and Sunset Highway were removed and disposed of offsite at locations selected by Scarsella. Consistent with its contract with the Port, Scarsella was responsible for appropriate disposal of any material removed from the site. As there were no payment obligations associated with material disposal (payment was based on weight of import material), weight of material leaving the site was not measured. Approximately 296 truckloads of the debris material, with an estimated haul capacity of 10 cubic yards per truckload, were transported to a private residential property at 5600 Nahahum Canyon Road in Cashmere, Washington (a few miles north of the City). With approval by RH2, Scarsella transported approximately 26 truckloads of debris material to the easternmost parcel at the site owned by the Port to aid in site grading and construction equipment installation (e.g., dewatering tanks and truck scales). Scarsella, with RH2 approval, also transported approximately four truckloads of debris material to a private residence located in the City (MFA was not provided the address).

4.2 Wood Waste Area Excavation

Wood waste removal was conducted between Sunset Highway and Mill Road. In particular, the removal focused on the west side of the former mill pond area. Figure 2 shows the approximate location of the former mill pond. Note that the east side of the former mill pond extends on to a parcel of property owned by the Port but not considered part of this interim remedial action. The excavation extents are shown on Figure 3. Similar to the debris removal, Scarsella selected the disposal location and made arrangements with a private landowner to accept the wood waste.

MFA observed the wood waste removal, including periodic field screening of the wood waste with a photoionization detector (PID) following the protocol defined in the removal action work plan (RH2, 2013a).

Wood waste removal began along Sunset Highway and moved from east to west approximately 200 feet. The wood waste was removed in rows approximately 20 feet wide (north to south), and varied from approximately 5 feet to 15 feet in depth. The depth and extent of the wood waste excavation were determined by visual observation of wood waste present and observation of native cobbles in the subsurface. The lateral extent of the wood waste excavation is shown on Figure 4.

The contract specifications placed the responsibility for identification and appropriate disposal of excavated materials on the contractor. The wood waste was transported to a private property at 5600 Nahahum Canyon Road in Cashmere, Washington. Approximately 428 truckloads of wood waste material were removed from the site (an estimated 14,045 cubic yards, according to RH2). Timbers that had been found in the subsurface and a tree that had been removed were also transported off site to the private property mentioned above. As part of the wood waste removal, wood posts, debris, and stormwater pipelines that were encountered were removed and are described in the following sections.

4.2.1 Wood Post, Debris, and Pipeline Removal

Treated-wood posts were encountered along the southeast portion of the wood waste excavation area. Posts were buried vertically and extended roughly 10 and 12 feet below ground surface (bgs). Additional treated-wood post removal activities are described in Section 4.5.

Buried refuse and other debris intermixed with soil were encountered along the southern portion of the wood waste excavation. Refuse and debris were observed extending generally 2 to 4 feet bgs. Visible refuse and debris were excavated and stockpiled on plastic sheeting south of Mill Road for profiling. Based on stockpile measurements, approximately 336 cubic yards of material was removed from the debris and refuse area excavation. The extents of the refuse and debris excavation are shown on Figure 3. The stockpiled material was later disposed of offsite following characterization (see Section 6.6).

During wood waste removal, a 24-inch-diameter corrugated metal pipe and an 8-inch-diameter steel pipe aligned north to south were exposed (see Figure 8). The pipes were located next to each other and appeared to extend to the north and under Sunset Highway. The 8-inch-diameter steel pipe was later found to extend south to the water structure to the south. The 24-inch-diameter corrugated pipe appeared to tie into the site drainage system. The pipes were cut near Sunset Highway, with the remaining piping, which appeared to extend under Sunset Highway, abandoned by capping with concrete. A wall-like structure constructed of untreated timber logs was also found extending north and south as shown on Figure 8. The timber logs were removed during excavation.

4.2.2 Confirmation Sampling

Confirmation soil samples, consisting of native materials, were collected from the base of the wood waste excavation. The samples were collected generally at a frequency of one soil sample per 100-foot-by-100-foot grid and analyzed for parameters defined in the sampling and analysis plan (RH2, 2013b). Three grid confirmation samples were collected based on the extent of the wood waste excavation. Excavation extents and sample locations are shown in Figure 4.

4.3 PCS Area 2 Excavation

Prior to starting the remedial actions in PCS Area 2, test pits were advanced for characterization purposes. The test pit locations are shown on Figure 5 and are described in further detail in Section 6.1. Soils from PCS Area 2 were excavated with a track hoe excavator and stockpiled on plastic sheeting south of Mill Road for profiling. The excavation was extended based on field screening and visual observation of impacts. The excavation in PCS Area 2 was extended to a depth of generally 2 feet below groundwater, which was observed to be approximately 4 feet bgs. Final excavation extents were determined through confirmation soil sampling of the excavation sidewalls as described in Section 4.3.1.

The PCS Area 2 excavation began in May 2013 and was completed in June 2013. The excavation began where, according to test pit investigations, areas with impacts exceeding MTCA Method A CULs were located. The excavation was extended based on field screening and analytical results of confirmation wall samples. Based on elevated confirmation sample results, the excavation was extended to the north and south and subsequently resampled. The excavation to the southeast was bound by the water structure, a discovered subsurface bypass of No Name Creek, and by Mill Road. The excavation to the southwest was also bound by Mill Road.

PCS Area 2 excavation extents and confirmation sample locations are shown on Figure 6. Based on stockpile measurements, approximately 3,005 cubic yards of soil was removed from PCS Area 2 and stockpiled on site south of Mill Road (refer to Appendix C). Confirmation sampling results are summarized in the tables following this report.

Several large concrete blocks were encountered along the east edge of the excavation. The concrete blocks extended from approximately 1 foot bgs to beyond the base of the excavation. The concrete blocks were left in place at the direction of RH2. The locations of the concrete blocks are shown on Figure 6.

4.3.1 PCS Area 2 Confirmation Sampling

Confirmation sample locations were measured with a GPS unit (manufacturer specifications indicate that the GPS meter is capable of accuracy of 10 centimeters under ideal conditions; based on a review of the post-activity processed data, the GPS meter appears to have been accurate to within 1.5 feet during the interim action). The soil samples were analyzed for the parameters defined in the remedial action work plan (RH2, 2013a). Confirmation samples were collected from the excavation sidewalls and floors, following the procedures outlined in the sampling and analysis plan (RH2, 2013b) and the modifications to the sampling and analysis plan summarized in a memorandum (Appendix A):

- Generally, one soil sample per 200-square-foot area was collected from the floor of the excavation. Floor soil samples are denoted with an "F" in their sample identification numbers, along with the associated depth (e.g., A2-F10-S-6 is associated with a soil sample collected from PCS Area 2, floor sample location number 10 at a depth of 6 feet bgs).

- Soil samples were collected generally 20 linear feet apart along the sidewalls of the excavation at the approximate vertical center of the excavation wall, or at depths that coincided with impacts observed during field screening. Wall soil samples are denoted with a "W" in their sample identification numbers, along with the associated depth (e.g., A2-W10-S-4 is associated with a soil sampled collected from PCS Area 2, wall sample location number 10 at a depth of 4 feet bgs).

4.4 Storm Line PCS Area Excavation

A pipe aligned north to south determined to be associated with the site stormwater collection system was encountered during removal action activities and removed. Petroleum-impacted soil was noted beneath the pipe near the center of the site. The impacted area, identified as the Storm Line PCS Area, was excavated based on field screening, and the floor and sidewalls of the excavation were sampled. Confirmation sample results indicated CUL exceedances that required extension of the excavation in June to the west and south, with subsequent confirmation sampling. Based on stockpile measurements, approximately 665 cubic yards of soil associated with the Storm Line PCS Area excavation was removed and stockpiled on site south of Mill Road (refer to Appendix C). The extent of excavation is shown in Figure 7. Confirmation sampling procedures were generally consistent with those performed in PCS Area 2 and described in the sampling and analysis plan (RH2, 2013b) and the modifications to the sampling and analysis plan summarized in a memorandum (Appendix A).

4.5 Wood Post Area Soil Excavation

During removal of the treated-wood posts discussed in Section 4.2.1 and shown on Figure 4, soft, saturated soils were observed from approximately 3 to 12 feet bgs. No analytical characterization of the wood post treatment chemicals was completed. Soil samples collected from test pits in this area had detections of contaminants of concern below associated MTCA CULs. The soils, identified by RH2 as structurally unsuitable for redevelopment, were removed and stockpiled on plastic sheeting south of Mill Road. Based on stockpile measurements, approximately 1,130 cubic yards of material associated with the Wood Post Area excavation was removed and stockpiled south of Mill Road (refer to Appendix C). The extent of excavation is shown on Figure 4.

A large concrete block was encountered along the south edge of the excavation, approximately 1 foot bgs. The concrete was left in place at the direction of RH2. This concrete is shown on Figure 4.

4.5.1 Wood Post Removal

Treated wood posts were removed and stored on plastic sheeting until transport to and disposal at the Waste Management Greater Wenatchee Landfill and Recycling Center. Approximately 30 treated-wood posts were removed. GPS readings were collected from the top of the vertical posts before they were removed from the ground. Because of safety considerations, not all of the posts could be measured with the GPS unit. The locations of the posts measured with a GPS unit are shown on Figure 4.

4.6 Dewatering

Groundwater elevation varied throughout the site. For most of the excavations, dewatering was required in order to advance the excavation, as well as to characterize subgrade soils and conditions, and to collect samples. Groundwater was pumped from the excavations into a series of four 21,000-gallon capacity water storage tanks. The contract specifications placed the responsibility on Scarsella for management, characterization, and disposal of all dewatering fluids generated during the removal action. Water samples were collected by Scarsella for characterization purposes. Scarsella made arrangements with and obtained approval from the City to discharge the water to the City's sanitary sewer system.

4.7 Backfilling

The site was backfilled with imported structural fill from two borrow sources:

- A farm, owned by William Burnett, located at 7380 U.S. Highway 97 in Dryden, Washington
- Rock Island Road Pit, owned by Bremmer Construction, located at 4200 Rock Island Road in Rock Island, Washington

Contract specifications required that imported fill "be obtained from a verified and tested clean source"; however, there were no environmental characterization sampling requirements beyond this requirement.

Certified temporary truck scales were installed in the east corner of the property, along Mill Road. The scales weighed trucks carrying structural import fill onto the site. A total of 50,490 tons of structural import fill was brought on site.

Fill was placed generally in 1-foot-thick lifts and compacted with tracking equipment to redevelopment compaction standards (i.e., Washington State Department of Transportation Embankment Compaction Method C). Compaction testing was conducted by Construction Special Inspection and Testing Northwest of Wenatchee, Washington; results are provided in Appendix D.

5 ASSOCIATED ACTIONS

5.1 Water Main Replacement

During wood waste excavation, water was observed to be infiltrating into the west end of the excavation. The infiltration rate appeared faster than in other areas of the excavation. According to City maintenance personnel, the aging, City-owned water main that transected the property was prone to leaking and had required numerous repairs over the past several years.

During a site visit, a City crew member used a field meter to test grab samples of the infiltrating water. The water tests were positive for residual chlorine. Based on the location and rate of infiltrating water, the proximity of the infiltrating water to the water main, site knowledge, and the residual chlorine test results, it was determined that the aging water main required replacement because of the rapid rate of water infiltration into the excavation.

Scarsella mobilized a pipe construction crew to the site to assist with dewatering activities. The Port then authorized the replacement of the water main. RH2 worked with Scarsella to develop a design and scope of work for the water line replacement.

A temporary water line was installed to maintain service during the construction work. Scarsella then installed a new water main across the central portion of the site, running from Sunset Highway south to Mill Road. Figure 8 shows the location of the new water main and laterals serving the business to the west and the residence to the southeast. During the utility trench work, soils were periodically screened with a PID field meter.

Elevated PID readings were observed in soils south of Mill Road in the trench that was dug for the new water line connection to the residence. While the trench was open and accessible, MFA collected three soil samples from the sidewalls of the trench to characterize the elevated PID readings (refer to Section 6.7.2 for a discussion of analytical results associated with the samples). The soils removed from the ground when the trench was dug were placed in the PCS stockpiles. New import structural fill was used to fill in the trench where the elevated PID readings had been obtained.

5.2 Water Structure Abandonment

A water structure was located at the site along Mill Road (see Figure 8). The water structure appeared to be an open-top cistern with concrete walls that was approximately 24 feet in diameter and 15 feet deep. The structure was almost full of water, with only 1 to 2 feet of freeboard. Originally, the objective was to decommission the water structure by removal. Based on the size and type of the structure, Ecology determined that it did not meet the definition of a well and approved decommissioning the structure by filling in place. Scarsella decommissioned the water structure in May 2013 by backfilling with sand fill from the Rock Island Road Pit in Rock Island, Washington. A limited amount of dewatering was needed to minimize the displacement of water over the top of the structure. The structure was then capped with a controlled density fill concrete cap from the water table to the top of the structure (approximately 1.5 feet thick).

5.3 No Name Creek Culvert Identification

During wood waste removal activities, a lidded concrete vault was encountered in the northeast part of the site (see Figure 8). The vault had two pipes connecting to it: a 2-foot-diameter pipe aligned southward, and a 3-foot-diameter pipe aligned north-northeastward. Water was observed flowing into the vault coming from the south and flowing out of the vault going northeastward.

Dye testing results indicated that the vault was part of the No Name Creek bypass. The general alignment of the inlet and outlet pipes leading into and out of the vault were sighted based on the

location of the vault and known bypass features. The City attempted to further locate the pipes using utility locate equipment, but was unable to clearly identify the alignment of the pipes. After the discovery of the vault and creek bypass pipes, RH2 requested that additional excavations be kept at least 15 feet from the general location of the creek bypass lines.

When the area near the concrete vault was backfilled, Scarsella installed a riser on the vault, extending it to be flush with the final site grade.

5.4 Characterization Activities

As areas of interest were identified during implementation of the wood waste removal action, test pits were dug and sampled to better understand these areas, which included the extent of PCS Area 2 impacts and the wood post area.

5.4.1 Wood Post Area Characterization

In the wood post area, test pits 28 through 30 and test pit TP-S-Post were excavated to approximately 10 to 12 feet bgs (see Figure 5). A discrete soil sample was collected from each test pit at 3, 6, and 9 feet bgs. The three discrete samples from each pit were then homogenized and submitted to the laboratory for characterization purposes. One composite sample was submitted for each of the three test pits. Groundwater grab samples were collected from the excavations, using disposable bailers. Sampling results are included in the attached tables.

5.4.2 PCS Area 2 Characterization

Test pits 31 through 43 were excavated in PCS Area 2 (see Figure 5). The test pits were extended until groundwater was encountered (typically 4 feet bgs), and soil samples were generally collected near the water table (e.g., 4 feet bgs). Because the test pits were relatively shallow and accessible, groundwater grab samples were collected directly from the test pits. Sampling results are included in the attached tables.

5.4.3 Groundwater Sampling

At the beginning of the remedial action, MFA observed three wells on the property: one was a flush-mounted monitoring well (B-1) located in the northeast part of the site; one was a stick-up mounted dewatering well (DW01) located in the southern part of the site; and one was a stick-up well (bearing Ecology identification tag number ACC-922) found in the northwest corner of the site. Well labeled ACC-922 appeared to be constructed like a domestic well; however, it did not have utilities connected to it.

Reportedly there was a flush-mounted monitoring well (B-2) south of Mill Road that may have been inadvertently covered up or destroyed as part of prior site activities. Well B-2 was not encountered during the Phase I remedial activities.

Monitoring well B-1 was sampled in April 2013 before implementation of the interim remedial action. Groundwater quality field parameters and sampling information are summarized on a field sampling data sheet (Appendix E).

5.4.4 PCS Area 4 Characterization

In April 2013, MFA issued a memorandum regarding the PCS Area 4 characterization approach. The memo included an approach for characterization of PCS Area 4. The goal of the characterization was to delineate the extent of impacts in PCS Area 4 for estimation of soil volumes requiring removal and disposal under the next anticipated removal action (see Appendix F). The memo described advancing test pits for sample collections. Subsequently the scope of work was revised as per a July 16, 2013 electronic mail regarding the Cashmere Mill site next steps (MFA, 2013b). Rather than advancing test pits, a drilling contractor was hired to advance borings in PCS Area 4.

In July 2013, reconnaissance borings were advanced by direct-push drill method in PCS Area 4 for characterization purposes. The boring locations for GP1 through GP9 are shown on Figure 9. One soil sample was collected from each boring at depths near the groundwater table. The sample depths are indicated in the sample names. Reconnaissance groundwater samples were collected at GP4 and GP6. Also during this effort, three reconnaissance borings (GP10, GP11, and GP12) were advanced north of Mill Road near PCS Area 2 and the Storm Line PCS Area (see Figure 9). A reconnaissance groundwater sample was collected from each of the borings north of Mill Road. Groundwater quality field parameters and sampling information are summarized on field sampling data sheets (Appendix E). Because the groundwater samples were collected from temporary well screens in borings, groundwater samples might not be as representative of aquifer conditions as samples collected from properly developed monitoring wells.

5.4.5 Dewatering Assessment

In June 2013, GeoEngineers installed one temporary test well and seven observation wells supporting a dewatering assessment in the southern portion of the site (south of Mill Road) in preparation for the next phase of remedial actions. Tests were performed to evaluate aquifer characteristics. Groundwater samples were collected and submitted for chemical analysis. Results of the dewatering assessment are included in the Draft Dewatering Assessment report prepared by GeoEngineers (GeoEngineers, 2013).

6 SAMPLING AND ANALYSIS RESULTS

Laboratory analytical reports are included in Appendix G. Data validation memoranda are included in Appendix H. The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned, as described in the validation memoranda. The analytical methods used are provided in the laboratory reports and summarized in the data validation memoranda.

The sample results are summarized in the attached tables. The tables are organized as follows:

- Table 1—sample identification and description explaining the information provided in the sample names.
- Table 2—confirmation soil samples summarizing samples that were collected to confirm the extents of excavations were in compliance with CULs.
- Table 3—characterization soil samples summarizing samples that were collected as part of the soil characterization process to assist with the remedial action planning.
- Table 4—characterization water samples summarizing samples that were collected as part of the water characterization process for informational purposes.

The tables include the MTCA Method A CULs. If a MTCA Method A CUL was not available, a MTCA Method B value was used as available and as indicated in the tables. Detected concentrations are shown in bold and concentrations exceeding the MTCA CULs are shaded, as described in the table notes.

During the remedial action, a number of sample locations were overexcavated and removed. This includes some samples collected for characterization purposes (e.g., test pits) and confirmation wall samples that were found to exceed the MTCA CULs. Sample locations are shown on the attached figures. Sample locations that were later excavated are presented in a lighter shade on the figures, which indicates that the soil from which they were collected is no longer present.

For PCS Area 2 and the Storm Line PCS Area, the main contaminants of concern were hydrocarbons. Ecology concurred with a remedial action approach in which the excavations were advanced to a depth of generally 2 feet below the water table. Dewatering allowed for the collection of soil samples from the base of the excavations for informational purposes; however, these floor samples were not used to guide additional removal activities vertically because they were collected from below the water table.

MFA issued a letter dated June 10, 2013, regarding calculation of site-specific total petroleum hydrocarbon CULs for the site. The original work plan did not anticipate the volume of PCS that was generated, nor did it contemplate on-site reuse of stockpiled materials; MTCA Method A CULs were therefore established for the removal action. However, with the volume of material generated requiring off-site disposal, as well as the higher than expected water table resulting in leaving in place excavation base soils that exhibited MTCA Method A CUL exceedances, the goal of the letter was to evaluate whether site-specific CULs could be developed to screen stockpiled soil for potential reuse or on-site disposal, and to establish excavation boundaries for PCS remaining in some areas of the site. However, because of the observed variability in hydrocarbon concentrations and the resultant calculated CULs, it was determined unreasonable to apply site-wide hydrocarbon CULs (see Appendix I).

6.1 Test Pits

Test pits were advanced in the following locations for characterization purposes:

- Test Pits 28, 29, 30, and Post were advanced in the wood post and debris excavation areas.
- Test Pits 31 through 43 were advanced in PCS Area 2.
- Sample Stormpipes 1 and 2 were collected in what later became identified as the Storm Line PCS Area.

One soil sample was collected from each test pit. Approximate locations of the test pits are shown on Figure 5. Test pit locations with soil samples above MTCA Method A CULs for diesel- and oil-range organic hydrocarbons were removed during the removal action. The soil from the sample locations that remains on site are Stormpipe 2 and Test Pits 33, 34, and 36. Soil samples collected from these test pit locations were below MTCA Method A CULs. The data are summarized in Table 3.

Groundwater samples were collected from Test Pits 28 through 43 for informational purposes. Most of the water samples collected had exceedances for diesel- and oil-range organic hydrocarbons. The water collected from Test Pit 29 had exceedances of some PAHs. The data are summarized in Table 4. Because the groundwater samples were collected from test pits, the groundwater grab samples might not be as representative of aquifer conditions as samples collected from properly developed monitoring wells.

6.2 Wood Waste Area

Three confirmation soil samples were collected in the wood waste excavation area:

- G-S-1 (northwest portion)
- G-S-2 (northeast portion)
- G-S-3 (southern portion)

The sample locations are shown on Figure 4. The samples were collected from native soils below the wood waste. Detected concentrations were below the MTCA CULs. The data are summarized in Table 2.

6.3 PCS Area 2

Forty-six confirmation wall soil samples were collected from the PCS Area 2 excavation. The sample locations are shown in Figure 6. Of these wall samples, 14 samples had exceedances for diesel-range and oil-range organic hydrocarbons, with most of these wall samples later removed as part of additional excavations. Note that wall sample W39 was removed as part of a later excavation and a new confirmation wall sample (W46) was collected to the south. However, a new confirmation wall sample was not collected to the east after removing the soil at W39. The data are summarized in Table 2.

Two wall samples from PCS Area 2, W37 and W38, are from soils which exceed the MTCA Method A CULs for diesel- and oil-range organic hydrocarbons. These samples were collected from the

southeast corner of the excavation. Because of the presence of the No Name Creek bypass, the excavation could not be advanced farther to the east at W37. Because of the presence of Mill Road, the excavation could not be advanced farther south at W38. The creek bypass and the road prevented further excavation in this area. Samples W37 and W38 were analyzed for diesel-, oil-, and gasoline-range organic hydrocarbons, selected volatile organic compounds, PAHs, and extractable petroleum hydrocarbons/volatile petroleum hydrocarbons. No additional MTCA CUL exceedances beyond the diesel- and oil-range hydrocarbon exceedances were found in these samples.

As stated above, soil samples were collected from the base of the excavation and below the water table for informational purposes; however, these samples did not lead to additional excavation vertically. Of the 64 floor samples collected in PCS Area 2, six samples had detections that exceeded the MTCA Method A CUL for diesel- and oil-range organic hydrocarbons. The floor samples with exceedances are F16, F21, F29, F41, F52, and F54 (see Figure 6). The data are summarized in Table 2.

6.4 Storm Line PCS Area

Fourteen confirmation wall soil samples were collected in the Storm Line PCS Area. The sample locations are shown on Figure 7. Of these wall samples, W2 and W4 had exceedances for diesel-, oil-, and gasoline-range organic hydrocarbons. W2 was removed during a later excavation, and W4 was unintentionally left in place. While analytical results associated with wall samples W3 and W9 did not exceed CULs, later extensions of the overall excavation did not allow practical removal of adjacent sidewall exceedances without excavating these locations.

As stated in Section 6, soil samples were collected from the base of the excavation and below the water table for informational purposes; however, these samples did not lead to additional excavation vertically. Of the 11 floor samples collected in the Storm Line PCS Area, four samples had detections that exceeded the MTCA Method A CUL for diesel- and oil-range organic hydrocarbons. The floor samples with these exceedances are F2, F3, F4, and F6 (see Figure 7); soil near these sample locations was not excavated more deeply. The data are summarized in Table 2.

6.5 Groundwater

6.5.1 Wood Waste Monitoring Well

Before the removal action began, a groundwater sample was collected in April 2013 from existing monitoring well B-1 for informational purposes. The location of the well is shown on Figure 8. Groundwater quality field parameters and sampling information are summarized on a field sampling data sheet (Appendix E). The data are summarized in Table 4.

The turbidity in the water increased during purging. The integrity of the well is not known, including if or when the well was developed. The water sample had MTCA CUL exceedances for diesel- and oil-range hydrocarbons, chromium, and lead.

6.5.2 PCS Area 2 Reconnaissance Borings

Three reconnaissance groundwater samples were collected from three reconnaissance borings (GP10, GP11, and GP12) in PCS Area 2 in July 2013. The sample locations are shown on Figure 9. Groundwater quality field parameters and sampling information are summarized on field sampling data sheets (Appendix E) and the data are summarized in Table 4.

GP10 was advanced near the PCS Area 2 confirmation floor soil samples that exhibited the highest diesel- and oil-range organic hydrocarbon concentrations. Similarly, GP12 was advanced near the Storm Line PCS Area confirmation floor soil samples that exhibited the highest diesel- and oil-range organic hydrocarbon concentrations. There were no detections at or above the method reporting limits in the reconnaissance groundwater samples collected from GP10, GP11, and GP12.

6.6 Stockpile Characterization

During the removal action, stockpiles were created from excavated materials. The stockpiles were located south of Mill Road. In August 2013, MFA prepared a memo summarizing the excavated material stockpiles. The memo is attached as Appendix C and includes a figure showing stockpile locations, a table summarizing analytical results, and data for physical analysis. The analytical laboratory reports for stockpile samples are provided in Appendix G. In June 2013, the debris stockpile was transported off site for disposal. A total of 654 tons of material was disposed of at Waste Management's Greater Wenatchee Regional Landfill in Wenatchee, Washington. Disposal receipts are included in Appendix J.

6.7 PCS Area 4 Characterization

6.7.1 Reconnaissance Borings

In July 2013, reconnaissance borings were advanced by direct-push drill method in PCS Area 4 for characterization purposes. The boring locations for GP1 through GP9 are shown on Figure 9. One soil sample was collected from each boring at the depths near the groundwater table. The sample depths are indicated in the sample names. The soil sample collected at GP6 exceeded MTCA CULs for diesel-, oil-, and gasoline-range organic hydrocarbons. The soil data are summarized in Table 3.

Reconnaissance groundwater samples were collected at GP4 and GP6. Groundwater quality field parameters and sampling information are summarized on a field sampling data sheet (Appendix E).

There were no detections in the reconnaissance groundwater sample collected at GP4. Detections in the reconnaissance groundwater sample collected from GP6 exceeded the MTCA Method A CULs for diesel- and oil-range organic hydrocarbons. The water data are summarized in Table 4.

Following the Phase I Interim Action, GeoEngineers conducted additional characterization in PCS Area 4. Therefore, the area of PCS impacts estimated on Figure 9 will likely be revised. The results of the additional characterization will be summarized by GeoEngineers.

6.7.2 Water Line Replacement

As stated above, in April 2013, during the remedial action, a water main was replaced at the site. Scarsella extended a service line to the private residence on the southeast side of the site. During excavation of the water line trench near PCS Area 4, three soil samples (WL1, WL2, and WL3) were collected at approximately 3 to 3.5 feet bgs along the sidewall of the trench. The soil sample locations are shown on Figure 5 and the data summarized in Table 3.

Soil sample WL1, on the west end of the trench, exceeded the MTCA CULs for diesel-, oil-, and gasoline-range organic hydrocarbons. The soils removed from the trench were placed in the stockpile with soils from PCS Area 2. Imported fill material was used to backfill the trench after installation of the new water line.

6.8 Database Upload

The data generated by MFA during the Phase I Interim Action have been uploaded to Ecology's environmental information management (EIM) system database. The EIM upload includes data associated with samples collected by MFA from April through July 2013. MFA uploaded the data to Ecology's database in February 2014. The Ecology database facility site identification number is FS20168.

7 REMOVAL ACTION OBJECTIVE ATTAINMENT

7.1 Objectives Attained

The Phase I interim actions completed in 2013 include:

- Debris removal and off-site disposal.
- Excavation and off-site disposal of wood waste from the areas of the site between Mill Road and Sunset Highway.
- Excavation of soils from PCS Area 2 and the Storm Line PCS Area. The excavated material was not disposed of offsite; rather, it was stockpiled south of Mill Road for disposal under a subsequent phase of the removal action. The depth of the excavations was limited to 2 feet below the water table. In some locations in PCS Area 2, soils above MTCA Method A CULs remain because of site features limiting excavation. In addition, soil above MTCA Method A CULs associated with a sample (W4) in the Storm Line PCS Area remains in place.
- Dewatering for excavation, material removal, and sample collection. The dewatering included a temporary connection to the City's sanitary sewer system.

- Decommission of the water structure. The water structure was not removed; rather, it was decommissioned in place by filling. The fence around the water structure and the adjacent tree were removed.
- Characterization of PCS Area 4.
- Backfill of excavations with imported structural fill and site grading.

7.2 Additional Action Items

Additional action items performed during implementation of the Phase I actions included:

- Additional site characterization (e.g., test pits) in PCS Area 2 and the wood waste excavations.
- Discovery, excavation, and disposal of refuse and debris intermixed with soil near the wood waste excavation area. The material was temporarily stockpiled south of Mill Road before characterization and off-site disposal.
- Discovery, excavation, and disposal of treated-wood posts near the wood waste excavation area.
- Discovery and identification of the No Name Creek bypass culvert and vault. Installation of a riser to the vault to extend it up to finished grade.
- Discovery of a number of buried concrete structures.
- Discovery, excavation, and removal of PCS in the Storm Line PCS area. The soils were stockpiled south of Mill Road.
- Replacement of the water main at the site.
- Discovery, removal, and disposal of the stormwater system, associated piping, and structures. Abandonment of pipes that were not removed (e.g., the pipes that appear to extend under Sunset Highway).
- Stockpile characterization.
- Performing a dewatering assessment (conducted by GeoEngineers).

In July 2013, MFA issued a letter to the Port recommending that the Port provide Scarsella notice of substantial completion for Schedule A (otherwise known as Phase I) of the former Cashmere Mill site removal action (see Appendix K).

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.

REFERENCES

GeoEngineers. 2013. Draft dewatering assessment. Cashmere Mill site remedial excavation (Phase 2). Cashmere, Washington. GeoEngineers, Inc. Spokane, Washington. July 18.

GeoEngineers. 2014. Draft data gap assessment report. Former Cashmere Mill site. Cashmere, Washington. GeoEngineers, Inc., Spokane, Washington. January 22.

MFA. 2013a. Site characterization report, former Cashmere Mill site, Cashmere, Washington. Maul Foster & Alongi, Inc., Bellingham, Washington. March 20.

MFA. 2013b. Electronic mail (re: Cashmere Mill Site Next Steps) to M. Monahan, Washington State Department of Ecology, Yakima, Washington; L. Jaecks, Port of Chelan County, Wenatchee, Washington; R. Asplund and A. Neff, RH2 Engineering, Inc., Wenatchee, Washington; and J. Lamb and B. Williams, GeoEngineers, Inc., Spokane, Washington, from J. Clary, Maul Foster & Alongi, Inc., Bellingham, Washington. July 16.

RH2. 2007. Cashmere mill site feasibility study-letter report. RH2 Engineering, Inc. Wenatchee, Washington. February 7.

RH2. 2013a. Final draft Port of Chelan County former Cashmere Mill site removal action work plan. RH2 Engineering, Inc., Wenatchee, Washington. January.

RH2. 2013b. Port of Chelan County former Cashmere Mill site removal action sampling and analysis plan, quality assurance project plan. RH2 Engineering, Inc., Wenatchee, Washington. April.

TABLES

Table 1
Sample Identification and Description
Former Cashmere Mill Site
Cashmere, Washington

Confirmation Soil Samples	
G-S-#	Confirmation soil samples collected from the predefined woodwaste excavation sample grids.
A2-W#-S-x	PCS Area 2 excavation wall confirmation soil samples collected at x-feet below grade.
A2-F#-S-x	PCS Area 2 excavation floor confirmation soil samples collected at x-feet below grade.
SL-W#-S-x	Storm Line PCS Area excavation wall confirmation soil samples collected at x-feet below grade.
SL-F#-S-x	Storm Line PCS Area excavation floor confirmation soil samples collected at x-feet below grade.

Characterization Soil Samples	
TP-#-date	Characterization soil samples collected from test pits excavated to characterize and delineate contamination in the wood post area (TP-28 through TP-30) and in PCS Area 2 (TP-31 through TP-43).
Stormpipe-S-#	Characterization soil samples collected during removal of the existing stormwater conveyance system from areas exhibiting physical indications of contamination.
TP-S-POST	Characterization soil sample (one) collected from the original test pit installed in the area where vertically driven treated wood posts were discovered.
GP#-S-x	Characterization soil samples collected from direct-push reconnaissance borings in PCS Area 4 at x-feet below grade.
WL#-S-x	Water line trench sidewall characterization soil samples collected x-feet below grade (replacement water line installed south of Mill Road).

Characterization Water Samples	
TP-#-date	Water samples collected from test pits excavated during characterization of the wood post area and PCS Area 2.
B1-date	Water sample (one) collected from the existing groundwater monitoring well B1, located between Mill Road and Sunset Highway.
GW#-W-x	Water samples collected from direct-push reconnaissance borings in PCS Area 2 and PCS Area 4 at x-feet below grade.

Characterization Soil Samples from Stockpiles	
AREA2-SP-#	Characterization soil samples collected from the stockpile created from the initial excavation from PCS Area 2.
AREA2-date-SP-#	Characterization soil samples collected from the stockpiles created following the excavation of PCS Area 2.
STORMPIPE-SP-#	Characterization soil sample collected from the stockpile created from the initial excavation from the Storm Line PCS Area.
SL-date-SP-#	Characterization soil samples collected from the stockpiles created following the excavation of the Storm Line PCS Area.
DEBRIS-SP-#	Characterization soil samples collected from the stockpile created from excavated material that was found to be intermixed with refuse/debris.
POST-SP-#	Characterization soil samples collected from the stockpile created from soil excavated from the wood post area.

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Area	Wood Waste Excavation Floor Samples			PCS Area 2 Excavation Sidewall Samples										
			Sample Designation	G-S-1	G-S-2	G-S-3	A2-W1-S-4	A2-W2-S-4	A2-W3-S-4	A2-W4-S-4	A2-W5-S-4	A2-W6-S-4	A2-W7-S-4	A2-W8-S-4	A2-W9-S-4	A2-W10-S-4	A2-W11-S-4
			Sample Date	04/17/2013	04/30/2013	05/06/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013
			Status	In-Place	In-Place	In-Place	In-Place	Removed	Removed	Removed	Removed	In-Place	In-Place	In-Place	Removed	Removed	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx																	
Diesel Range	2,000	MTCA A		**10**	**260**	6.9 U	**310**	**1,700**	**8,900**	**4,000**	**1,200**	**6.1**	5.6 U	5.5 U	**190**	**220**	**32**
Motor-Oil Range	2,000	MTCA A		**32**	**440**	14 U	**720**	**3,000**	**14,000**	**5,600**	**2,800**	**20**	11 U	11 U	**2,300**	**2,800**	**110**
NWTPH-Gx																	
Gasoline Range	30	MTCA A		8.1 U	16 U	9.4 U	8.8 U	8.0 U	5.4 U	6.0 U	5.8 U	5.0 U	5.1 U	5.4 U	8.8 U	10 U	6.1 U
BTEX																	
Benzene	0.03	MTCA A		0.020 U	0.040 U	0.024 U	0.022 U	0.020 U	0.014 U	0.015 U	0.015 U	0.013 U	0.013 U	0.014 U	0.022 U	0.026 U	0.015 U
Ethylbenzene	6	MTCA A		0.020 U	0.040 U	0.024 U	0.022 U	0.020 U	0.014 U	0.015 U	0.015 U	0.013 U	0.013 U	0.014 U	0.022 U	0.026 U	0.015 U
m,p-Xylene	9	MTCA A		0.041 U	0.079 U	0.047 U	0.044 U	0.040 U	0.027 U	0.030 U	0.029 U	0.025 U	0.025 U	0.027 U	0.044 U	0.052 U	0.030 U
o-Xylene	16,000	MTCA B NCAR		0.020 U	**0.041**	0.024 U	0.022 U	0.020 U	0.014 U	0.015 U	0.015 U	0.013 U	0.013 U	0.014 U	0.022 U	0.026 U	0.015 U
Total Xylenes	9	MTCA A		ND	**0.041**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	7	MTCA A		0.020 U	**0.081**	0.024 U	0.022 U	**0.210**	0.014 U	0.015 U	0.015 U	0.013 U	0.013 U	0.014 U	**0.033**	**0.032**	0.015 U
VOCs																	
1,2-Dichloroethane (EDC)	11	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																	
Arsenic	20	MTCA A		6 U	9 U	6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A		**42** J	**42.4**	**43**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR		**13.3**	**22.4**	**15.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A		**6**	**13**	**6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs																	
1-Methylnaphthalene	35	MTCA B CAR		**0.023**	**0.060**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR		**0.059**	**0.110**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR		0.018 U	**0.049**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR		0.018 U	0.020 U	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR		0.018 U	**0.054**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR		0.018 U	**0.130**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A		0.018 U	**0.050**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV		0.018 U	**0.043**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	140	MTCA B CAR		0.018 U	**0.190**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR		0.018 U	0.020 U	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR		0.018 U	0.020 U	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR		**0.027**	**0.069**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR		0.018 U	**0.060**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR		0.018 U	0.020 U	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5	MTCA A		**0.074**	**0.130**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NV		**0.045**	**0.290**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR		**0.036**	**0.290**	0.019 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	NV	NV		0.036 U	**0.047**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR		0.93 U	0.25 U	0.039 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A		ND	**0.072**	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Area	PCS Area 2 Excavation Sidewall Samples													
		Sample Designation	A2-W12-S-4	A2-W13-S-4	A2-W14-S-4	A2-W15-S-4	A2-W16-S-4	A2-W17-S-4	A2-W18-S-4	A2-W19-S-4	A2-W20-S-4	A2-W21-S-4	A2-W22-S-4[a]	A2-W23-S-4	A2-W24-S-4	A2-W25-S-4
		Sample Date	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/23/2013	05/23/2013	05/23/2013
		Status	Removed	Removed	Removed	Removed	In-Place	In-Place	Removed	In-Place	In-Place	In-Place	Removed	In-Place	In-Place	Removed
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx																
Diesel Range	2,000	MTCA A	**80**	**190**	**55**	**620**	**8.0**	**48**	**70**	**70**	**7.3**	**33**	**420**	**15**	**33**	**1,900**
Motor-Oil Range	2,000	MTCA A	**520**	**1,000**	**760**	**2,500**	**27**	**700**	**1,000**	**170**	**28**	**150**	**2,200**	**100**	**150**	**14,000**
NWTPH-Gx																
Gasoline Range	30	MTCA A	7.4 U	6.6 U	7.4 U	6.0 U	7.4 U	10 U	9.7 U	8.6 U	7.5 U	5.7 U	4.1 U	7.4 U	8.7 U	5.7 U
BTEX																
Benzene	0.03	MTCA A	0.019 U	0.016 U	0.019 U	0.015 U	0.018 U	0.026 U	0.024 U	0.021 U	0.019 U	0.014 U	0.011 U	0.018 U	0.022 U	0.014 U
Ethylbenzene	6	MTCA A	0.019 U	0.016 U	0.019 U	0.015 U	0.018 U	0.026 U	0.024 U	0.021 U	0.019 U	0.014 U	0.012 U	0.018 U	0.022 U	0.014 U
m,p-Xylene	9	MTCA A	0.037 U	0.033 U	0.037 U	0.030 U	0.037 U	0.051 U	0.048 U	0.043 U	0.037 U	0.029 U	0.030 U	0.037 U	0.043 U	0.028 U
o-Xylene	16,000	MTCA B NCAR	0.019 U	0.016 U	0.019 U	0.015 U	0.018 U	0.026 U	0.024 U	0.021 U	0.019 U	0.014 U	0.015 U	0.018 U	0.022 U	0.014 U
Total Xylenes	9	MTCA A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	7	MTCA A	0.019 U	0.016 U	0.019 U	0.015 U	0.018 U	0.026 U	0.024 U	**0.029**	0.019 U	**0.015**	0.018 U	0.018 U	0.022 U	0.014 U
VOCs																
1,2-Dichloroethane (EDC)	11	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00028 U	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00026 U	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00034 U	NA	NA	NA
Metals																
Arsenic	20	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs																
1-Methylnaphthalene	35	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0075 U	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0066 U	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0058 U	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0055 U	NA	NA	NA
Anthracene	24,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0064 U	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0070 U	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0076 U	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0083 U	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013 U	NA	NA	NA
Benzo(ghi)perylene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0090 U	NA	NA	NA
Chrysene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0082 U	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0066 U	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0077 U	NA	NA	NA
Fluorene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0056 U	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.015 U	NA	NA	NA
Naphthalene	5	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.011 U	NA	NA	NA
Phenanthrene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0086 U	NA	NA	NA
Pyrene	2,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0097 U	NA	NA	NA
Total Benzofluoranthenes	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.022 U	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0081 U	NA	NA	NA
cPAH TEQ	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Area	PCS Area 2 Excavation Sidewall Samples													
			Sample Designation	A2-W26-S-4	A2-W27-S-4	A2-W28-S-4	A2-W29-S-4	A2-W30-S-4	A2-W31-S-4	A2-W32-S-4	A2-W33-S-4	A2-W34-S-4	A2-W35-S-4	A2-W36-S-4	A2-W37-S-4	A2-W38-S-4	A2-W39-S-4
			Sample Date	05/23/2013	05/23/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/31/2013	05/31/2013	05/31/2013	05/31/2013	05/31/2013	05/31/2013
			Status	Removed	Removed	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	Removed
Analyte	Soil CUL (mg/kg)	CUL Source		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx																	
Diesel Range	2,000	MTCA A		**5,100**	**1,900**	5.4 U	**200**	**42**	**51**	**6.4**	**97**	**8.8**	**19**	5.6 U	**510**	**570**	**710**
Motor-Oil Range	2,000	MTCA A		**29,000**	**20,000**	11 U	**380**	**76**	**350**	**38**	**1,100**	**56** J	**200** J	**16** J	**4,200** J	**4,200** J	**5,400** J
NWTPH-Gx																	
Gasoline Range	30	MTCA A		7.2 U	10 U	5.4 U	6.9 U	**15**	5.9 U	6.9 U	7.0 U	14 U	13 U	5.8 U	8.4 U	12 U	6.8 U
BTEX																	
Benzene	0.03	MTCA A		0.018 U	0.026 U	0.013 U	0.017 U	0.017 U	0.015 U	0.017 U	0.018 U	0.034 U	0.033 U	0.014 U	0.021 U	0.029 U	0.017 U
Ethylbenzene	6	MTCA A		0.018 U	0.026 U	0.013 U	0.017 U	**0.029**	0.015 U	0.017 U	0.018 U	0.034 U	0.033 U	0.014 U	0.021 U	0.029 U	0.017 U
m,p-Xylene	9	MTCA A		0.036 U	0.051 U	0.027 U	0.034 U	0.033 U	0.030 U	0.035 U	0.035 U	0.068 U	0.067 U	0.029 U	0.042 U	**0.10**	0.034 U
o-Xylene	16,000	MTCA B NCAR		0.018 U	0.026 U	0.013 U	0.017 U	0.017 U	0.015 U	0.017 U	0.018 U	0.034 U	0.033 U	0.014 U	0.021 U	0.029 U	0.017 U
Total Xylenes	9	MTCA A		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.10**	ND
Toluene	7	MTCA A		0.018 U	0.026 U	**0.020**	**0.028**	**0.032**	**0.024**	**0.036**	**0.026**	0.034 U	**0.040**	**0.017**	0.021 U	**0.63**	**0.10**
VOCs																	
1,2-Dichloroethane (EDC)	11	MTCA B NCAR		NA	NA	NA	NA	0.001 U	NA	NA	NA	NA	NA	NA	0.0012 U	0.0017 U	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A		NA	NA	NA	NA	0.001 U	NA	NA	NA	NA	NA	NA	0.0012 U	0.0017 U	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A		NA	NA	NA	NA	0.001 U	NA	NA	NA	NA	NA	NA	0.0012 U	0.0017 U	NA
Metals																	
Arsenic	20	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A		NA	NA	NA	NA	**17.87**	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs																	
1-Methylnaphthalene	35	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.170**	NA
2-Methylnaphthalene	320	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.051**	**0.360**	NA
Acenaphthene	4,800	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.071**	NA
Acenaphthylene	1	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.033**	NA
Anthracene	24,000	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	0.028 U	NA
Benzo(a)anthracene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.048**	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.075**	NA
Benzo(k)fluoranthene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	0.028 U	NA
Benzo(a)pyrene	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.070**	**0.060**	NA
Benzo(ghi)perylene	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.064**	NA
Chrysene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.160**	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	0.028 U	NA
Dibenzofuran	80	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.073**	NA
Fluoranthene	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.170**	NA
Fluorene	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.058**	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.032**	NA
Naphthalene	5	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.043**	**0.340**	NA
Phenanthrene	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.041**	**0.36**	NA
Pyrene	2,400	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031 U	**0.140**	NA
Total Benzofluoranthenes	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NA**	NA
Total Benzofluoranthenes	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.063**	**0.120**	NA
cPAH TEQ	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.081	0.083	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Area	PCS Area 2 Excavation Sidewall Samples							Storm Line PCS Area Excavation Sidewall Samples						
			Sample Designation	A2-W40-S-4	A2-W41-S-4	A2-W42-S-4	A2-W43-S-4	A2-W44-S-4	A2-W45-S-4	A2-W46-S-4	SL-W1-S-4	SL-W2-S-4	SL-W3-S-4	SL-W4-S-4	SL-W5-S-4	SL-W6-S-4	SL-W7-S-4
			Sample Date	06/03/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/30/2013
			Status	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	Removed	Removed	In-Place	In-Place	In-Place	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx																	
Diesel Range	2,000	MTCA A		5.8 U	5.8 U	5.4 U	**21**	**8.2**	5.7 U	**140**	**70**	**2,200**	**23**	**5,300**	**10**	5.8 U	6.6 U
Motor-Oil Range	2,000	MTCA A		12 U	12 U	11 U	**68**	**31**	**13**	**240**	**190**	**6,500**	**58**	**15,000**	**31**	12 U	13 U
NWTPH-Gx																	
Gasoline Range	30	MTCA A		5.7 U	6.5 U	5.9 U	5.5 U	6.0 U	5.8 U	7.8 U	16 U	**67**	16 U	**170**	6.5 U	6.5 U	7.8 U
BTEX																	
Benzene	0.03	MTCA A		0.014 U	0.016 U	0.015 U	0.014 U	0.015 U	0.015 U	0.019 U	0.041 U	0.017 U	0.040 U	0.015 U	0.016 U	0.016 U	0.019 U
Ethylbenzene	6	MTCA A		0.014 U	0.016 U	0.015 U	0.014 U	0.015 U	0.015 U	0.019 U	0.041 U	0.017 U	0.040 U	0.015 U	0.016 U	0.016 U	0.019 U
m,p-Xylene	9	MTCA A		0.029 U	0.032 U	0.029 U	0.028 U	0.030 U	0.029 U	0.039 U	0.081 U	0.034 U	0.079 U	0.030 U	0.033 U	0.032 U	0.039 U
o-Xylene	16,000	MTCA B NCAR		0.014 U	0.016 U	0.015 U	0.014 U	0.015 U	0.015 U	0.019 U	0.041 U	0.017 U	0.040 U	0.015 U	0.016 U	0.016 U	0.019 U
Total Xylenes	9	MTCA A		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	7	MTCA A		0.014 U	**0.031**	**0.018**	0.014 U	**0.021**	**0.021**	**0.027**	**0.062**	**0.017**	**0.098**	0.015 U	0.016 U	0.016 U	0.019 U
VOCs																	
1,2-Dichloroethane (EDC)	11	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																	
Arsenic	20	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs																	
1-Methylnaphthalene	35	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Area	Storm Line PCS Area Excavation Sidewall Samples							PCS Area 2 Excavation Floor Samples						
		Sample Designation	SL-W8-S-4	SL-W9-S-4	SL-W10-S-4	SL-W11-S-4	SL-W12-S-4	SL-W13-S-4	SL-W14-S-4	A2-F1-S-6	A2-F2-S-6	A2-F3-S-6	A2-F4-S-6	A2-F5-S-6	A2-F6-S-6	A2-F7-S-6
		Sample Date	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013
		Status	In-Place	Removed	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx																
Diesel Range	2,000	MTCA A	6.0 U	5.7 U	6.4 U	7.4 U	6.6 U	6.0 U	**130**	**16**	**450**	**24**	**35**	**560**	**59**	**520**
Motor-Oil Range	2,000	MTCA A	12 U	12 U	13 U	15 U	13 U	12 U	**310**	**28**	**860**	**47**	**65**	**800**	**140**	**750**
NWTPH-Gx																
Gasoline Range	30	MTCA A	6.9 U	5.5 U	7.9 U	9.1 U	7.7 U	7.3 U	6.9 U	NA	NA	NA	NA	NA	NA	NA
BTEX																
Benzene	0.03	MTCA A	0.017 U	0.014 U	0.020 U	0.023 U	0.019 U	0.018 U	0.017 U	0.013 U	0.016 U	0.016 U	0.017 U	0.017 U	0.017 U	0.017 U
Ethylbenzene	6	MTCA A	0.017 U	0.014 U	0.020 U	0.023 U	0.019 U	0.018 U	0.017 U	0.013 U	0.016 U	0.016 U	0.017 U	0.017 U	0.017 U	0.017 U
m,p-Xylene	9	MTCA A	0.034 U	0.028 U	0.040 U	0.045 U	0.038 U	0.036 U	0.034 U	0.026 U	0.033 U	0.033 U	0.034 U	0.034 U	0.034 U	0.034 U
o-Xylene	16,000	MTCA B NCAR	0.017 U	0.014 U	0.020 U	0.023 U	0.019 U	0.018 U	0.017 U	0.013 U	0.016 U	0.016 U	0.017 U	0.017 U	0.017 U	0.017 U
Total Xylenes	9	MTCA A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	7	MTCA A	0.017 U	**0.021**	**0.020**	**0.046**	0.019 U	**0.021**	**0.034**	0.013 U	**0.053**	0.016 U	0.017 U	0.017 U	0.017 U	**0.024**
VOCs																
1,2-Dichloroethane (EDC)	11	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																
Arsenic	20	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs																
1-Methylnaphthalene	35	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Area	PCS Area 2 Excavation Floor Samples													
		Sample Designation	A2-F8-S-6	A2-F9-S-6	A2-F10-S-6	A2-F11-S-6	A2-F12-S-6	A2-F13-S-6	A2-F14-S-6	A2-F15-S-6	A2-F16-S-6	A2-F17-S-6	A2-F18-S-6	A2-F19-S-6	A2-F20-S-6	A2-F21-S-6
		Sample Date	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013
		Status	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx																
Diesel Range	2,000	MTCA A	**23**	**28**	**23**	**330**	5.7 U	6.0 U	5.9 U	**97**	**1,300**	**130**	**120**	**970**	**380**	**660**
Motor-Oil Range	2,000	MTCA A	**50**	**79**	**63**	**800**	11 U	12 U	**18**	**320**	**7,200**	**260**	**920**	**190**	**990**	**1,400**
NWTPH-Gx																
Gasoline Range	30	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX																
Benzene	0.03	MTCA A	0.017 U	0.016 U	0.014 U	0.016 U	0.014 U	0.016 U	0.012 U	0.017 U	0.017 U	0.015 U	0.018 U	0.016 U	0.016 U	0.018 U
Ethylbenzene	6	MTCA A	0.017 U	0.016 U	0.014 U	0.016 U	0.014 U	0.016 U	0.012 U	0.017 U	0.017 U	0.015 U	0.018 U	0.016 U	0.016 U	0.018 U
m,p-Xylene	9	MTCA A	0.035 U	0.033 U	0.028 U	0.032 U	0.029 U	0.032 U	0.025 U	0.033 U	0.035 U	0.029 U	0.037 U	0.031 U	0.032 U	0.036 U
o-Xylene	16,000	MTCA B NCAR	0.017 U	0.016 U	0.014 U	0.016 U	0.014 U	0.016 U	0.012 U	0.017 U	0.017 U	0.015 U	0.018 U	0.016 U	0.016 U	0.018 U
Total Xylenes	9	MTCA A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	7	MTCA A	0.017 U	0.016 U	0.014 U	0.016 U	0.014 U	0.016 U	0.012 U	**0.080**	0.017 U	**0.016**	**0.020**	0.016 U	0.016 U	0.018 U
VOCs																
1,2-Dichloroethane (EDC)	11	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																
Arsenic	20	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs																
1-Methylnaphthalene	35	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Area	PCS Area 2 Excavation Floor Samples													
			Sample Designation	A2-F22-S-6	A2-F23-S-6	A2-F24-S-6	A2-F25-S-6	A2-F26-S-6	A2-F27-S-6	A2-F28-S-6	A2-F29-S-6	A2-F30-S-6	A2-F31-S-6	A2-F32-S-6[a]	A2-F33-S-6	A2-F34-S-6	A2-F35-S-6
			Sample Date	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/16/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013
			Status	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx																	
Diesel Range	2,000	MTCA A		5.6 U	**64**	**15**	**9.7**	**17**	**62**	**220**	**1,800**	**33**	**20**	**180**	**12**	**32**	**7.2**
Motor-Oil Range	2,000	MTCA A		**19**	**230**	**75**	**37**	**77**	**360**	**1,500**	**4,600**	**58**	**39**	**330**	**21**	**56**	**14**
NWTPH-Gx																	
Gasoline Range	30	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2 U	NA	NA	NA
BTEX																	
Benzene	0.03	MTCA A		0.017 U	0.018 U	0.016 U	0.018 U	0.016 U	0.018 U	0.017 U	0.012 U	0.016 U	0.017 U	0.0060 U	0.015 U	0.015 U	0.022 U
Ethylbenzene	6	MTCA A		0.017 U	0.018 U	0.016 U	0.018 U	0.016 U	0.018 U	0.017 U	0.012 U	0.016 U	0.017 U	0.0064 U	0.015 U	0.015 U	0.022 U
m,p-Xylene	9	MTCA A		0.034 U	0.036 U	0.031 U	0.037 U	0.032 U	0.037 U	0.035 U	0.024 U	0.033 U	0.034 U	0.015 U	0.030 U	0.030 U	0.045 U
o-Xylene	16,000	MTCA B NCAR		0.017 U	0.018 U	0.016 U	0.018 U	0.016 U	0.018 U	0.017 U	0.012 U	0.016 U	0.017 U	0.0081 U	0.015 U	0.015 U	0.022 U
Total Xylenes	9	MTCA A		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	7	MTCA A		0.017 U	**0.037**	0.016 U	0.018 U	0.016 U	0.018 U	0.017 U	0.012 U	0.016 U	0.017 U	0.0092 U	0.015 U	0.015 U	0.022 U
VOCs																	
1,2-Dichloroethane (EDC)	11	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00023 U	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00021 U	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00028 U	NA	NA	NA
Metals																	
Arsenic	20	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs																	
1-Methylnaphthalene	35	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0041 U	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0037 U	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0032 U	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0030 U	NA	NA	NA
Anthracene	24,000	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0035 U	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.021**	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.023**	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.014**	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.023**	NA	NA	NA
Benzo(ghi)perylene	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.015**	NA	NA	NA
Chrysene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.028**	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0057 U	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0036 U	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.039**	NA	NA	NA
Fluorene	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0031 U	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0083 U	NA	NA	NA
Naphthalene	5	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0063 U	NA	NA	NA
Phenanthrene	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0048 U	NA	NA	NA
Pyrene	2,400	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.043**	NA	NA	NA
Total Benzofluoranthenes	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.050**	NA	NA	NA
cPAH TEQ	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031	NA	NA	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Area	PCS Area 2 Excavation Floor Samples													
		Sample Designation	A2-F36-S-6	A2-F37-S-6[a]	A2-F38-S-6	A2-F39-S-6	A2-F40-S-6	A2-F41-S-6	A2-F42-S-6[a]	A2-F43-S-6	A2-F44-S-6	A2-F45-S-6	A2-F46-S-6	A2-F47-S-6	A2-F48-S-6	A2-F49-S-6
		Sample Date	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/23/2013	05/23/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/31/2013
		Status	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx																
Diesel Range	2,000	MTCA A	**11**	**30**	**9.8**	**25**	**75**	**7,500**	**12**	**58**	**35**	**340**	**190**	**11**	**55**	**53**
Motor-Oil Range	2,000	MTCA A	**20**	**200**	**45**	**54**	**200**	**22,000**	**110**	**110**	**180**	**1,400**	**1,300**	**95**	**400**	**240**
NWTPH-Gx																
Gasoline Range	30	MTCA A	NA	2.0 U	NA	NA	NA	NA	3.3 U	NA	NA	NA	NA	NA	NA	NA
BTEX																
Benzene	0.03	MTCA A	0.014 U	0.0054 U	0.017 U	0.014 U	0.014 U	0.019 U	0.0092 U	0.017 U	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U	0.024 U
Ethylbenzene	6	MTCA A	0.014 U	0.0058 U	0.017 U	0.014 U	0.014 U	0.019 U	0.0099 U	0.017 U	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U	0.024 U
m,p-Xylene	9	MTCA A	0.028 U	0.014 U	0.034 U	0.029 U	0.027 U	0.037 U	0.024 U	0.033 U	0.035 U	0.036 U	0.041 U	0.036 U	0.037 U	0.047 U
o-Xylene	16,000	MTCA B NCAR	0.014 U	0.0073 U	0.017 U	0.014 U	0.014 U	0.019 U	0.012 U	0.017 U	0.018 U	0.018 U	0.020 U	0.018 U	0.018 U	0.024 U
Total Xylenes	9	MTCA A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	7	MTCA A	0.014 U	0.0084 U	0.017 U	0.014 U	0.014 U	0.019 U	**0.048**	0.017 U	0.018 U	**0.018**	**0.035**	0.018 U	**0.019**	0.024 U
VOCs																
1,2-Dichloroethane (EDC)	11	MTCA B NCAR	NA	0.00021 U	NA	NA	NA	NA	0.00028 U	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A	NA	0.00020 U	NA	NA	NA	NA	0.00026 U	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A	NA	0.00026 U	NA	NA	NA	NA	0.00033 U	NA	NA	NA	NA	NA	NA	NA
Metals																
Arsenic	20	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs																
1-Methylnaphthalene	35	MTCA B CAR	NA	0.0040 U	NA	NA	NA	NA	**0.0086**	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR	NA	0.0035 U	NA	NA	NA	NA	**0.011**	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR	NA	0.0031 U	NA	NA	NA	NA	**0.0072**	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR	NA	0.0029 U	NA	NA	NA	NA	**0.011**	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR	NA	0.0034 U	NA	NA	NA	NA	**0.013**	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR	NA	0.0037 U	NA	NA	NA	NA	**0.0088**	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR	NA	0.0041 U	NA	NA	NA	NA	**0.010**	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR	NA	0.0044 U	NA	NA	NA	NA	0.0020 U	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A	NA	0.0071 U	NA	NA	NA	NA	**0.0082**	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV	NA	0.0048 U	NA	NA	NA	NA	**0.0088**	NA	NA	NA	NA	NA	NA	NA
Chrysene	140	MTCA B CAR	NA	0.0044 U	NA	NA	NA	NA	**0.013**	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR	NA	0.0055 U	NA	NA	NA	NA	0.0023 U	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR	NA	0.0035 U	NA	NA	NA	NA	**0.013**	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR	NA	**0.016**	NA	NA	NA	NA	**0.030**	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR	NA	0.0030 U	NA	NA	NA	NA	**0.017**	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR	NA	0.0081 U	NA	NA	NA	NA	**0.0058**	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5	MTCA A	NA	0.0061 U	NA	NA	NA	NA	**0.053**	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NV	NA	0.0046 U	NA	NA	NA	NA	**0.045**	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR	NA	**0.016**	NA	NA	NA	NA	**0.029**	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	NV	NV	NA	NA	NA	NA	NA	NA	**NA**	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR	NA	0.0043 U	NA	NA	NA	NA	**0.020**	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A	NA	ND	NA	NA	NA	NA	0.012	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Area	PCS Area 2 Excavation Floor Samples														
			Sample Designation	A2-F50-S-6	A2-F51-S-6	A2-F52-S-6	A2-F53-S-6	A2-F54-S-6	A2-F55-S-6	A2-F56-S-6	A2-F57-S-6	A2-F58-S-6	A2-F59-S-6	A2-F60-S-6	A2-F61-S-6	A2-F62-S-6	A2-F63-S-6	A2-F64-S-6
			Sample Date	05/31/2013	05/31/2013	05/31/2013	05/31/2013	05/31/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013	06/03/2013
			Status	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx																		
Diesel Range	2,000	MTCA A		**16**	5.8 U	**2,500**	**110**	**740**	**86**	**54**	**8.2**	**79**	**41**	**24**	**88**	**46**	**8.8**	**14**
Motor-Oil Range	2,000	MTCA A		**33**	**18**	**20,000**	**600**	**4,100**	**360**	**230**	**28**	**380**	**200**	**120**	**380**	**230**	**40**	**43**
NWTPH-Gx																		
Gasoline Range	30	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX																		
Benzene	0.03	MTCA A		0.017 U	0.016 U	0.020 U	0.014 U	0.015 U	0.015 U	0.014 U	0.016 U	0.016 U	0.016 U	0.014 U	0.014 U	0.016 U	0.014 U	0.014 U
Ethylbenzene	6	MTCA A		0.017 U	0.016 U	0.020 U	0.014 U	0.015 U	0.015 U	0.014 U	0.016 U	0.016 U	0.016 U	0.014 U	0.014 U	0.016 U	0.014 U	0.014 U
m,p-Xylene	9	MTCA A		0.035 U	0.031 U	0.039 U	0.028 U	0.030 U	0.030 U	0.029 U	0.032 U	0.031 U	0.032 U	0.029 U	0.029 U	0.031 U	0.029 U	0.029 U
o-Xylene	16,000	MTCA B NCAR		0.017 U	0.016 U	0.020 U	0.014 U	0.015 U	0.015 U	0.014 U	0.016 U	0.016 U	0.016 U	0.014 U	0.014 U	0.016 U	0.014 U	0.014 U
Total Xylenes	9	MTCA A		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	7	MTCA A		0.017 U	0.016 U	0.020 U	0.014 U	0.015 U	**0.021**	**0.016**	**0.016**	**0.019**	**0.016**	**0.017**	0.014 U	**0.016**	**0.018**	**0.014**
VOCs																		
1,2-Dichloroethane (EDC)	11	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																		
Arsenic	20	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs																		
1-Methylnaphthalene	35	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	NV	NV		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Area	Storm Line Area Excavation Floor Samples										
		Sample Designation	SL-F1-S-6	SL-F2-S-6	SL-F3-S-6	SL-F4-S-6	SL-F5-S-6	SL-F6-S-6	SL-F7-S-6	SL-F8-S-6	SL-F9-S-6	SL-F10-S-6	SL-F11-S-6
		Sample Date	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/22/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013	05/30/2013
		Status	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx													
Diesel Range	2,000	MTCA A	**220**	**680**	**3,800**	**1,200**	**15**	**1,100**	6.7 U	**6.3**	6.6 U	**59**	**14**
Motor-Oil Range	2,000	MTCA A	**720**	**2,300**	**10,000**	**3,500**	**44**	**3,200**	**14**	12 U	**15**	**67**	**36**
NWTPH-Gx													
Gasoline Range	30	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX													
Benzene	0.03	MTCA A	0.019 U	0.020 U	0.017 U	0.019 U	0.016 U	0.017 U	0.018 U	0.016 U	0.019 U	0.016 U	0.015 U
Ethylbenzene	6	MTCA A	0.019 U	0.020 U	0.017 U	0.019 U	0.016 U	0.017 U	0.018 U	0.016 U	0.019 U	0.016 U	0.015 U
m,p-Xylene	9	MTCA A	0.038 U	0.040 U	0.034 U	0.037 U	0.032 U	0.034 U	**0.045**	0.033 U	0.038 U	0.032 U	0.030 U
o-Xylene	16,000	MTCA B NCAR	0.019 U	0.020 U	0.017 U	0.019 U	0.016 U	0.017 U	0.018 U	0.016 U	0.019 U	0.016 U	0.015 U
Total Xylenes	9	MTCA A	ND	ND	ND	ND	ND	ND	**0.045**	ND	ND	ND	ND
Toluene	7	MTCA A	**0.021**	**0.020**	0.017 U	0.019 U	0.016 U	0.017 U	**0.064**	**0.018**	**0.020**	**0.018**	**0.017**
VOCs													
1,2-Dichloroethane (EDC)	11	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Arsenic	20	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs													
1-Methylnaphthalene	35	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Area	Wood Waste Excavation Floor Samples		
			Sample Designation	G-S-1	G-S-2	G-S-3
			Sample Date	4/17/2013	4/30/2013	5/6/2013
			Status	In-Place	In-Place	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source		mg/kg	mg/kg	mg/kg
SVOCs						
1,2,4-Trichlorobenzene	35	MTCA B CAR		0.018 U	0.020 U	0.019 U
1,2-Dichlorobenzene	7,200	MTCA B NCAR		0.018 U	0.020 U	0.019 U
1,3-Dichlorobenzene	NV	NV		0.018 U	0.020 U	0.019 U
1,4-Dichlorobenzene	NV	NV		0.018 U	0.020 U	0.019 U
2,4,5-Trichlorophenol	8,000	MTCA B NCAR		0.090 U	0.097 U	0.097 U
2,4,6-Trichlorophenol	80	MTCA B NCAR		0.090 U	0.097 U	0.097 U
2,4-Dichlorophenol	240	MTCA B NCAR		0.180 U	0.200 U	0.190 U
2,4-Dimethylphenol	1,600	MTCA B NCAR		0.036 U	0.039 U	0.039 U
2,4-Dinitrophenol	160	MTCA B NCAR		0.770 U	0.830 U	0.820 U
2,4-Dinitrotoluene	160	MTCA B NCAR		0.090 U	0.097 U	0.097 U
2,6-Dinitrotoluene	80	MTCA B NCAR		0.090 U	0.097 U	0.097 U
2-Chloronaphthalene	6,400	MTCA B NCAR		0.018 U	0.020 U	0.019 U
2-Chlorophenol	400	MTCA B NCAR		0.018 U	0.020 U	0.019 U
2-Methylphenol	4,000	MTCA B NCAR		0.018 U	**0.046**	0.019 U
2-Nitroaniline	800	MTCA B NCAR		0.018 U	0.097 U	0.097 U
2-Nitrophenol	NV	NV		0.090 U	0.097 U	0.019 U
3,3-Dichlorobenzidine	2.2	MTCA B CAR		0.140 U	0.150 U	0.140 U
3-Nitroaniline	NV	NV		0.090 U	0.097 U	0.019 U
4,6-Dinitro-2-methylphenol	NV	NV		0.180 U	0.200 U	0.190 U
4-Bromophenylphenyl ether	NV	NV		0.018 U	0.020 U	0.019 U
4-Chloro-3-methylphenol	NV	NV		0.090 U	0.097 U	0.097 U
4-Chloroaniline	5	MTCA B CAR		0.240 U	0.260 U	0.260 U
4-Chlorophenylphenyl ether	NV	NV		0.018 U	0.020 U	0.019 U
4-Methylphenol	400	MTCA B NCAR		**0.330**	**0.560**	0.019 U
4-Nitroaniline	NV	NV		0.090 U	0.097 U	0.097 U
4-Nitrophenol	NV	NV		0.090 U	0.097 U	0.097 U
Benzoic acid	320,000	MTCA B NCAR		0.360 U	**0.650**	0.390 U
Benzyl alcohol	8,000	MTCA B NCAR		0.018 U	0.020 U	**0.097**
Bis(2-chloro-1-methylethyl) ether	14	MTCA B CAR		0.018 U	0.020 U	0.019 U
Bis(2-chloroethoxy)methane	NV	NV		0.018 U	0.020 U	0.019 U
Bis(2-chloroethyl)ether	0.91	MTCA B CAR		0.018 U	0.020 U	0.019 U
Bis(2-ethylhexyl)phthalate	71	MTCA B CAR		0.023 U	**0.040**	0.024 U
Butylbenzylphthalate	530	MTCA B CAR		0.018 U	0.020 U	0.019 U
Carbazole	NV	NV		0.018 U	0.020 U	0.019 U
Diethylphthalate	64,000	MTCA B NCAR		0.045 U	0.049 U	0.048 U
Dimethyl phthalate	NV	NV		0.018 U	0.020 U	0.019 U
Di-n-butyl phthalate	8,000	MTCA B NCAR		0.018 U	0.020 U	0.019 U
Di-n-octyl phthalate	NV	NV		0.018 U	0.020 U	0.019 U
Hexachlorobenzene	0.63	MTCA B CAR		0.018 U	0.020 U	0.019 U
Hexachlorobutadiene	13	MTCA B CAR		0.018 U	0.020 U	0.019 U
Hexachlorocyclopentadiene	480	MTCA B NCAR		0.360 UJ	0.390 U	0.390 U
Hexachloroethane	71	MTCA B CAR		0.018 U	0.020 U	0.019 U
Isophorone	1,100	MTCA B CAR		0.018 U	0.020 U	0.019 U
Nitrobenzene	160	MTCA B NCAR		0.018 U	0.020 U	0.019 U
N-Nitrosodiphenylamine	200	MTCA B CAR		0.018 U	**0.200**	0.019 U
N-Nitrosodipropylamine	0.14	MTCA B CAR		0.018 U	0.020 U	0.019 U
Pentachlorophenol	2.5	MTCA B CAR		0.180 U	0.200 U	0.190 U
Phenol	24,000	MTCA B NCAR		**0.062**	**0.540**	**0.023**

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Area	PCS Area 2 Excavation Sidewall Samples			PCS Area 2 Excavation Floor Samples		
			Sample Designation	A2-W22-S-4[a]	A2-W37-S-4	A2-W38-S-4	A2-F32-S-6[a]	A2-F37-S-6[a]	A2-F42-S-6[a]
			Sample Date	05/22/2013	05/31/2013	05/31/2013	05/22/2013	05/22/2013	05/23/2013
			Status	Removed	In-Place	In-Place	In-Place	In-Place	In-Place
Analyte	Soil CUL (mg/kg)	CUL Source		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
VPH									
n-Pentane	NV	NV		1.4 U	1.4 U	2.3 U	1.2 U	1.1 U	1.7 U
n-Hexane	NV	NV		1.4 U	1.4 U	2.3 U	1.2 U	1.1 U	1.7 U
n-Octane	NV	NV		1.4 U	1.4 U	2.3 U	1.2 U	1.1 U	1.7 U
n-Decane	NV	NV		1.4 U	1.4 U	2.3 U	1.2 U	1.1 U	1.7 U
n-Dodecane	NV	NV		1.4 U	1.4 U	2.3 U	1.2 U	1.1 U	1.7 U
C8-C10 Aromatics	NV	NV		14 U	14 U	23 U	12 U	11 U	17 U
C10-C12 Aromatics	NV	NV		14 U	14 U	23 U	12 U	11 U	17 U
C12-C13 Aromatics	NV	NV		14 U	14 U	23 U	12 U	11 U	17 U
C5-C6 Aliphatics	NV	NV		14 U	14 U	23 U	12 U	11 U	17 U
C6-C8 Aliphatics	NV	NV		14 U	14 U	23 U	12 U	11 U	17 U
C8-C10 Aliphatics	NV	NV		14 U	14 U	23 U	12 U	11 U	17 U
C10-C12 Aliphatics	NV	NV		14 U	14 U	23 U	12 U	11 U	17 U
EPH									
C8-C10 Aliphatics	NV	NV		2.5 U	25 U	33 U	2.3 U	2.2 U	2.7 U
C10-C12 Aliphatics	NV	NV		2.5 U	25 U	33 U	2.3 U	2.2 U	2.7 U
C12-C16 Aliphatics	NV	NV		**4.5**	25 U	33 U	2.3 U	2.2 U	2.7 U
C16-C21 Aliphatics	NV	NV		**64**	**100**	**150**	**19**	**4.8**	**4.1**
C21-C34 Aliphatics	NV	NV		**1,000**	**3,400**	**3,200**	**230**	**120**	**140**
C8-C10 Aromatics	NV	NV		2.5 U	25 U	33 U	2.3 U	2.2 U	2.7 U
C10-C12 Aromatics	NV	NV		2.5 U	25 U	33 U	2.3 U	2.2 U	2.7 U
C12-C16 Aromatics	NV	NV		2.5 U	25 U	33 U	2.3 U	2.2 U	2.7 U
C16-C21 Aromatics	NV	NV		**18** J	**39**	**40**	**5.3**	**2.6**	2.7 U
C21-C34 Aromatics	NV	NV		**120**	**530**	**300**	**46**	**22**	**41**

Table 2
Summary of Soil Confirmation Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

NOTES:

Detections are in **bold.**

Detections that exceed soil cleanup levels highlighted in gray.

Detections that exceed soil cleanup levels by adding diesel and oil range organic hydrocarbon numbers together highlighted in yellow.

Total concentrations were calculated using one-half the detection limit for non-detects. Where all components are non-detect, the calculated total is "ND."

BTEX = benzene, toluene, ethylbenzene, xylenes.

cPAH TEQ = carcinogenic polycyclic aromatic hydrocarbon toxic equivalency quotient, calculated from laboratory-provided cPAH data.

CUL = cleanup level (screening level value).

EPH = extractable petroleum hydrocarbons.

J = Result is an estimated value.

mg/kg = milligrams per kilogram (parts per million).

MTCA = Washington State Model Toxics Control Act.

MTCA A = MTCA Method A screening level value.

MTCA B CAR = MTCA Method B screening level value for carcinogenic compounds.

MTCA B NCAR = MTCA Method B screening level value for noncarcinogenic compounds.

NA = not analyzed.

ND = not detected.

NV = no value.

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon—Diesel and Heavy Oil Range Organics Method.

NWTPH-Gx = Northwest Total Petroleum Hydrocarbon—Gasoline Range Organics Method.

PAH = polycyclic aromatic hydrocarbon.

PCS = petroleum contaminated soil.

SVOC = semivolatile organic compound.

U = Analyte not detected at or above method reporting limit.

UJ = Analyte not detected at or above method reporting limit. Result is an estimated value.

VOC = volatile organic compound.

VPH = volatile petroleum hydrocarbons.

[a]Results are reported to method detection limit, except for EPH and VPH, which are reported to method reporting limit.

Table 3
Summary of Soil Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Sample Designation	WL1-S-3.5	WL2-S-3.0	WL3-S-3.5	TP-S-POST	TP-28-050713	TP-29-050713	TP-30-050713	TP-31-050713	TP-32-050713	TP-33-050713	TP-34-050713
			Sample Date	04/29/2013	04/29/2013	04/29/2013	05/01/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013
Analyte	Soil CUL (mg/kg)	CUL Source		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx														
Diesel Range	2,000	MTCA A		**610**	**27**	**200**	**12**	**280**	**9.5**	**24**	**41**	**1,900**	**9.6**	**51**
Motor Oil Range	2,000	MTCA A		**1,800**	**110**	**500**	**70**	**370**	**16**	**98**	**200**	**17,000**	**68**	**25**
NWTPH-Gx														
Gasoline Range	30	MTCA A		**110**	6.2 U	**21**	6.2 U	NA	NA	NA	**27**	18 U	9.9 U	8.2 U
BTEX														
Benzene	0.03	MTCA A		0.016 U	0.015 U	0.017 U	0.016 U	NA	NA	NA	0.017 U	0.045 U	0.025 U	0.020 U
Ethylbenzene	6	MTCA A		**0.055**	0.015 U	0.017 U	0.016 U	NA	NA	NA	0.017 U	0.045 U	0.025 U	0.020 U
m,p-Xylene	9	MTCA A		0.031 U	0.031 U	0.034 U	0.031 U	NA	NA	NA	0.034 U	0.091 U	0.049 U	0.041 U
o-Xylene	16,000	MTCA B NCAR		0.016 U	0.015 U	0.017 U	0.016 U	NA	NA	NA	0.017 U	0.045 U	0.025 U	0.020 U
Total Xylenes	9	MTCA A		ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND
Toluene	7	MTCA A		0.016 U	0.015 U	0.017 U	0.016 U	NA	NA	NA	**0.043**	0.045 U	0.025 U	0.020 U
VOCs														
1,2-Dichloroethane (EDC)	11	MTCA B NCAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals														
Arsenic	20	MTCA A		6 U	6 U	6 U	10 U	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A		**63.7**	**39.7**	**73.0**	**38**	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR		**21.7**	**12**	**17.5**	**21.6**	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A		**24**	**3**	**11**	6 U	NA	NA	NA	NA	NA	NA	NA
PAHs														
1-Methylnaphthalene	35	MTCA B CAR		NA	NA	NA	0.020 U	**0.210**	0.019 U	0.059 U	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR		NA	NA	NA	0.020 U	**0.290**	0.019 U	0.059 U	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR		NA	NA	NA	0.020 U	**0.150**	0.019 U	0.059 U	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR		NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR		NA	NA	NA	0.020 U	**0.077**	0.019 U	0.059 U	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR		NA	NA	NA	0.020 U	**0.150**	0.019 U	0.059 U	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A		NA	NA	NA	0.020 U	**0.057**	0.019 U	0.059 U	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV		NA	NA	NA	0.020 U	0.057 U	0.019 U	**0.068**	NA	NA	NA	NA
Chrysene	140	MTCA B CAR		NA	NA	NA	0.020 U	**0.260**	0.019 U	**0.100**	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR		NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR		NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR		NA	NA	NA	0.020 U	**0.180**	0.019 U	**0.110**	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR		NA	NA	NA	0.020 U	**0.160**	0.019 U	0.059 U	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR		NA	NA	NA	0.020 U	0.057 U	0.019 U	**0.059**	NA	NA	NA	NA
Naphthalene	5	MTCA A		NA	NA	NA	0.020 U	**0.120**	0.019 U	**0.098**	NA	NA	NA	NA

Table 3
Summary of Soil Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Sample Designation	WL1-S-3.5	WL2-S-3.0	WL3-S-3.5	TP-S-POST	TP-28-050713	TP-29-050713	TP-30-050713	TP-31-050713	TP-32-050713	TP-33-050713	TP-34-050713
		Sample Date	04/29/2013	04/29/2013	04/29/2013	05/01/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Phenanthrene	NV	NV	NA	NA	NA	0.020 U	**0.620**	0.019 U	**0.160**	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR	NA	NA	NA	0.020 U	**0.450**	**0.021**	**0.120**	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR	NA	NA	NA	0.25 U	0.110 U	0.039 U	**0.140**	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A	NA	NA	NA	ND	**0.086**	ND	**0.056**	NA	NA	NA	NA
SVOCs													
1,2,4-Trichlorobenzene	35	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
1,2-Dichlorobenzene	7,200	MTCA B NCAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
1,3-Dichlorobenzene	NV	NV	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
1,4-Dichlorobenzene	NV	NV	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
2,4,5-Trichlorophenol	8,000	MTCA B NCAR	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
2,4,6-Trichlorophenol	80	MTCA B NCAR	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
2,4-Dichlorophenol	240	MTCA B NCAR	NA	NA	NA	0.200 U	0.570 U	0.190 U	0.590 U	NA	NA	NA	NA
2,4-Dimethylphenol	1,600	MTCA B NCAR	NA	NA	NA	0.039 U	0.110 U	0.039 U	0.120 U	NA	NA	NA	NA
2,4-Dinitrophenol	160	MTCA B NCAR	NA	NA	NA	0.830 U	2.400 U	0.820 U	2.500 U	NA	NA	NA	NA
2,4-Dinitrotoluene	160	MTCA B NCAR	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
2,6-Dinitrotoluene	80	MTCA B NCAR	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
2-Chloronaphthalene	6,400	MTCA B NCAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
2-Chlorophenol	400	MTCA B NCAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
2-Methylphenol	4,000	MTCA B NCAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
2-Nitroaniline	800	MTCA B NCAR	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
2-Nitrophenol	NV	NV	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
3,3-Dichlorobenzidine	2.2	MTCA B CAR	NA	NA	NA	0.150 U	0.430 U	0.140 U	0.440 U	NA	NA	NA	NA
3-Nitroaniline	NV	NV	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NV	NV	NA	NA	NA	0.200 U	0.570 U	0.190 U	0.590 U	NA	NA	NA	NA
4-Bromophenylphenyl ether	NV	NV	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
4-Chloro-3-methylphenol	NV	NV	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
4-Chloroaniline	5	MTCA B CAR	NA	NA	NA	0.260 U	0.770 U	0.260 U	0.800 U	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NV	NV	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
4-Methylphenol	400	MTCA B NCAR	NA	NA	NA	0.020 U	**0.190**	**0.033**	0.059 U	NA	NA	NA	NA
4-Nitroaniline	NV	NV	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
4-Nitrophenol	NV	NV	NA	NA	NA	0.098 U	0.290 U	0.097 U	0.300 U	NA	NA	NA	NA
Benzoic acid	320,000	MTCA B NCAR	NA	NA	NA	0.390 U	1.100 U	0.390 U	1.200 U	NA	NA	NA	NA
Benzyl alcohol	8,000	MTCA B NCAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Bis(2-chloro-1-methylethyl) ether	14	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	NV	NV	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Bis(2-chloroethyl)ether	0.91	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	71	MTCA B CAR	NA	NA	NA	0.024 U	0.072 U	0.024 U	0.074 U	NA	NA	NA	NA
Butylbenzylphthalate	530	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Carbazole	NV	NV	NA	NA	NA	0.020 U	**0.080**	0.019 U	0.059 U	NA	NA	NA	NA

Table 3
Summary of Soil Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Sample Designation	WL1-S-3.5	WL2-S-3.0	WL3-S-3.5	TP-S-POST	TP-28-050713	TP-29-050713	TP-30-050713	TP-31-050713	TP-32-050713	TP-33-050713	TP-34-050713
		Sample Date	04/29/2013	04/29/2013	04/29/2013	05/01/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Diethylphthalate	64,000	MTCA B NCAR	NA	NA	NA	0.049 U	0.140 U	0.048 U	0.150 U	NA	NA	NA	NA
Dimethyl phthalate	NV	NV	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Di-n-butyl phthalate	8,000	MTCA B NCAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Di-n-octyl phthalate	NV	NV	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Hexachlorobenzene	0.63	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Hexachlorobutadiene	13	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Hexachlorocyclopentadiene	480	MTCA B NCAR	NA	NA	NA	0.390 U	1.100 U	0.390 U	1.200 U	NA	NA	NA	NA
Hexachloroethane	71	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Isophorone	1,100	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Nitrobenzene	160	MTCA B NCAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
N-Nitrosodiphenylamine	200	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
N-Nitrosodipropylamine	0.14	MTCA B CAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA
Pentachlorophenol	2.5	MTCA B CAR	NA	NA	NA	0.200 U	0.570 U	0.190 U	0.590 U	NA	NA	NA	NA
Phenol	24,000	MTCA B NCAR	NA	NA	NA	0.020 U	0.057 U	0.019 U	0.059 U	NA	NA	NA	NA

Table 3
Summary of Soil Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Sample Designation	TP-35-050713	TP-36-050713	TP-37-050713	TP-38-050713	TP-39-050713	TP-40-050713	TP-41-050713	TP-42-050713	TP-43-050713	Stormpipe-S-1	Stormpipe-S-2
		Sample Date	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/09/2013	05/09/2013
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx													
Diesel Range	2,000	MTCA A	**610**	**100**	**23,000**	**2,500**	**71**	**6,300**	**55**	**1,900**	**57**	**5,000**	**9.0**
Motor Oil Range	2,000	MTCA A	**1,200**	**340**	**6,500**	**3,600**	**580**	**10,000**	**260**	**4,800**	**380**	**17,000**	**25**
NWTPH-Gx													
Gasoline Range	30	MTCA A	8.9 U	**11**	**140**	**25**	9.1 U	6.7 U	8.4 U	9.1 U	6.1 U	**62**	**7.6**
BTEX													
Benzene	0.03	MTCA A	0.022 U	0.023 U	0.021 U	0.014 U	**0.052**	0.017 U	0.021 U	0.023 U	0.015 U	0.017 U	0.017 U
Ethylbenzene	6	MTCA A	0.022 U	0.023 U	0.021 U	0.014 U	0.023 U	0.017 U	0.021 U	0.023 U	0.015 U	**0.028**	0.017 U
m,p-Xylene	9	MTCA A	0.044 U	0.047 U	0.042 U	0.028 U	0.045 U	0.034 U	0.042 U	0.046 U	0.031 U	**0.066**	0.033 U
o-Xylene	16,000	MTCA B NCAR	0.022 U	0.023 U	0.021 U	0.014 U	0.023 U	0.017 U	0.021 U	0.023 U	0.015 U	**0.056**	0.017 U
Total Xylenes	9	MTCA A	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.122**	ND
Toluene	7	MTCA A	**0.083**	**0.058**	0.021 U	0.014 U	**0.094**	0.017 U	0.021 U	0.023 U	0.015 U	**0.017**	0.017 U
VOCs													
1,2-Dichloroethane (EDC)	11	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Arsenic	20	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs													
1-Methylnaphthalene	35	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Summary of Soil Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Sample Designation	TP-35-050713	TP-36-050713	TP-37-050713	TP-38-050713	TP-39-050713	TP-40-050713	TP-41-050713	TP-42-050713	TP-43-050713	Stormpipe-S-1	Stormpipe-S-2
		Sample Date	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/09/2013	05/09/2013
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Phenanthrene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs													
1,2,4-Trichlorobenzene	35	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	7,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	8,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	240	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	1,600	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	6,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	4,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	2.2	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	5	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid	320,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	8,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloro-1-methylethyl) ether	14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl)ether	0.91	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	71	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	530	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Summary of Soil Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Sample Designation	TP-35-050713	TP-36-050713	TP-37-050713	TP-38-050713	TP-39-050713	TP-40-050713	TP-41-050713	TP-42-050713	TP-43-050713	Stormpipe-S-1	Stormpipe-S-2
		Sample Date	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/09/2013	05/09/2013
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Diethylphthalate	64,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.63	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	13	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	480	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	71	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	1,100	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	200	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodipropylamine	0.14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	2.5	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	24,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Summary of Soil Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Sample Designation	GP1-S-3.0	GP2-S-3.5	GP3-S-3.0	GP4-S-4.0	GP5-S-4.0	GP6-S-4.0	GP7-S-4.0	GP8-S-4.0	GP9-S-4.0
		Sample Date	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/26/2013
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NWTPH-Dx											
Diesel Range	2,000	MTCA A	**87**	**40**	**12**	5.4 U	**8.0**	**4,600**	**33**	**7.3**	**14**
Motor Oil Range	2,000	MTCA A	**370**	**280**	**16**	**24**	**29**	**20,000**	**52**	**32**	**21**
NWTPH-Gx											
Gasoline Range	30	MTCA A	8.9 U	6.3 U	9.0 U	6.4 U	7.1 U	**120**	18 U	9.2 U	7.1 U
BTEX											
Benzene	0.03	MTCA A	0.022 U	0.016 U	0.022 U	0.016 U	0.018 U	0.020 U	0.046 U	0.023 U	0.018 U
Ethylbenzene	6	MTCA A	0.022 U	0.016 U	0.022 U	0.016 U	0.018 U	**0.110**	0.046 U	0.023 U	0.018 U
m,p-Xylene	9	MTCA A	0.045 U	0.031 U	0.045 U	0.032 U	0.036 U	**0.23**	0.092 U	0.046 U	0.035 U
o-Xylene	16,000	MTCA B NCAR	0.022 U	0.016 U	0.022 U	0.016 U	0.018 U	**0.24**	0.046 U	0.023 U	0.018 U
Total Xylenes	9	MTCA A	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	7	MTCA A	**0.031**	**0.022**	**0.03**	**0.017**	**0.026**	**0.049**	**0.1**	**0.031**	0.018 U
VOCs											
1,2-Dichloroethane (EDC)	11	MTCA B NCAR	NA	NA	NA	NA	NA	0.0012 U	NA	NA	NA
1,2-Dibromoethane (EDB)	0.005	MTCA A	NA	NA	NA	NA	NA	0.0012 U	NA	NA	NA
Methyl tert-butyl ether (MTBE)	0.1	MTCA A	NA	NA	NA	NA	NA	0.0012 U	NA	NA	NA
Metals											
Arsenic	20	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	2,000	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA
PAHs											
1-Methylnaphthalene	35	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	1	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	140	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	0.14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	5	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Summary of Soil Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Sample Designation	GP1-S-3.0	GP2-S-3.5	GP3-S-3.0	GP4-S-4.0	GP5-S-4.0	GP6-S-4.0	GP7-S-4.0	GP8-S-4.0	GP9-S-4.0
		Sample Date	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/26/2013
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Phenanthrene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	1.4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
1,2,4-Trichlorobenzene	35	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	7,200	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	8,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	240	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	1,600	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	80	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	6,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	4,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	2.2	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	5	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid	320,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	8,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloro-1-methylethyl) ether	14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl)ether	0.91	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	71	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	530	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Summary of Soil Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

		Sample Designation	GP1-S-3.0	GP2-S-3.5	GP3-S-3.0	GP4-S-4.0	GP5-S-4.0	GP6-S-4.0	GP7-S-4.0	GP8-S-4.0	GP9-S-4.0
		Sample Date	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/25/2013	07/26/2013
Analyte	Soil CUL (mg/kg)	CUL Source	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Diethylphthalate	64,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	8,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	NV	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	0.63	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	13	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	480	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	71	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	1,100	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	200	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodipropylamine	0.14	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	2.5	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	24,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Summary of Soil Characterization Sample Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

NOTES:

Detections are in **bold.**

Detections that exceed soil cleanup levels highlighted in gray.

Detections that exceed soil cleanup levels by adding diesel- and oil-range organic hydrocarbon numbers together highlighted in yellow.

Total concentrations were calculated using one-half the detection limit for non-detects. Where all components were non-detect, the calculated total is "ND."

BTEX = benzene, toluene, ethylbenzene, xylenes.

cPAH TEQ = carcinogenic polycyclic aromatic hydrocarbon toxic equivalency quotient, calculated from laboratory-provided cPAH data.

CUL = cleanup level (screening level value).

J = Result is an estimated value.

mg/kg = milligrams per kilogram (parts per million).

MTCA = Washington State Model Toxics Control Act.

MTCA A = MTCA Method A screening level value.

MTCA B CAR = MTCA Method B screening level value for carcinogenic compounds.

MTCA B NCAR = MTCA Method B screening level value for noncarcinogenic compounds.

NA = not analyzed.

ND = not detected.

NV = no value.

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon—Diesel and Heavy Oil Range Organics Method.

NWTPH-Gx = Northwest Total Petroleum Hydrocarbon—Gasoline Range Organics Method.

PAH = polycyclic aromatic hydrocarbon.

SVOC = semivolatile organic compound.

U = Analyte not detected at or above method reporting limit.

UJ = Analyte not detected at or above method reporting limit. Result is an estimated value.

VOC = volatile organic compound.

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

				Sample Designation	B1-032813	TP-28-050713	TP-29-050713	TP-30-050713	TP-31-050713	TP-32-050713	TP-33-050713	TP-34-050713
				Sample Date	03/28/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013
Analyte	CAS	Groundwater CUL (µg/L)	CUL Source		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NWTPH-Dx												
Diesel Range	68334-30-5	500	MTCA A		**190**	**140**	**860**	100 U	**150**	**360**	100 U	**150**
Motor Oil Range	64742-65-0	500	MTCA A		**400**	**1,200**	**1,300**	**200**	**760**	**2,900**	**430**	**490**
NWTPH-Gx												
Gasoline Range	86290-81-5	800	MTCA A		250 U	NA	NA	NA	250 U	250 U	250 U	250 U
BTEX												
Benzene		5	MTCA A		1 U	NA	NA	NA	1 U	1 U	1 U	1 U
Ethylbenzene		700	MTCA A		1 U	NA	NA	NA	1 U	1 U	1 U	1 U
m,p-Xylene		1,600	MTCA B NCAR		2 U	NA	NA	NA	2 U	2 U	2 U	2 U
o-Xylene		1,600	MTCA B NCAR		1 U	NA	NA	NA	1 U	1 U	1 U	1 U
Total Xylenes		1,600	MTCA B NCAR		ND	NA	NA	NA	ND	ND	ND	ND
Toluene		100	MTCA A		1 U	NA	NA	NA	1 U	1 U	1 U	1 U
VOCs												
1,2-Dichloroethane	120-82-1	5	MTCA A		0.2 U	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)		0.01	MTCA A		0.01 U	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	95-50-1	20	MTCA A		0.5 UJ	NA	NA	NA	NA	NA	NA	NA
Metals												
Arsenic	120-82-1	5	MTCA A		50 U	NA	NA	NA	NA	NA	NA	NA
Chromium	95-50-1	50	MTCA A		**109**	NA	NA	NA	NA	NA	NA	NA
Copper	541-73-1	640	MTCA B NCAR		**74**	NA	NA	NA	NA	NA	NA	NA
Lead	541-73-1	15	MTCA A		**40**	NA	NA	NA	NA	NA	NA	NA
PAHs												
1-Methylnaphthalene	90-12-0	1.5	MTCA A		**0.31**	**1.1**	**2.4**	1 U	NA	NA	NA	NA
2-Methylnaphthalene	91-57-6	32	MTCA A		**0.22**	**1.5**	**0.91**	1 U	NA	NA	NA	NA
Acenaphthene	83-32-9	960	MTCA B NCAR		**0.42**	**2.9**	**2.3**	1 U	NA	NA	NA	NA
Acenaphthylene	208-96-8	NV	NV		0.01 U	0.01 U	0.02 U	1 U	NA	NA	NA	NA
Anthracene	120-12-7	4,800	MTCA B NCAR		0.01 U	**0.25**	**1.4**	1 U	NA	NA	NA	NA
Benzo(a)anthracene	56-55-3	0.12	MTCA B CAR		**0.01**	**0.046**	**0.86**	1 U	NA	NA	NA	NA
Benzo(a)pyrene	50-32-8	0.1	MTCA A		0.01 U	**0.016**	**0.42**	1 U	NA	NA	NA	NA
Benzo(ghi)perylene	191-24-2	NV	NV		0.01 U	0.01 U	**0.11**	1 U	NA	NA	NA	NA
Chrysene	218-01-9	12	MTCA B CAR		**0.019**	**0.066**	**0.9**	1 U	NA	NA	NA	NA
Dibenzo(a,h)anthracene	53-70-3	0.012	MTCA B CAR		0.01 U	0.01 U	**0.042**	1 U	NA	NA	NA	NA
Dibenzofuran	132-64-9	16	MTCA B NCAR		**0.082**	**1.4**	**0.69**	1 U	NA	NA	NA	NA
Fluoranthene	206-44-0	640	MTCA B NCAR		**0.035**	**0.42**	**4**	1 U	NA	NA	NA	NA
Fluorene	86-73-7	640	MTCA B NCAR		**0.11**	**1.6**	**2.6**	1 U	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	0.12	MTCA B CAR		0.01 U	0.01 U	**0.11**	1 U	NA	NA	NA	NA
Naphthalene	91-20-3	160	MTCA A		**5.5**	**4**	**0.33**	1 U	NA	NA	NA	NA
Phenanthrene	85-01-8	NV	NV		**0.08**	**2.5**	**8.9**	1 U	NA	NA	NA	NA
Pyrene	129-00-0	480	MTCA B NCAR		**0.055**	**0.35**	**3**	1 U	NA	NA	NA	NA
Total Benzofluoranthenes	NA	NV	NV		0.02 U	**0.027**	**0.73**	5 U	NA	NA	NA	NA
cPAH TEQ	NA	0.1	MTCA A		**0.008**	**0.025**	**0.603**	ND	NA	NA	NA	NA

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

				Sample Designation	B1-032813	TP-28-050713	TP-29-050713	TP-30-050713	TP-31-050713	TP-32-050713	TP-33-050713	TP-34-050713
				Sample Date	03/28/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013
Analyte	CAS	Groundwater CUL (µg/L)	CUL Source		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
SVOCs												
1,2,4-Trichlorobenzene	120-82-1	1.5	MTCA B CAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	720	MTCA B NCAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	NV	NV		1 U	1 U	1 U	1 U	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	NV	NV		1 U	1 U	1 U	1 U	NA	NA	NA	NA
2,4,5-Trichlorophenol	95-95-4	800	MTCA B NCAR		5 U	5 U	5 U	5 U	NA	NA	NA	NA
2,4,6-Trichlorophenol	88-06-2	4	MTCA B CAR		3 U	3 U	3 U	3 U	NA	NA	NA	NA
2,4-Dichlorophenol	120-83-2	24	MTCA B NCAR		3 U	3 U	3 U	3 U	NA	NA	NA	NA
2,4-Dimethylphenol	105-67-9	160	MTCA B NCAR		3 U	3 U	3 U	3 U	NA	NA	NA	NA
2,4-Dinitrophenol	51-28-5	32	MTCA B NCAR		20 U	20 U	20 U	20 U	NA	NA	NA	NA
2,4-Dinitrotoluene	121-14-2	32	MTCA B NCAR		3 U	3 U	3 U	3 U	NA	NA	NA	NA
2,6-Dinitrotoluene	606-20-2	16	MTCA B NCAR		3 U	3 U	3 U	3 U	NA	NA	NA	NA
2-Chloronaphthalene	91-58-7	640	MTCA B NCAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
2-Chlorophenol	95-57-8	40	MTCA B NCAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
2-Methylphenol	95-48-7	400	MTCA B NCAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
2-Nitroaniline	88-74-4	160	MTCA B NCAR		3 U	3 U	3 U	3 U	NA	NA	NA	NA
2-Nitrophenol	88-75-5	NV	NV		3 U	3 U	3 U	3 U	NA	NA	NA	NA
3,3-Dichlorobenzidine	91-94-1	0.19	MTCA B CAR		5 U	5 U	5 U	5 U	NA	NA	NA	NA
3-Nitroaniline	99-09-2	NV	NV		3 U	3 U	3 U	3 U	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	534-52-1	NV	NV		10 U	10 U	10 U	10 U	NA	NA	NA	NA
4-Bromophenylphenyl ether	101-55-3	NV	NV		1 U	1 U	1 U	1 U	NA	NA	NA	NA
4-Chloro-3-methylphenol	59-50-7	NV	NV		3 U	3 U	3 U	3 U	NA	NA	NA	NA
4-Chloroaniline	106-47-8	0.22	MTCA B CAR		5 U	5 U	5 U	5 U	NA	NA	NA	NA
4-Chlorophenylphenyl ether	7005-72-3	NV	NV		1 U	1 U	1 U	1 U	NA	NA	NA	NA
4-Methylphenol	106-44-5	40	MTCA B NCAR		2 U	2 U	2 U	2 U	NA	NA	NA	NA
4-Nitroaniline	100-01-6	NV	NV		3 U	3 U	3 U	3 U	NA	NA	NA	NA
4-Nitrophenol	100-02-7	NV	NV		10 UJ	10 U	10 U	10 U	NA	NA	NA	NA
Benzoic acid	65-85-0	64,000	MTCA B NCAR		20 U	20 UJ	20 UJ	20 UJ	NA	NA	NA	NA
Benzyl alcohol	100-51-6	800	MTCA B NCAR		2 U	2 U	2 U	2 U	NA	NA	NA	NA
Bis(2-chloro-1-methylethyl) ether	108-60-1	0.63	MTCA B CAR		1 UJ	1 U	1 U	1 U	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	111-91-1	NV	NV		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Bis(2-chloroethyl)ether	111-44-4	0.04	MTCA B CAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	117-81-7	6.3	MTCA B CAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Butylbenzylphthalate	85-68-7	46	MTCA B CAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Carbazole	86-74-8	NV	NV		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Diethylphthalate	84-66-2	13,000	MTCA B NCAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Dimethyl phthalate	131-11-3	NV	NV		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Di-n-butyl phthalate	84-74-2	1,600	MTCA B NCAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Di-n-octyl phthalate	117-84-0	NV	NV		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Hexachlorobenzene	118-74-1	0.055	MTCA B CAR		1 U	1 U	1 U	1 U	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	0.56	MTCA B CAR		3 U	3 U	3 U	3 U	NA	NA	NA	NA

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Sample Designation	B1-032813	TP-28-050713	TP-29-050713	TP-30-050713	TP-31-050713	TP-32-050713	TP-33-050713	TP-34-050713
			Sample Date	03/28/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013	05/07/2013
Analyte	CAS	Groundwater CUL (µg/L)	CUL Source	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Hexachlorocyclopentadiene	77-47-4	48	MTCA B NCAR	5 U	5 U	5 U	5 U	NA	NA	NA	NA
Hexachloroethane	67-72-1	3.1	MTCA B CAR	2 U	2 U	2 U	2 U	NA	NA	NA	NA
Isophorone	78-59-1	46	MTCA B CAR	1 U	1 U	1 U	1 U	NA	NA	NA	NA
Nitrobenzene	98-95-3	16	MTCA B NCAR	1 U	1 U	1 U	1 U	NA	NA	NA	NA
N-Nitrosodiphenylamine	86-30-6	NV	NV	1 U	1 U	1 U	1 U	NA	NA	NA	NA
N-Nitrosodipropylamine	621-64-7	NV	NV	1 U	1 U	1 U	1 U	NA	NA	NA	NA
Pentachlorophenol	87-86-5	0.22	MTCA B CAR	0.025 U	**0.05**	**0.044**	10 U	NA	NA	NA	NA
Phenol	108-95-2	2,400	MTCA B NCAR	1 U	1 U	1 U	1 U	NA	NA	NA	NA

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Sample Designation	TP-35-050713	TP-36-050713	TP-37-050713	TP-38-050713	TP-39-050713	TP-40-050813	TP-41-050813
			Sample Date	05/07/2013	05/07/2013	05/07/2013	05/08/2013	05/08/2013	05/08/2013	05/08/2013
Analyte	CAS	Groundwater CUL (µg/L)	CUL Source	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NWTPH-Dx										
Diesel Range	68334-30-5	500	MTCA A	**2,000**	**2,600**	**25,000**	**6,900**	**330**	**17,000**	**1,500**
Motor Oil Range	64742-65-0	500	MTCA A	**3,100**	**2,800**	**42,000**	**9,700**	**1,200**	**29,000**	**3,400**
NWTPH-Gx										
Gasoline Range	86290-81-5	800	MTCA A	250 U	250 U	250 U	250 U	250 U	250 U	250 U
BTEX										
Benzene		5	MTCA A	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene		700	MTCA A	1 U	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene		1,600	MTCA B NCAR	2 U	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene		1,600	MTCA B NCAR	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes		1,600	MTCA B NCAR	ND	ND	ND	ND	ND	ND	ND
Toluene		100	MTCA A	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOCs										
1,2-Dichloroethane	120-82-1	5	MTCA A	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)		0.01	MTCA A	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	95-50-1	20	MTCA A	NA	NA	NA	NA	NA	NA	NA
Metals										
Arsenic	120-82-1	5	MTCA A	NA	NA	NA	NA	NA	NA	NA
Chromium	95-50-1	50	MTCA A	NA	NA	NA	NA	NA	NA	NA
Copper	541-73-1	640	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Lead	541-73-1	15	MTCA A	NA	NA	NA	NA	NA	NA	NA
PAHs										
1-Methylnaphthalene	90-12-0	1.5	MTCA A	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91-57-6	32	MTCA A	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	960	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	208-96-8	NV	NV	NA	NA	NA	NA	NA	NA	NA
Anthracene	120-12-7	4,800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	56-55-3	0.12	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	50-32-8	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	191-24-2	NV	NV	NA	NA	NA	NA	NA	NA	NA
Chrysene	218-01-9	12	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	53-70-3	0.012	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	132-64-9	16	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	206-44-0	640	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Fluorene	86-73-7	640	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	0.12	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	160	MTCA A	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	85-01-8	NV	NV	NA	NA	NA	NA	NA	NA	NA
Pyrene	129-00-0	480	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	NA	NV	NV	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	NA	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Sample Designation	TP-35-050713	TP-36-050713	TP-37-050713	TP-38-050713	TP-39-050713	TP-40-050813	TP-41-050813
			Sample Date	05/07/2013	05/07/2013	05/07/2013	05/08/2013	05/08/2013	05/08/2013	05/08/2013
Analyte	CAS	Groundwater CUL (µg/L)	CUL Source	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
SVOCs										
1,2,4-Trichlorobenzene	120-82-1	1.5	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	720	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	NV	NV	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	NV	NV	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95-95-4	800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88-06-2	4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120-83-2	24	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105-67-9	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51-28-5	32	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121-14-2	32	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606-20-2	16	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91-58-7	640	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95-57-8	40	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	95-48-7	400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88-74-4	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88-75-5	NV	NV	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	91-94-1	0.19	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	NV	NV	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	534-52-1	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	101-55-3	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	59-50-7	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106-47-8	0.22	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	7005-72-3	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	106-44-5	40	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100-01-6	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100-02-7	NV	NV	NA	NA	NA	NA	NA	NA	NA
Benzoic acid	65-85-0	64,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	100-51-6	800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloro-1-methylethyl) ether	108-60-1	0.63	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	111-91-1	NV	NV	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl)ether	111-44-4	0.04	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	117-81-7	6.3	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	85-68-7	46	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Carbazole	86-74-8	NV	NV	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	84-66-2	13,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	131-11-3	NV	NV	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	84-74-2	1,600	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	117-84-0	NV	NV	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118-74-1	0.055	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	0.56	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Sample Designation	TP-35-050713	TP-36-050713	TP-37-050713	TP-38-050713	TP-39-050713	TP-40-050813	TP-41-050813
			Sample Date	05/07/2013	05/07/2013	05/07/2013	05/08/2013	05/08/2013	05/08/2013	05/08/2013
Analyte	CAS	Groundwater CUL (µg/L)	CUL Source	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Hexachlorocyclopentadiene	77-47-4	48	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	67-72-1	3.1	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Isophorone	78-59-1	46	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	98-95-3	16	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86-30-6	NV	NV	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodipropylamine	621-64-7	NV	NV	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87-86-5	0.22	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Phenol	108-95-2	2,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Sample Designation	TP-42-050813	TP-43-050813	GP4-W-2.5	GP6-W-2.5	GP10-W-3.5	GP11-W-4.5	GP12-W-4.5
			Sample Date	05/08/2013	05/08/2013	07/26/2013	07/26/2013	07/26/2013	07/26/2013	07/26/2013
Analyte	CAS	Groundwater CUL (µg/L)	CUL Source	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
NWTPH-Dx										
Diesel Range	68334-30-5	500	MTCA A	**21,000**	**240**	100 U	**1,300**	100 U	100 U	100 U
Motor Oil Range	64742-65-0	500	MTCA A	**38,000**	**720**	200 U	**4,200**	200 U	200 U	200 U
NWTPH-Gx										
Gasoline Range	86290-81-5	800	MTCA A	250 U	250 U	250 U	250 U	250 U	250 U	250 U
BTEX										
Benzene		5	MTCA A	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene		700	MTCA A	1 U	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene		1,600	MTCA B NCAR	2 U	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene		1,600	MTCA B NCAR	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes		1,600	MTCA B NCAR	ND	ND	ND	ND	ND	ND	ND
Toluene		100	MTCA A	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOCs										
1,2-Dichloroethane	120-82-1	5	MTCA A	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane (EDB)		0.01	MTCA A	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	95-50-1	20	MTCA A	NA	NA	NA	NA	NA	NA	NA
Metals										
Arsenic	120-82-1	5	MTCA A	NA	NA	NA	NA	NA	NA	NA
Chromium	95-50-1	50	MTCA A	NA	NA	NA	NA	NA	NA	NA
Copper	541-73-1	640	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Lead	541-73-1	15	MTCA A	NA	NA	NA	NA	NA	NA	NA
PAHs										
1-Methylnaphthalene	90-12-0	1.5	MTCA A	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	91-57-6	32	MTCA A	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	960	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	208-96-8	NV	NV	NA	NA	NA	NA	NA	NA	NA
Anthracene	120-12-7	4,800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	56-55-3	0.12	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	50-32-8	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	191-24-2	NV	NV	NA	NA	NA	NA	NA	NA	NA
Chrysene	218-01-9	12	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	53-70-3	0.012	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	132-64-9	16	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	206-44-0	640	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Fluorene	86-73-7	640	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	193-39-5	0.12	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	160	MTCA A	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	85-01-8	NV	NV	NA	NA	NA	NA	NA	NA	NA
Pyrene	129-00-0	480	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Total Benzofluoranthenes	NA	NV	NV	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ	NA	0.1	MTCA A	NA	NA	NA	NA	NA	NA	NA

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Sample Designation	TP-42-050813	TP-43-050813	GP4-W-2.5	GP6-W-2.5	GP10-W-3.5	GP11-W-4.5	GP12-W-4.5
			Sample Date	05/08/2013	05/08/2013	07/26/2013	07/26/2013	07/26/2013	07/26/2013	07/26/2013
Analyte	CAS	Groundwater CUL (µg/L)	CUL Source	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
SVOCs										
1,2,4-Trichlorobenzene	120-82-1	1.5	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	95-50-1	720	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	NV	NV	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	NV	NV	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	95-95-4	800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	88-06-2	4	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	120-83-2	24	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	105-67-9	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	51-28-5	32	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	121-14-2	32	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	606-20-2	16	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	91-58-7	640	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	95-57-8	40	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	95-48-7	400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	88-74-4	160	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	88-75-5	NV	NV	NA	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine	91-94-1	0.19	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	99-09-2	NV	NV	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	534-52-1	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Bromophenylphenyl ether	101-55-3	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	59-50-7	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	106-47-8	0.22	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenylphenyl ether	7005-72-3	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	106-44-5	40	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	100-01-6	NV	NV	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	100-02-7	NV	NV	NA	NA	NA	NA	NA	NA	NA
Benzoic acid	65-85-0	64,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	100-51-6	800	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloro-1-methylethyl) ether	108-60-1	0.63	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	111-91-1	NV	NV	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl)ether	111-44-4	0.04	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	117-81-7	6.3	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate	85-68-7	46	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Carbazole	86-74-8	NV	NV	NA	NA	NA	NA	NA	NA	NA
Diethylphthalate	84-66-2	13,000	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	131-11-3	NV	NV	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	84-74-2	1,600	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	117-84-0	NV	NV	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	118-74-1	0.055	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	0.56	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

			Sample Designation	TP-42-050813	TP-43-050813	GP4-W-2.5	GP6-W-2.5	GP10-W-3.5	GP11-W-4.5	GP12-W-4.5
			Sample Date	05/08/2013	05/08/2013	07/26/2013	07/26/2013	07/26/2013	07/26/2013	07/26/2013
Analyte	CAS	Groundwater CUL (µg/L)	CUL Source	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Hexachlorocyclopentadiene	77-47-4	48	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	67-72-1	3.1	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Isophorone	78-59-1	46	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	98-95-3	16	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	86-30-6	NV	NV	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodipropylamine	621-64-7	NV	NV	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87-86-5	0.22	MTCA B CAR	NA	NA	NA	NA	NA	NA	NA
Phenol	108-95-2	2,400	MTCA B NCAR	NA	NA	NA	NA	NA	NA	NA

Table 4
Summary of Water Characterization Analytical Results
Former Cashmere Mill Site
Cashmere, Washington

NOTES:

Detections in **bold.**

Detections that exceed groundwater cleanup levels highlighted gray.

Detections that exceed groundwater cleanup levels by adding diesel- and oil-range organic hydrocarbon numbers together highlighted in yellow.

Total concentrations were calculated using one-half the detection limit for non-detects. Where all components were non-detect, the calculated total is "ND."

BTEX = benzene, toluene, ethylbenzene, xylenes.

CAS = Chemical Abstracts Service registry number.

cPAH TEQ = carcinogenic polycyclic aromatic hydrocarbon toxic equivalency quotient, calculated from laboratory-provided cPAH data.

CUL = cleanup level (screening level value).

MTCA = Washington State Model Toxics Control Act.

MTCA A = MTCA Method A screening level value.

MTCA B CAR = MTCA Method B screening level value for carcinogenic compounds.

MTCA B NCAR = MTCA Method B screening level value for noncarcinogenic compounds.

µg/L = micrograms per liter (parts per billion).

NA = not analyzed.

ND = not detected.

NV = no value.

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon—Diesel and Heavy Oil Range Organics Method.

NWTPH-Gx = Northwest Total Petroleum Hydrocarbon—Gasoline Range Organics Method.

PAH = polycyclic aromatic hydrocarbon.

SVOC = semivolatile organic compound.

U = Analyte not detected at or above method reporting limit.

UJ = Analyte not detected at or above method reporting limit. Result is an estimated value.

VOC = volatile organic compound.

FIGURES

Figure 1
Vicinity Map

Former Cashmere Mill Site
Cashmere, Washington

Legend

Site Boundary

Site Address: Sunset Highway, Cashmere, Washington, 98815
Section 5 of Township 23 North, Range 19 East

0 1,000 2,000
Feet

Source: Topo map acquired from ESRI, Inc., ArcGIS Online; site boundary obtained from RH2 Engineering, Inc.

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Print Date: 2/20/2014
Approved By: H. Hirsch
Produced By: apadilla
Project: 0871.01.02-01

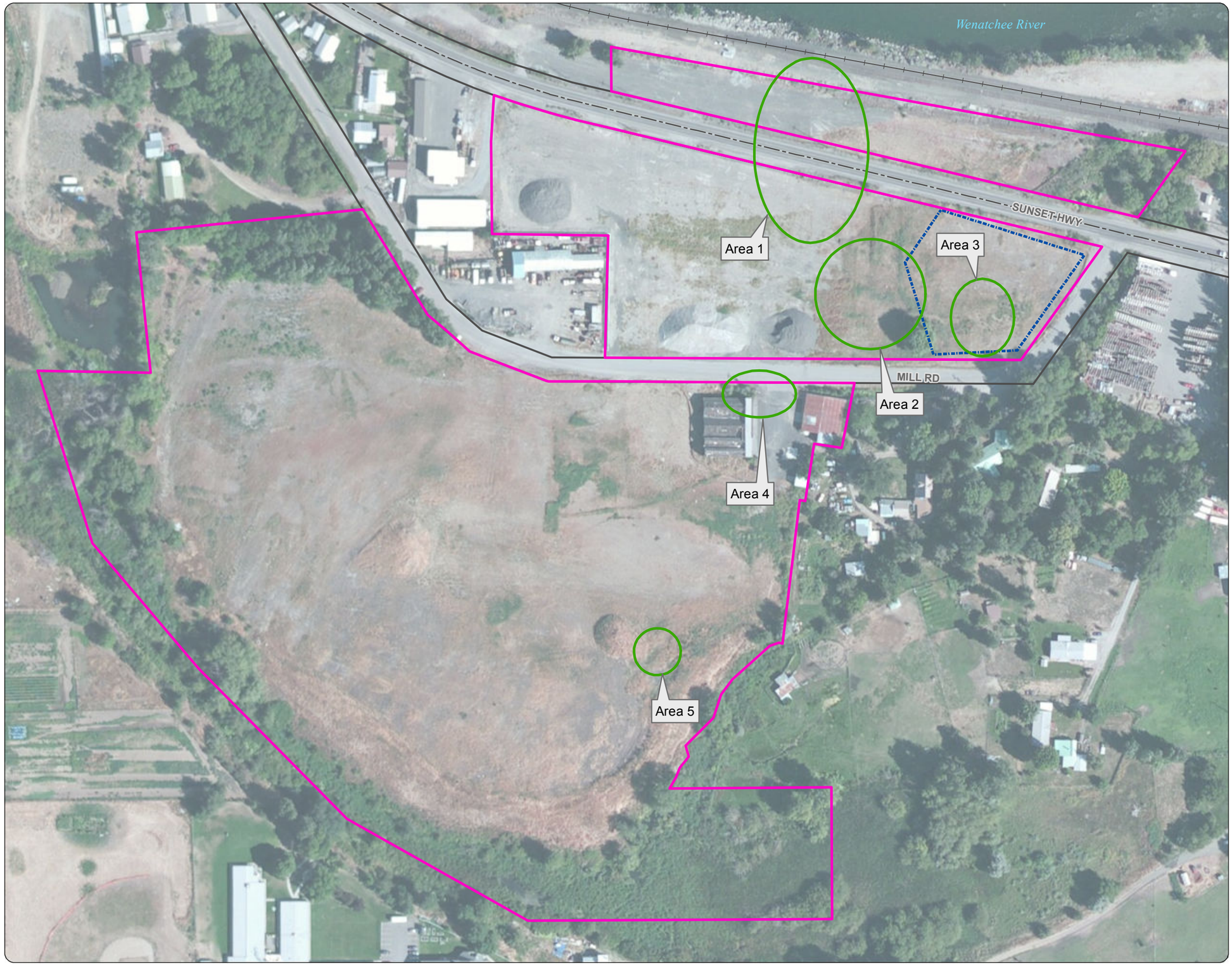

Figure 2
Site Map

Former Cashmere Mill Site
Cashmere, Washington

Legend

- BNSF Railroad
- Highway Centerline
- Road Extent
- Approximate Location of Former Mill Pond
- Previously Identified Petroleum Contaminated Soil Area
- Site Boundary

Notes:
1. Petroleum contaminated soil areas are shown as defined by Removal Action Work Plan.

0 80 160
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online; historical site features and surface elevation data obtained from RH2 Engineering, Inc.

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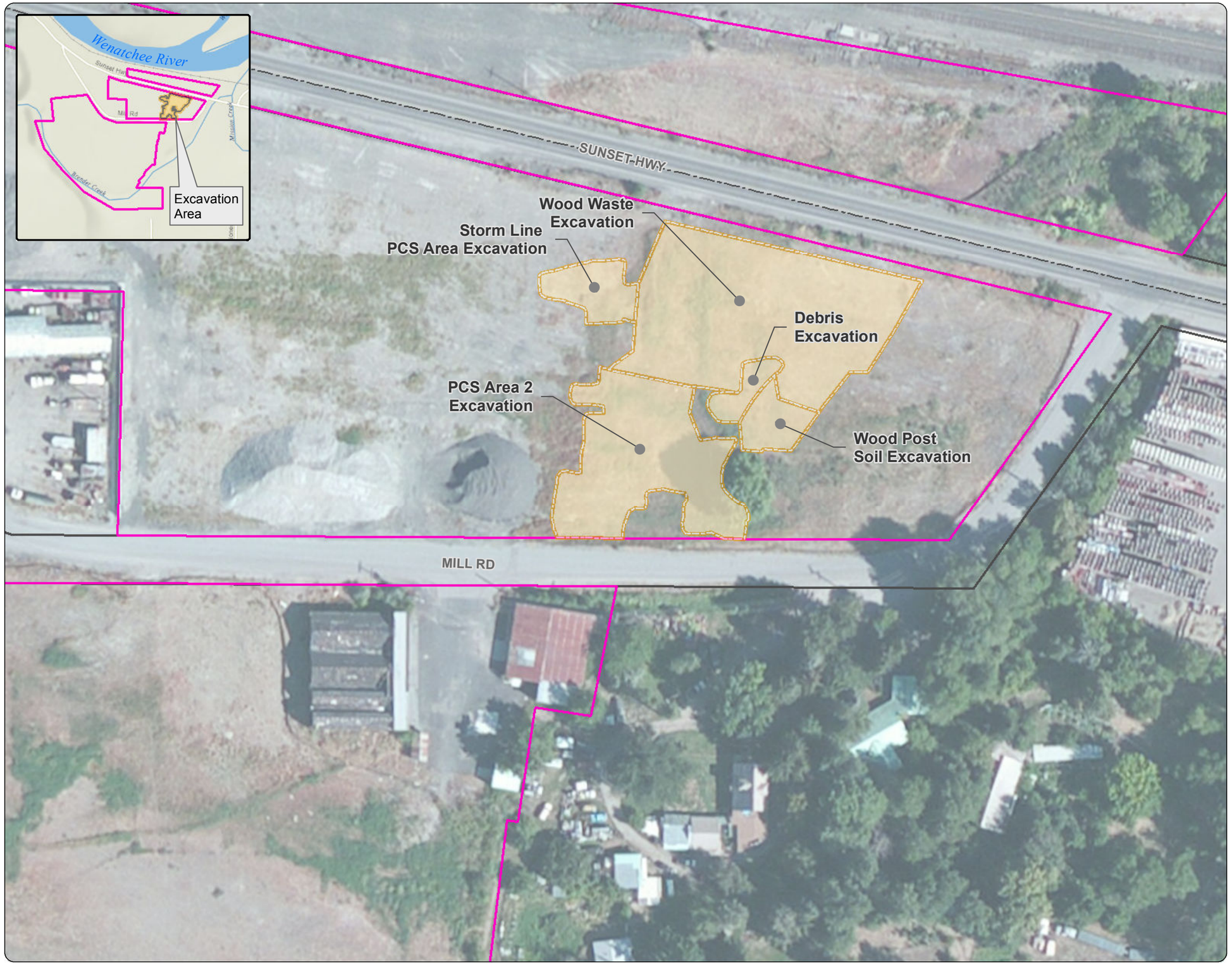
Project: 0871.01.02.01

Figure 3
Excavation Extents

Former Cashmere Mill Site
Cashmere, Washington



Legend

- Highway Centerline
- Road Extent
- Excavation Extent
- Site Boundary

Note: Conditions depicted on the aerial photograph do not reflect current site conditions.

0 40 80
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online.

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Figure 4
Wood Waste Excavation

Former Cashmere Mill Site
Cashmere, Washington

Legend

- Treated Post, Removed
- Confirmation Sample
- Highway Centerline
- Road Extent
- Concrete Block Extent (Approximate)
- Excavation Extent
- Site Boundary

Note: Conditions depicted on the aerial photograph do not reflect current site conditions.

0 25 50
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online.

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Project: 0871.01.02-01

Figure 5
Test Pit Locations

Former Cashmere Mill Site
Cashmere, Washington

Legend

- Highway Centerline
- Road Extent
- Excavation Extent
- Site Boundary
- Monitoring Well

Test Pits, Located Outside of Excavations

- S Soil
- W Soil and Water

Test Pits, Later Removed During Continued Excavation

- S Soil
- W Soil and Water

Note: Conditions depicted on the aerial photograph do not reflect current site conditions.

0 25 50
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online.

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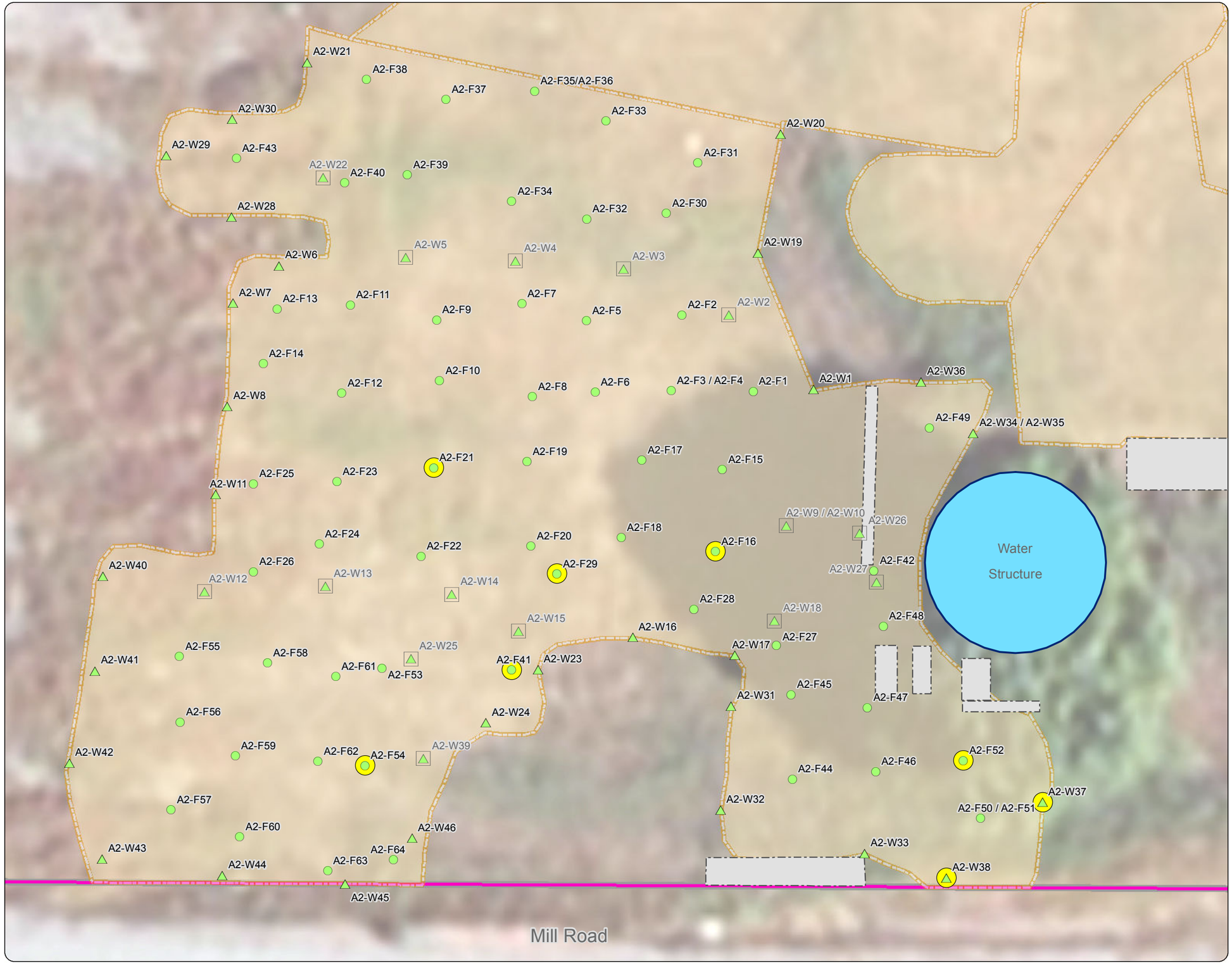
Figure 6
PCS Area 2 Excavation

Former Cashmere Mill Site
Cashmere, Washington



Legend

- Concrete Block Extent (Approximate)
- Excavation Extent
- Site Boundary

Samples

- Wall Sample
- Wall Sample, Later Removed During Continued Excavation
- Floor Sample
- MTCA A Cleanup Level Exceedance, In Place

Notes:
1. Conditions depicted on the aerial photograph do not reflect current site conditions.
2. MTCA = Model Toxics Control Act.

0 8 16
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online.

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Project: 0871.01.02-01

Figure 7
Storm Line PCS Area Excavation

Former Cashmere Mill Site
Cashmere, Washington

Storm Line
PCS Area Excavation

Wood Waste
Excavation

SL-W8
SL-W14
SL-W9
SL-W7
SL-F7
SL-W13
SL-W10
SL-F10
SL-F9
SL-W2
SL-W3
SL-W1
SL-F8
SL-F11
SL-W11
SL-F1
SL-F2
SL-F3
SL-W12
SL-W4
SL-F6
SL-F4
SL-F5
SL-W5
SL-W6

Legend

- Catch Basin
- Storm Pipe
- Excavation Extent

Samples

- Wall Sample
- Wall Sample, Later Removed During Continued Excavation
- Floor Sample
- MTCA A Cleanup Level Exceedance, In Place

Notes:
1. Conditions depicted on the aerial photograph do not reflect current site conditions.
2. MTCA = Model Toxics Control Act.

0 5 10
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online.

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Project: 0871.01.02-01

Figure 8
Additional Site Features

Former Cashmere Mill Site
Cashmere, Washington

Legend

- Monitoring Well
- Manhole
- Catch Basin
- Inlet
- Old Water Line
- New Water Line
- No Name Creek Culvert Alignment (Approximate)
- Storm Pipe (Removed)
- Corrugated Pipe (Dashed Where Approximate)
- Steel Pipe (Dashed Where Approximate)
- Wood Wall Alignment
- Bypass Vault
- Concrete Block Extent (Approximate)
- Site Boundary

Notes:
1. Corrugated pipes, steel pipes, storm pipes, and the wood wall have been removed.

0 30 60
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online.

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Project: 0871.01.02-01

Figure 9
July 2013 Characterization

Former Cashmere Mill Site
Cashmere, Washington

SUNSET HWY

MILL RD

GP12

GP11

GP10

GP2	
Diesel	40
Motor Oil	280

GP6	
Diesel	4,600
Motor Oil	20,000
Gasoline	120

GP9	
Diesel	14
Motor Oil	21

GP1	
Diesel	87
Motor Oil	370

GP8	
Diesel	7
Motor Oil	32

GP4	
Diesel	ND
Motor Oil	24

GP7	
Diesel	33
Motor Oil	52

GP3	
Diesel	12
Motor Oil	16

GP5	
Diesel	8
Motor Oil	29

Motor Oil and Diesel Concentration (mg/kg)

<100 | 100 - 199 | 200 - 399 | 400 - 799 | 800 - 1,199 | 1,200 - 2,399 | 2,400 - 3,599 | 3,600 - 5,999 | 6,000 - 8,999 | 9,000 - 14,999 | 15,000 - 24,000

Legend

- Highway Centerline
- Road Extent
- Site Boundary

Borings

- Groundwater Sample
- Soil Sample
- Soil and Groundwater Sample

Notes:
1. Soil samples collected from borings completed July 25th and 26th, 2013, via direct-push drill method.
2. Reported concentration detections for diesel, motor oil, and gasoline are in milligrams per kilogram (parts per million).
3. ND = not detected.
4. Gasoline not detected, with the exception of GP6.
5. Conditions depicted on the aerial image do not reflect current site conditions.

0 40 80
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online.

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Print Date: 4/10/2014
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Produced By: apadilla
Project: 0871.01.02-01

APPENDIX A

SAMPLING AND ANALYSIS PLAN MODIFICATIONS MEMORANDUM

MEMORANDUM

To: Mary Monahan

Date: April 22, 2013

From: Justin Clary, PE

Project: 0779.02.01

RE: Sampling and Analysis Plan Modifications
2013 Cashmere Mill Site Removal Action

In support of the Cashmere Mill Site Removal Action, the Port of Chelan County) developed a sampling and analysis plan/quality assurance project plan (SAP/QAPP) that describes the procedures for wood waste and soil field screening, woodwaste and soil sampling, and groundwater sampling that will be conducted during implementation of the woodwaste and petroleum-contaminated soil removal action at the former mill site in Cashmere, Washington. Since issuance of the most recent revision of the SAP/QAPP (February 2013), project staff communications with the analytical laboratory and the Washington State Department of Ecology, as well as field observations, have driven the need to modify portions of the document. The purpose of this memorandum is to document the identified modifications, and this memorandum should not be considered reflective of a comprehensive review and revision of the SAP/QAPP. The following provides excerpts from the SAP/QAPP with modifications provided in underline/strikeout format to reflect additions/deletions.

4.4 Soil Confirmation Sampling of Known and Discovered PCS and CWW

PCS removal at Site 2, Site 4, and any discovered PCS or CWW sites will be guided by field screening ~~results~~ to estimate the extent ~~establish the limits~~ of probable contamination. Representative soil samples shall be collected up to 6 to 12 inches below the excavation base and at the approximate vertical center of each excavation sidewall using clean stainless steel spoons for SVOCs and metals analysis and using EPA Method 5035 for VOC analysis and placed into laboratory-provided containers. One sample will be collected for every ~~100~~200 square feet of excavation floor. One soil sample will be collected per sidewall, ~~and every 10 linear feet of excavation sidewall~~where the sidewalls are less than 20 feet in length. For side walls greater than 20 feet in length, samples shall be collected every 20 linear feet. The excavation conditions (e.g., sidewall slopes, groundwater, etc.) and safety situations may reduce the ability to collect samples at the desired frequencies. Alterations to the sampling scheme should be documented. Ecology may provide directions on sample density based on field conditions at the time of sampling. Samples at locations where PCS has been removed at Site 2 and Site 4 will be collected and analyzed for TPH as diesel/oil and BTEX. Samples of soil at locations where PCS has been

discovered will be collected and analyzed for TPH as gasoline, TPH as diesel/oil, BTEX (and EDC/EDB, MTBE and total lead if gasoline is detected). Samples of soil at locations where CWW has been removed will be collected from the excavation base and analyzed for TPH as gasoline, TPH as diesel/oil, BTEX and WTC (and total lead, EDC/ECB and MTBE if gasoline is detected).

Table 7
Analytical Summary for Confirmation Soil Samples and Contaminated Woodwaste

Parameter	Analytical Method	Detection Limit (mg/kg)	MTCA Method A Cleanup Level[a] (mg/kg)
Gasoline-Range Hydrocarbons	Ecology NWTPH-Gx/5035	5.0	30 (100 if benzene—ND, TEX < 1%)
~~BETX~~BTEX	EPA SW8021	~~0.01255~~0.025—0.05	0.03—benzene 6—ethylbenzene 7—toluene 9—total xylenes
Ethylene dibromide (EDB)[b] Ethylene dichloride (EDC)[b] Methyl Tertiary Butyl Ether (MTBE)[b]	EPA SW8260	0.001	0.005—EDB EDC—Method B 0.1—MTBE ~~MTBE~~
Diesel-Range Hydrocarbons	Ecology NWTPH-Dx + Acid/Silica Gel Cleanup	5.0—Diesel 10—Heavy Oils, Mineral Oil	2,000—Diesel 2,000—Heavy Oils 4,000—Mineral Oil
~~Chlorophenols~~	~~EPA SW8041~~	~~0.00625~~	~~Method B~~
Semivolatile Organic Compounds (SVOCs)~~PAHs~~	EPA SW8270-~~SIM~~	~~0.005~~0.02—0.2	0.1 and Method B
~~Phenols, Cresols~~	~~EPA SW8270~~	~~0.2 to 0.0201~~	~~Method B~~
Arsenic	EPA SW6010C	5.0	20
Chromium (trivalent criteria used)~~III~~	EPA SW6010C	0.5	2,000
Copper	EPA SW6010C	0.2	3,200 (Method B)
Lead[b]	EPA SW6010C	~~0.2~~2.0	250

[a]From Table 740-1 in WAC 173-340-900.
[b]If gasoline is detected in the soil or wood waste.

Table 8
Analytical Summary for Groundwater

Parameter	Analytical Method	Detection Limit (~~m~~µg/L)	MTCA Method A Cleanup Level[a] (~~m~~µg/L)
Gasoline-Range Hydrocarbons	Ecology NWTPH-Gx	~~0.25~~250	800 (1,000 if benzene—ND)
~~BETX~~BTEX	EPA SW8021	1—BTE 2—Xylenes	5—Benzene 700—Ethylbenzene 1,000—Toluene 1,000—Xylenes
Ethylene dibromide (EDB)[b] Ethylene dichloride (EDC)[b] Methyl Tertiary Butyl Ether (MTBE)[b]	EPA SW8260	0.2 0.00036	0.01—EDB 5—EDC 20—MTBE
Diesel-Range Hydrocarbons	Ecology NWTPH-Dx with Acid/Silica Gel Cleanup	~~0.05~~100—Diesel ~~0.1~~200—Heavy Oils, Mineral Oil	500
Low Level Pentachlorophenol~~Chlorophenols[c,c]~~	EPA SW8041	0.025	0.22 (carcinogen—Method B)
Low Level PAHs[c]	EPA SW8270-SIM	0.01	0.1
~~Phenols, C~~Semivolatile Organic Compounds (SVOCs)~~resols~~[c] (full list of SVOCs except for pentachlorophenol and PAHs)	EPA SW8270	~~0.001 to 0.02~~1.0 - 20	Method B
Arsenic[c]	EPA ~~200.7~~200.8	0.5	5
Chromium (total value used for criteria)[c]	EPA ~~200.7~~200.8	0.5	50
Copper[c]	EPA ~~200.7~~200.8	0.5	640 (Method B)
Lead[b,c]	EPA ~~200.7~~200.8	0.1	15

[a]From Table 740-1 in WAC 173-340-900.
[b]If gasoline is detected in groundwater.
[c]If CWW was present and removed upgradient of the monitoring well.

APPENDIX B

ENVIRONMENTAL PERMITS

SHORELINE MANAGEMENT PERMIT
ACTION SHEET

Application No.: Shoreline Substantial Development Permit No. 2010-002

Administering Agency City of Cashmere

Type of Permits: ■ Shoreline Substantial Development Permit

Action: ■ Approved ☐ Denied

Date of Action: Monday, July 12, 2010

Date Mailed to DOE Monday, July 12, 2010

Pursuant to Chapter 90.58 RCW and the Shoreline Master Program of City of Cashmere, the following permit is hereby **approved**:

Cashmere Mill Site Rehabilitation
238 Olds Station, Ste. "A"
Wenatchee, WA 98801

To undertake the following development: The project consists of the excavation of approximately 13,000 cubic yards of subsurface organic ("wood waste") and replacement with clean granular fill at the Port's Mill Site.

Upon the following property: The subject property is located at the old Cashmere Mill site, located on Sunset Highway. The proposed work is located approximately 250 feet from the Wenatchee River, 300 feet from Mission Creek and 100 feet from Brender Creek. No-Name Creek runs through the site and is encased in a culvert within the project limits. The project is within the 100-year flood plan as identified by 5300150600A and is found within a portion of Section 04 and 05, Township 23 North, Range 19 East, W.M., in Chelan County, Washington.

Shoreline Jurisdiction: Within 200 feet of Mission and associated floodplain.

The project will be within a shoreline of the state (RCW 90.58.030). The project will be located within City of Cashmere Urban shoreline Environment Designation.

The following Shoreline Master Program provisions are applicable to this development: Section 7- Definitions, Sections 21-Shoreline Works and Modifications/Rehabilitations, 30- Shoreline Permits, Fees and Procedures.

All conditions imposed herein shall be binding on the "Applicant," which terms shall include the owner or owners of the property, heirs, assigns and successors.

CONDITIONS OF APPROVAL

City of Cashmere

1. A copy of this permit and attached conditions shall be kept on-site and provided to the contractor and all others working within the shoreline area at all times. The applicant, contractor, machinery operators and all others working within the shoreline area shall have read this permit and attached conditions and shall follow its conditions at all times.
2. All conditions imposed by the Administrator shall be binding on the "Applicant," which terms shall include the owner or owners of the properties, heirs, assigns, and successors.
3. The conditions of approval apply to the Shoreline Substantial Development Permit of record.
4. The project shall proceed in compliance with the Shoreline Management Act (RCW 90.58), the Washington Administrative Code, the City of Cashmere Shoreline Master Program, the City of Cashmere Comprehensive Plan, and the City of Cashmere Utilities Development Code.
5. **Construction pursuant to the Shoreline Substantial Development Permit shall not begin and is not authorized until twenty-one (21) days from the date of filing, as defined in RCW 90.58.140(6) and WAC 173-27-130, or until all review proceedings initiated within twenty-one (21) days from the date of such filing have been terminated; except as provided in RCW 90.58.140(5)(a) and (b). The date of filing is the date of actual receipt of a complete submittal of local government action by the Department of Ecology (DOE). After local government approval of the permit application, local government shall submit the permit to DOE. DOE shall file the permit within thirty days of the date of submittal by local government. Authorization to conduct the entire development may not occur for 51 days from receipt of the local government permit filing by DOE.**
6. Substantial progress toward construction of the project, for which this shoreline permit has been granted, must be accomplished within three (3) years of the filing date of this permit. Authorization to conduct development activities granted by the permit shall terminate five (5) years from the filing date of the permit.
7. Any construction debris and excavated material removed from the shoreline that is not used in construction of the project shall be transported to a legal disposal facility located more than 200 feet upland from the shorelines.
8. The applicant shall be responsible for adverse effects on the property of others caused by this construction and shall take all necessary precautions to minimize such effects. In the

case where adverse effects take place, proper action to correct and mitigate for such effects is required.

9. Existing native vegetation within the riparian buffer shall be maintained as riparian habitat. Disturbance of this vegetation shall be limited solely to the permitted activities outlined within this substantial development permit. Disturbed riparian vegetation shall be supplemented with native vegetation and plant materials selected from an approved plant list, developed or approved by City of Cashmere, the Washington State Department of Ecology and the Washington State Department of Fish & Wildlife, or as approved in a Habitat Mitigation Plan for this site. New plantings shall consist of large nursery stock, commercial tublings or seedlings, and/or cuttings from local donor sites.
10. The applicant shall be responsible for properly installing and maintaining erosion control devices on the site to control silts, soils or other debris from entering shoreline area due to runoff across disturbed areas of the property. Erosion control shall be installed and maintained until such time that native vegetation has been planted and established in all disturbed areas.
11. The appropriate erosion or other water quality control devices (sand bags, silt fences, straw bales, or other pollutant control devices) shall be in place prior to any excavation or other work activities in order to prevent erosion and water quality contamination, and to isolate the work area from Shoreline area.
12. The erosion control devices shall be routinely checked and maintained to function properly, and shall remain in place as long as there is a potential for raw soils, silts, sediments, silt-laden water, or other deleterious materials to enter Shoreline area.
13. Prior to entering shoreline jurisdiction area, all equipment shall be checked for leaks and cleaned free of any external petroleum products, hydraulic fluid, machinery coolants, dirt, weeds both aquatic and terrestrial, weed seeds, and/or any other deleterious materials.
14. Refueling of all equipment on site shall take place outside all shoreline and riparian areas and buffers, and proper precautions will be in place to prevent any spillage of fuel.
15. The applicant shall ensure that Best Management Practices are followed for the removal, construction, and placement of the new utilities and roadway.
16. If the applicant or his agents discover previously unknown historic or archaeological remains/artifacts while conducting the development activities authorized by this permit, the applicant/agent shall immediately stop work and notify the appropriate tribal and state representatives and the City of Cashmere or local, state and tribal coordination.

FINDINGS OF FACT

1. The project consists of the excavation of approximately 13,000 cubic yards of subsurface organic ("wood waste") and replacement with clean granular fill at the Port's Mill Site
2. The subject property is located at the old Cashmere Mill site, located on Sunset Highway. The proposed work is located approximately 250 feet from the Wenatchee River, 300 feet from Mission Creek and 100 feet from Brender Creek. No-Name Creek runs through the site and is encased in a culvert within the project limits. The project is within the 100-year flood plan as identified by 5300150600A and is found within a portion of Section 04 and 05, Township 23 North, Range 19 East, W.M., in Chelan County, Washington.

3. According to the Washington State Department of Fish and Wildlife Priority Habitat and Species Maps, the subject property is not within an identified fish and wildlife habitat conservation area.
4. According to the Federal Emergency Management Agency, FIRM maps, panel # 5300150600A.
5. The property is not located within an identified City of Cashmere Geologically Hazardous Area.
6. There are no known Cultural Resources on the subject property. In the event that cultural materials are encountered, work will be halted and the Office of Archaeological and Historic Services will be notified.
7. The application materials were submitted to City of Cashmere on May 10, 2010.
8. The application received a determination of completeness on May 17, 2010.
9. The proposed project is not able to meet the listed shoreline substantial development exemptions within the City of Cashmere Shoreline Master Program and WAC173-27-040 (h) (ii) as the costs of the development do exceed five thousand (5,000) dollars. Therefore, a Shoreline Substantial Development Permit is required.
10. The public notification requirements for shoreline applications in City of Cashmere have been satisfied. Notice of Application was published, posted, and mailed to property owners/taxpayers within 300 feet of the property and referred to jurisdictional agencies and departments of the City on June 8, 2010 with a Public Comment Period that ended June 9, 2010. These included: City of Cashmere Public Works, Chelan County PUD #1, WA Department of Ecology, WA Department of Fish & Wildlife, Washington State Department of Transportation, WA State Office of Archaeology & Historical Preservation, The Yakama Nation, Confederated Tribes of the Colville, US Department of Fish & Wildlife, WA Department of Natural Resources, the United States Army Corps of Engineers.
11. A Determination of Non-significance (DNS) was issued on June 9, 2010, concurrently with the Notice of Application, in accordance with the optional DNS process found in WAC 197.11.355. The lead agency has determined that this proposal will not have a probable significant adverse impact on the environment that could not be satisfactorily mitigated by compliance with all applicable local, state and federal land use regulations. The SEPA Checklist and DNS are included within the file of record as adopted by reference.
12. Any Conclusion of Law that is more correctly a Finding of Fact is incorporated herein as such by this reference.

CONCLUSIONS

1. Referral agency comments were received and considered in the review of this proposal.
2. Environmental and Critical Areas review has been completed. As conditioned, the proposal does not have negative impacts on critical areas which cannot be mitigated.
3. The proposed project meets the definition of "Development" as defined in the City of Cashmere Shoreline Master Program and WAC173-27-030 and is considered a substantial development.
4. The authorization of the shoreline permits will not be materially detrimental to the purposes of the Revised Code of Washington, the Washington Administrative Code, the City of

Cashmere Shoreline Master Program, the City of Cashmere Comprehensive Plan, the City of Cashmere Utilities Development Code, or be otherwise detrimental to the public interest.

5. Subject to the Conditions of Approval, the project design is consistent with the City of Cashmere Shoreline Master Program requirements.
6. Any Finding of Fact that is more correctly a Conclusion of Law is incorporated herein as such by this reference.

This Shoreline Substantial Development Permit is granted pursuant to the Shoreline Master Program of City of Cashmere, as amended, and nothing in this permit shall excuse the applicant from compliance with any other federal, state, or local statutes, ordinances, or regulations applicable to this project, but not inconsistent with the Shoreline Management Act of 1971 (Chapter 90.58 RCW).

This Shoreline Substantial Development Permit may be rescinded pursuant to RCW 90.58.140(7) in the event the permittee fails to comply with the terms and conditions hereof.

CONSTRUCTION PURSUANT TO THIS SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT SHALL NOT BEGIN NOR IS AUTHORIZED UNTIL TWENTY-ONE (21) DAYS FROM THE DATE OF FILING AS DEFINED IN RCW 90.58.140(6) AND WAC 173-14-090, OR UNTIL ALL REVIEW PROCEEDINGS INITIATED WITHIN TWENTY-ONE (21) DAYS FROM THE DATE OF SUCH FILING HAVE TERMINATED; EXCEPT AS PROVIDED IN RCW 90.58.140(5) (a) (b) (c).

Substantial progress toward construction of the project for which these shoreline permits have been granted must be accomplished within two (2) years of the filing date of this permit. Authorization to conduct development activities granted by this permit shall terminate five (5) years from the filing date of this permit.

Approved this 12th day of July, 2010.

CITY OF CASHMERE

Mark Botello

Mark Botello (Director of Planning & Building)

Anyone aggrieved by this decision has twenty-one (21) days from the "date of filing" as defined in WAC 461-08-305 and RCW 90.58.140(6) to file a petition for review with the Shorelines Hearings Board as provided for in RCW 90.58.180 and Chapter 461-08 WAC, the rules of practice and procedure of the Shorelines Hearings Board.

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mailbox@rh2.com
1.800.720.8052

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BOTHELL
12100 NE 195th St, Ste 100
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(tel) 425.951.5400
(fax) 425.398.2774

EAST WENATCHEE
300 Simon St SE, Ste 5
East Wenatchee, WA 98802
(tel) 509.886.2900
(fax) 509.886.2313

MUKILTEO
11524 Mukilteo Speedway
Ste 203
Mukilteo, WA 98275
(tel) 425.493.2519
(fax) 425.398.2774

RICHLAND
114 Columbia Point Dr, Ste C
Richland, WA 99352
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(fax) 509.946.4630

SILVERDALE
2021 NW Myhre Rd, Ste 107
Silverdale, WA 98383
(tel) 360.698.6528
(fax) 360.698.0510

TACOMA
One Pacific Building
621 Pacific Ave, Ste 104
Tacoma, WA 98402
(tel) 253.272.3059
(fax) 425.398.2774

COPY

May 3, 2010

Mark Botello
Public Works Director
City of Cashmere
101 Woodring Street
Cashmere, WA 98815

Sent Via: *US Mail*

Subject: **Port of Chelan County**

Dear Mr. Botello:

This letter addresses the requirements of Section 29.1 of the Chelan County Shoreline Master Program regarding review criteria for the Port of Chelan County Mill Pond Rehabilitation project, portions of which are within 200 feet of the shoreline of the Wenatchee River and the 100-year floodplain of Mission Creek.

The project consists of the excavation of approximately 13,000 cubic yards of subsurface organic material ("wood waste") and replacement with clean granular fill at the Port's Mill Site. The proposed work is located approximately 250 feet from the Wenatchee River, 300 feet from Mission Creek and 100 feet from Brender Creek. No-Name Creek runs through the site and is incased in a culvert within the project limits. This project is to aid in the future economic redevelopment of the Cashmere Mill site.

Section 29.1 Review Criteria for Substantial Development Permits

The purpose of a substantial development permit is to facilitate environmentally sound utilization and coordinated planning of the shorelines of Chelan County. A substantial development permit shall be granted only when the proposed project is consistent with all of the following.

(a) The provisions of the Shoreline Management Act, RCW 90.58

(1) Recognize and protect the statewide interest over local interest;

This project is a site rehabilitation project that will assist in future economic growth in the City of Cashmere. By promoting economic growth the project will contribute to an increase in state revenue through additional Washington State Sales Tax receipts.

(2) Preserve the natural character of the shoreline;

The project site is currently undeveloped and is surrounded by industrial and commercial uses. The Burlington Northern Santa Fe Railroad Company owns and maintains a railway between the project area and the Wenatchee River, which has

permanently disrupted the natural character of the shoreline.

The proposed improvements consist of removing wood waste and replacing it with clean fill, so there will be no change in the nature character of the project site or shoreline as a result of this project.

(3) Result in long term over short term benefit;

The only short term benefit is to improve the development potential of the site. One long term benefit of this project will be related to fostering economic development in Cashmere. Another long term benefit is to remove wood waste, which has the potential to introduce contaminants into the Wenatchee River and replace it with clean fill.

(4) Protect the resources and ecology of the shoreline;

Potential impacts to the resources and ecology of the shoreline will be avoided by limiting the work within the 200-foot shoreline boundary as much as possible. No loss of aquatic habitat will occur as a result of this project. No work will be done in the water. The project has the potential to improve the resources and ecology of the shoreline by eliminating potential contaminant sources that may eventually reach the shoreline from the continued deterioration of the wood waste.

(5) Increase public access to publicly owned areas of the shorelines;

This project will have no positive or negative effect on public access to the shoreline.

(6) Increase recreational opportunities for the public in the shoreline; and

This project will have no positive or negative effect on recreational opportunities.

(7) Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

RCW 90.58.100 governs the Shoreline Master Programs. The following describes how the project conforms to the guidelines stated in the Chelan County Shoreline Master Program.

According to the Chelan County Shoreline Master Program, in Section 20, Ports and Industries, it must be demonstrated that the proposal is consistent with the policies of the Shoreline Management Act.

SECTION 20 PORTS AND INDUSTRIES

20.1 Urban Environment

20.1.1 Any person proposing a development, expansion or alteration or any phase thereof not exempted herein, of a port facility or industry, shall apply for a permit.

20.1.2 Port facilities, water dependent industries and water related industries as defined in Section 7.2.800 of these Use Regulations may be permitted subject to the Chelan County zoning resolution and the following regulations:

a. **The conditions of issuance of required federal and state permits may be considered in issuance of a permit.**

b. Facilities and structures for ports and water-related industries of more than thirty-five (35) feet above average ground grade shall be designed to minimize obstruction of views from adjoining residential or recreational developments.

No facilities or structures are proposed.

c. Water dependent industries and port related facilities shall be constructed no closer than twenty (20) feet from the ordinary high water mark EXCEPT that if such a structure must be closer than twenty (20) feet from the ordinary high water mark in order to facilitate operations that are specifically water dependent, the above setback requirement may be modified to fit the situation through the variance procedure (Section 29.2).

No facilities will be constructed. No work will be done closer than (20) feet from the ordinary high water mark.

d. Water related industries shall be constructed no closer than twenty (20) feet from the ordinary high water mark provided that the structure does not substantially reduce the view from adjacent properties.

No industries are proposed under this project. No work will be done closer than (20) feet from the ordinary high water mark.

e. Industrial development shall be landscaped with appropriate vegetation in order to restore or enhance the natural scenic qualities and mitigate the destruction of habitat of the area. Wherever practical, pedestrian access and use of the shoreline shall be permitted.

Landscaping will be constructed as a part of future development. Pedestrian access to the shoreline will not be impeded by this project.

20.1.3 Non-water related industries may be permitted on Urban shorelines provided that the development is proposed for a lot which is zoned industrial and subject to Section 20.1.2(a-e) above and shall be constructed no closer than fifty (50) feet from the ordinary high water mark, provided that construction does not substantially reduce the view from adjacent properties.

No industries are proposed under this project.

(b) The applicable provisions of the Washington Administrative Code (WAC) 173-27-150

(1) A substantial development permit shall be grated only when the development proposed is consistent with:

(a) The policies and procedures of the act

Summarized above.

(b) The provision of this regulation

Summarized above.

(c) The applicable master program adopted or approved for the area.

Addressed above in 29.1.a(7).

(2) Local government may attach conditions to the approval of permits as necessary to assure consistency of the project with the act and the local master program.

(d) The Chelan County Shoreline Master Program

Addressed above in 29.1.a(7).

Section 29.4 Review Criteria for Shorelines of Statewide Significance
29.4.1 The Shoreline Management Act clearly establishes that Shorelines of Statewide Significance should receive additional attention and scrutiny (RCW 90.58.020 and WAC 173-16-040 (5)) and should be utilized in accordance with the following principles:
Criteria a-f below addresses the same issues as RCW 90.58.020, 1-6, which are addressed above.

- Recognize and protect the interest of all Washington State residents equally.
- Preserve the natural character of the shoreline.
- Consider results in long term over short term benefits.
- Protect the resources and ecology of the shorelines.
- Increase public access to publicly owned areas of the shoreline.
- Increase recreational opportunities for the public.

29.4.2 All permit applications for a proposed development along Shorelines of Statewide Significance must be shown to be consistent with the intent and spirit of the above mentioned principles.

Based on the responses to the above questions and the information included in the accompanying permit application, this project is consistent with the intent and spirit of the above-mentioned principles.

Please do not hesitate to let me know if I can provide additional information or clarification. Thank you for your consideration.

Sincerely,

RH2 ENGINEERING, INC.

Ryan Brownlee, P.E.
Project Engineer

RB/sp/kj

Enclosures: Shoreline Substantial Development Permit Application

2009
WASHINGTON STATE
Joint Aquatic Resources Permit Application (JARPA) Form [help]

US Army Corps of Engineers - Seattle District

AGENCY USE ONLY

Date received:

Agency reference #: _____

Tax Parcel #(s): _____

USE BLACK OR BLUE INK TO ENTER ANSWERS IN WHITE SPACES BELOW.

Part 1–Project Identification

Unique project information that makes it easy to identify. [help]

1a. Unique Project Identifier Number (UPI #) [help] • Don't have one yet? Get one at http://www.epermitting.wa.gov or call the Washington Governor's Office of Regulatory Assistance at (800) 917-0043.
N/A
1b. Project Name (Examples: Smith's Dock or Seabrook Lane Development) [help]
Sunset Highway Improvements

Part 2–Applicant

The person or organization responsible for the project. [help]

2a. Name (Last, First, Middle) and Organization (if applicable)			
Laura Jaecks, Port of Chelan County			
2b. Mailing Address (Street or PO Box)			
238 Olds Station Road, Suite A			
2c. City, State, Zip			
Wenatchee, WA 98801			
2d. Phone (1)	**2e.** Phone (2)	**2f.** Fax	**2g.** E-mail
(509) 661-3118	( )	(509) 661-3117	laura@ccpd.com

Part 3–Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b. of this application.) [help]

3a. Name (Last, First, Middle) and Organization (if applicable)			
Ryan Brownlee, P.E., RH2 Engineering			
3b. Mailing Address (Street or PO Box)			
300 Simon St. SE, Suite 5			
3c. City, State, Zip			
East Wenatchee, WA 98802			
3d. Phone (1)	**3e.** Phone (2)	**3f.** Fax	**3g.** E-mail
(509)886-6792	( )	(509)886-2313	rbrownlee@rh2.com

Part 4–Property Owner(s) [help]

Contact information for people or organizations owning the property(ies) where the project will occur. [help]

☐ Same as applicant. (Skip to Part 5.)

☐ Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)

☐ There are multiple property owners. Complete the section below and use JARPA Attachment A for each additional property owner.

4a. Name (Last, First, Middle) and Organization (if applicable)			
Port of Chelan County			
4b. Mailing Address (Street or PO Box)			
238 Olds Station Road, Suite A			
4c. City, State, Zip			
Wenatchee, WA 98801			
4d. Phone (1)	**4e.** Phone (2)	**4f.** Fax	**4g.** E-mail
(509) 663-5159	( )	( )	

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [help]

☐ There are multiple properties or project locations (e.g., linear projects). Complete the section below and use JARPA Attachment B for each additional property.

5a. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5n.) [help]			
Lot F CE 2009-029 PT GL1 of Sunset Highway;			
5b. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]			
Cashmere, WA, 98815			
5c. County [help]			
Chelan			
5d. Provide the section, township, and range for the project location. [help]			
¼ Section	**Section**	**Township**	**Range**
NW	5	23N	19E

5e. Provide the latitude and longitude of the project location. [help]

- Example: 47.03922 N lat. / -122.89142 W long

47.5211111N/ 120.477778W

5f. List the tax parcel number(s) for the project location. [help]

- The local county assessor's office can provide this information.

231905110650

5g. Indicate the type of ownership of the property. (Check all that apply.) [help]

☐ State Owned Aquatic Land Mission Creek ☐ Tribal ☐ Private

☐ Other publicly owned (federal, state, county, city, special districts like schools, ports, etc.) Chelan County / City of Cashmere

5h. Contact information for all adjoining property owners, lessees, etc. (If you need more space, use JARPA Attachment C.) [help]

Name	Mailing Address	Tax Parcel # (if known)
See Attached List		

5i. Is any part of the project area within a 100-year flood plain? [help]

☒ Yes ☐ No ☐ Don't know

5j. Briefly describe the vegetation and habitat conditions on the property. [help]

The site is currently undeveloped and partially covered with hydroseeded dryland grass.

5k. Describe how the property is currently used. [help]

The property is currently undeveloped land and is not currently used.

5l. Describe how the adjacent properties are currently used. [help]

The adjacent properties are industrial/commercial

5m. Describe the structures (above and below ground) on the property, including their purpose(s). [help]

There are abandoned subsurface concrete foundations on site.

5n. Provide driving directions from the closest highway to the project location, and attach a map. [help]

The site is located on Sunset highway approximately 1/2 mile from Division Street in Cashmere, Washington. Division Street is an extension of Cotlets Way. Cotlets Way is an exit from SR2/SR97 approximately 10 miles west of Wenatchee, Washington.

Part 6–Project Description

6a. Summarize the overall project. You can provide more detail in 6d. [help]

Excavation of approximately 13,000 cubic yards of subsurface organic material and replacement with clean granular fill.

6b. Indicate the project category. (Check all that apply.) [help]

☒ Commercial ☐ Residential ☐ Institutional ☒ Transportation ☐ Recreational
☒ Maintenance ☒ Environmental Enhancement

6c. Indicate the major elements of your project. (Check all that apply.) [help]

☐ Aquaculture	☐ Culvert	☐ Float	☐ Road
☐ Bank Stabilization	☐ Dam / Weir	☐ Geotechnical Survey	☐ Scientific Measurement Device
☐ Boat House	☐ Dike / Levee / Jetty	☐ Land Clearing	☐ Stairs
☐ Boat Launch	☐ Ditch	☐ Marina / Moorage	☐ Stormwater facility
☐ Boat Lift	☐ Dock / Pier	☐ Mining	☐ Swimming Pool
☐ Bridge	☐ Dredging	☐ Outfall Structure	☐ Utility Line
☐ Bulkhead	☐ Fence	☐ Piling	
☐ Buoy	☐ Ferry Terminal	☐ Retaining Wall (upland)	
☐ Channel Modification	☐ Fishway		

☐ Other: Excavation and Fill

6d. Describe how you plan to construct each project element checked in 6c. Include specific construction methods and equipment to be used. [help]

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year flood plain.

All construction activities will occur within the 100-year flood plain of Mission Creek.

Wood waste material will be excavated using conventional construction equipment such as track excavators, bull dozers, front-end loaders and dump trucks. Dewatering will occur through a series of pumps with screens. Water removed from the excavated areas will be filtered and dispersed on the surface nearby in order to infiltrate.

Clean granular fill material will be trucked to the site or relocated from nearby construction projects. The material will be dumped and compacted using either a roller or hydraulic tamper. Vibratory compaction may be used if necessary.

6e. What are the start and end dates for project construction? (month/year) [help]

- If the project will be constructed in phases or stages, use JARPA Attachment D to list the start and end dates of each phase or stage.

Start date: June 1, 2010 End date: October 30, 2010 ☐ See JARPA Attachment D

6f. Describe the purpose of the work and why you want or need to perform it. [help]

The purpose of the work is to improve the character of the existing land and make it buildable.

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [help]

Approximately $50,000

6h. Will any portion of the project receive federal funding? [help]

- **If yes**, list each agency providing funds.

☐ Yes ☒ No ☐ Don't know

Part 7–Wetlands: Impacts and Mitigation

X Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.)

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [help]

☐ Not applicable

7b. Will the project impact wetlands? [help]

☐ Yes ☒ No ☐ Don't know

7c. Will the project impact wetland buffers? [help]

☐ Yes ☒ No ☐ Don't know

7d. Has a wetland delineation report been prepared? [help]

- **If yes**, submit the report, including data sheets, with the JARPA package.

☐ Yes ☒ No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [help]

- **If yes**, submit the wetland rating forms and figures with the JARPA package.

☐ Yes ☒ No ☐ Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [help]

- **If yes**, submit the plan with the JARPA package.

☐ Yes ☐ No ☒ Not applicable – No adverse impacts

7g. Use the table below to list the type and rating of each wetland that will be impacted; the extent and duration of the impact; and the type and amount of compensatory mitigation proposed. If you are submitting a compensatory mitigation plan with a similar table, you may simply state (below) where we can find this information in the mitigation plan. [help]

Activity causing impact (fill, drain, excavate, flood, etc.)	Wetland type and rating category[1]	Impact area (sq. ft. or acres)	Duration of impact[2]	Proposed mitigation type[3]	Wetland mitigation area (sq. ft. or acres)

[1] Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.

[2] Indicate the time (in months or years, as appropriate) the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.

[3] Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available: _____

7h. For all filling activities identified in 7g., describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [help]

7i. For all excavating activities identified in 7g., describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [help]

7j. Summarize what the compensatory mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [help]

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, "waterbodies" refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [help]

☒ Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [help]

☐ Not applicable

"No-Name" creek bisect the proposed property and is presently encased in a culvert of unknown material. It is the intent of this project to maintain the integrity of this culvert. Sections of the culvert will be removed and replaced they are found to be degraded or in need of repair / replacement. All work is presently planed landward of the ordinary high water of "No-Name" creek. "No-Name" creek will be protected from adverse impact by prohibiting work within the ordinary high water and by installing sediment controls such as silt fence.

Brender Creek flows adjacent to the property and is separated from the project by Mill Road. Brender Creek will be protected from adverse impact by installing sediment controls such as silt fence.

8b. Will your project impact a waterbody or the area around a waterbody? [help]

☐ Yes ☒ No

8c. Summarize impact(s) to each waterbody in the table below. [help]

Activity causing impact (clear, dredge, fill, pile drive, etc.)	Waterbody name	Impact location[1]	Duration of impact[2]	Amount of material to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
				None	N/A

[1] Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.

[2] Indicate the time (in months or years, as appropriate) the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

8d. Have you prepared a mitigation plan to compensate for the project's adverse impacts to non-wetland waterbodies? [help]

- **If yes**, submit the plan with the JARPA package.

☐ Yes ☐ No ☒ Not applicable

8e. Summarize what the compensatory mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7j., you do not need to restate your answer here. [help]

N/A

8f. For all activities identified in 8c., describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [help]

N/A

8g. For all excavating or dredging activities identified in 8c., describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [help]

N/A

Part 9–Additional Information

Any additional information you can provide helps the reviewer(s) understand your project.

9a. If you have already worked with any government agencies on this project, list them below. [help]

Agency Name	Contact Name	Phone	Most Recent Date of Contact
City of Cashmere	Mr. Mark Botello	(509) 782-3513	April 26, 2010

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 on the Washington Department of Ecology's 303(d) List? [help]

- **If yes,** list the parameter(s) below.
- If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: http://www.ecy.wa.gov/programs/wq/303d/.

☐ Yes ☒ No

9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help]

- Go to http://cfpub.epa.gov/surf/locate/index.cfm to help identify the HUC.

17020011

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help]

- Go to http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm to find the WRIA #.

45

9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help]

- Go to http://www.ecy.wa.gov/programs/wq/swqs/criteria.html for the standards.

☐ Yes ☐ No ☒ Not applicable

9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [help]

- If you don't know, contact the local planning department.
- For more information, go to: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html

☐ Rural ☒ Urban ☐ Natural ☐ Aquatic ☐ Conservancy ☒ Other High Intensity

9g. What is the Washington Department of Natural Resources Water Type? [help]

- Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System.

☒ S ☒ F ☐ Np ☐ Ns

9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help]

- **If no**, provide the name of the manual your project is designed to meet.

☒ Yes ☐ No

Name of manual:

9i. If you know what the property was used for in the past, describe below. [help]

Historical Lumber Mill

9j. Has a cultural resource (archaeological) survey been performed on the project area? [help]

- **If yes**, attach it to your JARPA package.

☐ Yes ☒ No

9k. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [help]

See Attached List

9l. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [help]

Wenatchee/Peshastin Riparian Strip

Part 10–Identify the Permits You Are Applying For

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at http://apps.ecy.wa.gov/opas/.
- Governor's Office of Regulatory Assistance at (800) 917-0043 or help@ora.wa.gov.

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [help]

- For more information about SEPA, go to www.ecy.wa.gov/programs/sea/sepa/e-review.html.

☐ A copy of the SEPA determination or letter of exemption is included with this application.

☒ A SEPA determination is pending with City of Cashmere (lead agency). The expected decision date is Unknown.

☐ I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.)

- Submit the Fish Habitat Enhancement Project form with this application. The form can be found at http://www.epermitting.wa.gov/Portals/_JarpaResourceCenter/images/default/fishenhancement.doc

☐ This project is exempt (choose type of exemption below).

☐ Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?

_____

☐ Other: _____

☐ SEPA is pre-empted by federal law. [help]

10b. Indicate the permits you are applying for. (Check all that apply.) [help]

LOCAL GOVERNMENT

Local Government Shoreline permits:

☒ Substantial Development ☐ Conditional Use ☐ Variance

☐ Shoreline Exemption Type (explain): Per Chelan County Shoreline Master Program section 7.6.2(b)____

Other city/county permits:

☐ Floodplain Development Permit ☐ Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

☐ Hydraulic Project Approval (HPA) ☐ Fish Habitat Enhancement Exemption

Washington Department of Ecology:

☐ Section 401 Water Quality Certification

Washington Department of Natural Resources:

☐ Aquatic Resources Use Authorization

FEDERAL GOVERNMENT

United States Department of the Army permits (U.S. Army Corps of Engineers):

☐ Section 404 (discharges into waters of the U.S.) ☐ Section 10 (work in navigable waters)

United States Coast Guard permits:

☐ General Bridge Act Permit ☐ Private Aids to Navigation (for non-bridge projects)

Part 11–Authorizing Signatures

Signatures required before submitting the JARPA package.

11a. Applicant Signature (required) [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. _____ (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. _____ (initial)

Applicant

Date 5/3/10

11b. Authorized Agent Signature [help]

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Authorized Agent

Date 5/29/10

11c. Property Owner Signature (if not applicant) [help]

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

Property Owner

Date

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact The Governor's Office of Regulatory Assistance (ORA). People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341.
ORA publication number: ENV-019-09

Port of Chelan County
Mill Pond Rehabilitation Project
SEPA Checklist

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

Port of Chelan County, Cashmere Mill Site, Mill Pond Rehabilitation Project

2. Name of applicant:

Port of Chelan County

3. Address and phone number of applicant and contact person:

Mark Urdahl
Executive Director
Port of Chelan County
238 Olds Station Road, Suite A
Wenatchee, WA 98801

4. Date checklist prepared: April 29, 2010

5 Agency requesting checklist: City of Cashmere

6. Proposed timing or schedule (including phasing, if applicable):

Street and utility improvements will likely begin in June of 2010

7. Do you have any plans for future additions, or further activity related to or connected with this proposal? If yes, explain.

Yes, additional filling of excavated area as fill material becomes available.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

A shorelines substantial development permit is being sought.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

A JARPA has been developed and is pending approval for the adjacent Sunset Highway Roadway Frontage Improvements project.

10. List any government approvals or permits that will be needed for your proposal, if known.

Based on the preliminary geotechnical investigations, soils on in the project area are expected to be sands and gravels typical of deposits from glacial outwash on river terraces. The USDA Natural Resources Conservation Service classifies the soils as Cashmont sandy loam and Beverly fine sandy loam. Preliminary geotechnical investigations also indicate that there is a significant amount of organic wood debris (wood waste) located in the project limits.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Approximately 13,000 cubic yards (yd^3) of material will be excavated for the removal of wood waste material. Initially, the excavated area will be filled to within 4-feet of the existing ground surface. The remaining excavated area will be filled over time as granular import material becomes available.

Fill material will consist of granular soil and recycled (crushed) concrete imported from nearby construction projects.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

A stormwater pollution prevention plan in accordance with the Stormwater Management Manual for Eastern Washington will be developed to contain any erosion from the project. However, this project is at low risk for erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

There will be no impervious surface covering the site at the completion of this project.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Temporary erosion and sedimentation controls will be installed during construction consistent with the best management practices of the Stormwater Management Manual for Eastern Washington and City of Cashmere regulations.

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

No material will be filled or dredged within surface water or wetlands.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities, if known.**

No.

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

Yes, the project lies within the 100-year floodplain of Mission Creek.

6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No.

b. **Ground:**

1) **Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities, if known.**

Due to shallow water table, dewatering of the immediate area will be required to facilitate excavation. Groundwater that is removed from the excavated area will be treated and dispersed on the surface nearby and infiltrated back to the ground.

2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals ....; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

N/A

c. Water Runoff (including storm water):

1) **Describe the source of runoff (including storm water) and method of collection and disposal, if any (including quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

Direct precipitation over the excavated area will not leave the excavated areas in the form of runoff. Precipitation outside the excavated area within the

the site will be hydroseeded upon completion.

d. List threatened or endangered species known to be on or near the site.

Upper Columbia Summer Steelhead, Upper Columbia Spring Chinook, Bull Trout/Dolly Varden

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other: _____

mammals: deer, bear, elk, beaver, other: _____

fish: bass, salmon, trout, herring, shellfish, other _____

b. List any threatened or endangered species known to be on or near the site.

The Wenatchee River provides passage for a number of listed anadromous species.

c. Is the site part of a migration route? If so, explain.

Yes, the entire region is within the Pacific Flyway for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any.

Water quality in the Wenatchee will be enhanced because of sediment removal provided by the project.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

N/A

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally explain.

No.

The project corridor consists of a mix of commercial and industrial uses.

b. **Has the site been used for agriculture? If so, describe.**

No.

c. **Describe any structures on the site.**

Subsurface exploration has revealed the presence of subsurface concrete slabs in the project vicinity.

d. **Will any structure be demolished? If so, what?**

Subsurface concrete slabs may be demolished and removed if encountered.

e. **What is the current zoning classification of the site?**

Property in the vicinity of the project is zoned Mixed Commercial – Light Industrial.

f. **What is the current comprehensive plan designation of the site?**

The entire project is designated Urban Growth Area under the City's adopted Growth Management Act plan.

g. **If applicable, what is the current shoreline master program designation of the site?**

High Intensity

h. **Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

No.

i. **Approximately how many people would reside or work in the completed project?**

None.

j. **Approximately how many people would the completed project displace?**

None.

k. **Proposed measures to avoid or reduce displacement impacts, if any:**

N/A

c. **What existing off-site sources of light or glare may affect your proposal?**

None.

d. **Proposed measures to reduce or control light and glare impacts, if any:**

None.

12. **Recreation**

a. **What designated and informal recreational opportunities are in the immediate vicinity?**

None.

b. **Would the proposed project displace any existing recreational uses? If so, describe.**

No.

c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

None necessary.

13. **Historic and Cultural Preservation**

a. **Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.**

None known at this time.

b. **Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**

None known.

c. **Proposed measures to reduce or control impacts, if any:**

None.

16. Utilities

a. Circle utilities currently available at the site:

electricity, water, telephone, sanitary sewer, storm sewer, refuse service, natural gas, other: _____

b. Describe the utilities that are proposed for the project, the utility providing the services, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature of Preparer: _____

Signature of Applicant: _____

Date Submitted: 5/3/10

City of Cashmere
101 Woodring Street
Cashmere, WA 98815
Ph (509) 782-3513 Fax (509) 782-2840
Website www.cityofcashmere.org

May 17, 2010

Laura Jaecks
Port of Chelan County
238 Olds Station Road, Suite A
Cashmere, WA 98815

Re: Application for Shoreline Substantial Development Permit #2010-2

Dear Ms. Jaecks:

This letter serves as notice that your application for the Shoreline Substantial Development permit identified above has been accepted as complete. Please be aware that throughout the review process further information may be requested.

A "notice of application" is being prepared for the Shoreline Substantial Development permit in which the City will publish in the Cashmere Valley Record for two (2) consecutive weeks, with the comment period commencing on the date of second publication. The notice of application will also be posted on the subject property and at City Hall for a thirty (30) day public comment period. This notice of application and the application materials will also be sent to other jurisdictions and/or agencies and property owners within 350 feet of the subject site for comments during this time.

Following the comment period, the City will mail you copies of all comments received as a result of the notice, to which you may respond if you so choose.

The City of Cashmere Director of Planning & Building will consider comments and responses received as a result of the notice and will review your project's consistency with the City's adopted Comprehensive Plan, Shoreline Management Act., CMC Titles 14 through 18 and the applicable State WAC's and RCW's.

Sincerely,

Mark Botello

Mark Botello
Director of Planning & Building

Cc: Ryan Brownlee (300 Simon St. SE, Suite 5, East Wenatchee, WA. 98892)

Municipal development land use discussions with Chelan County will take place up to [illegible]

City of Cashmere

101 Woodring Street
Cashmere, WA 98815
Ph (509) 782-3513 Fax (509) 782-2840
Website www.cityofcashmere.org

CITY OF CASHMERE
APPLICATION
SUBSTANTIAL DEVELOPMENT PERMIT
AND CRITICAL AREAS PERMIT

Name of Applicant: Port of Chelan County

Application Number: Shoreline Substantial Development Permit 2010-2

Date of Application: Monday, May 10, 2010

Date Letter of Completeness Issued: Monday, May 17, 2010

Date Notice of Application Issued: Wednesday, June 9 , 2010

Description of Proposal and Project Permits: The project consists of the excavation of approximately 13,000 cubic yards of subsurface organic ("wood waste") and replacement with clean granular fill at the Port's Mill Site. The proposed work is located approximately 250 feet from the Wenatchee River, 300 feet from Mission Creek and 100 feet from Brender Creek. No-Name Creek runs through the site and is incased in a culvert within the project limits. The project is within the 100-year flood plan as identified by 5300150600A

Requested Approvals, Actions and/or Required Studies: Substantial Development Permit and Flood Plain Development Permit.

Other Permits Not Included, To the Extent Known: SEPA

Existing Environmental Documents and Where They Can Be Reviewed: Pursuant to Section 18.04.110 an environmental checklist was submitted with the application and a Determination of Nonsignificance (DNS) was issued on Wednesday, May 26, 2010. Environmental Checklist and DNS is available for review at Cashmere City Hall, and the optional DNS process is being used pursuant to WAC 197-11-355.

Statement of Public Comment Period: The 30-day agency and SEPA comment period commences on Wednesday, June 9, 2010 and lasts through July 8, 2010. Any interested party has the right to comment on the proposal, request a copy of the decision once it is made, and may appeal the decision subject to the requirements of the CMC Title 14.11.010, Appeal of Administrative Interpretations and Approvals.

Statement of Preliminary Determination: The development regulations that will be used for the project mitigation and to provide consistency with the type of land use for the proposed site, are outlined in Titles 12, 13, 14, 15, and 18.

Statement of Decision Time Line: A decision on this application will be made within 120 days after issuance of the letter of completeness, pursuant to RCW 36.70B and the CMC Title 14 Development Code Administration.

City Contact Person: For further information about this project, please contact Mark Botello, Director of Planning & Building, at 101 Woodring Street, Cashmere, WA 98815, or by calling 782-3513.

DETERMINATION OF NONSIGNIFICANCE

Description of proposal: Port of Chelan County Mill Pond Rehabilitation

Proponent: Port of Chelan County

Location of proposal, including street address, if any:. The project consists of the excavation of approximately 13,000 cubic yards of subsurface organic ("wood waste") and replacement with clean granular fill at the Port's Mill Site. The proposed work is located approximately 250 feet from the Wenatchee River, 300 feet from Mission Creek and 100 feet from Brender Creek. No-Name Creek runs through the site and is incased in a culvert within the project limits. The project is within the 100-year flood plan as identified by 5300150600A

Lead agency: City of Cashmere

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

___ There is no comment period for this DNS.

___ This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 15 days from the date below. Comments must be submitted by _____.

__X__ This optional DNS is issued pursuant to WAC 197-11-355.

Responsible official: Mark Botello

Position/Title: Director of Planning & Building **Phone:** 509-782-3513

Address: 101 Woodring Street, Cashmere, WA 98815

Date: June 9, 2010 **Signature:** Mark Botello

Owner Name	Address_1	City	State	Zip
CRUNCH PAK LLC	300 SUNSET AVE	CASHMERE	WA	98815
GRAMS RANDALL L	203 CEDAR ST	CASHMERE	WA	98815
HAVERFIELD RODNEY A	PO BOX 356	CASHMERE	WA	98815
AMERICAN LEGIONNO 64		CASHMERE	WA	98815
SCHOOL DIST NO 222	210 SOUTH DIVISION	CASHMERE	WA	98815
CASHMERE MISSION LLC	300 SUNSET HIGHWAY	CASHMERE	WA	98815
REYES ALEX E	317 E RAYMOND AVE	CHELAN	WA	98816
CHELAN COUNTY PUD	PO BOX 1231	WENATCHEE	WA	98807
SPEARS PROPERTIES LLC	PO BOX 451	CASHMERE	WA	98815
RYAN RICHARD C	5125 VISTA HEIGHTS PL	CASHMERE	WA	98815
PORT OF CHELAN COUNTY	238 OLDS STATION RD STE A	WENATCHEE	WA	98801
MOUNT CASHMERE PROPERTIES LLC	2833 EUCLID AVE	WENATCHEE	WA	98801
GARCIA RAFAEL	5557 SUNSET HWY	CASHMERE	WA	98815
REYNA JAVIER A	203 PERRY ST	CASHMERE	WA	98815

Cashmere Mill Pond Rehabilitation

Port of Chelan County

Legend
Wetlands
Streams
County Parcels

last modified by: am on 4/30/2010
location: J:\Jobs\PCC\356-03\001 Port\GIS\ Cashmere Mill Pond Rehab\gis\MillPond.mxd

City of Cashmere
101 Woodring Street
Cashmere, WA 98815
Ph (509) 782-3513 Fax (509) 782-2840
Website www.cityofcashmere.org

CITY OF CASHMERE
LAND USE APPLICATION
COMMENT SHEET

APPLICATION #: 2010-02

TYPE OF PROPOSED LAND USE: Shoreline Substantial Development/Critical Areas

NAME OF APPLICANT: Port of Chelan County

DEADLINE FOR COMMENTS: July 8, 2010

RETURN COMMENTS TO: Mark Botello, Director of Planning & Building
City of Cashmere
101 Woodring Street
Cashmere, WA 98815

All comments will be compiled for consideration during the City's application review process. If comments are not received from your agency by the above date, it will be construed that your agency has no concern with this application.

SIGNED: _____ DATE: _____

AGENCY NAME: _____

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

February 19, 2013

Laura Jaecks
Port of Chelan County
285 Technology Center Way. STE 102
Wenatchee, WA 98801

RE: Transfer and modification of coverage under the Construction Stormwater General Permit.

Permit number:	**WAR-011991**
Site Name:	**Port of Chelan - Cashmere Mill Site**
Location:	**South of Sunset Hwy**
	Cashmere **County: Chelan**
Disturbed Acres:	**22**

Dear Ms. Jaecks:

The Washington Department of Ecology (Ecology) received your Transfer of Coverage and modification of coverage paperwork for the Construction Stormwater General Permit. Our records have been updated to show Port of Chelan County as responsible for permit coverage effective December 15, 2012. Our records also show a change in project plans to start environmental remediation activities at site. **Please retain this permit coverage letter with your permit (enclosed), stormwater pollution prevention plan (SWPPP), and site log book. These materials are the official record of permit coverage for your site.**

Please take time to read the entire permit and contact Ecology if you have any questions.

Appeal Process
You have a right to appeal coverage under the general permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this letter. This appeal is limited to the general permit's applicability or non-applicability to a specific discharger. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of this letter:

- File your appeal and a copy of the permit cover page with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and the permit cover page on Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

Address and Location Information:

Street Addresses:	**Mailing Addresses:**
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board (PCHB) 1111 Israel Road SW, Suite 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Electronic Discharge Monitoring Reports (WQWebDMR)
This permit requires that Permittees submit monthly discharge monitoring reports (DMRs) electronically using Ecology's secure online system, WQWebDMR. To sign up for WQWebDMR go to: www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html. If you have questions, contact Tonya Wolfe at (360) 407-7097 (Olympia area), or (800) 633-6193/option 3, or email WQWebPortal@ecy.wa.gov.

Ecology Field Inspector Assistance
If you have questions regarding stormwater management at your construction site, please contact Bryan Neet of Ecology's Central Regional Office in Yakima at bryan.neet@ecy.wa.gov, or (509) 575-2808.

Questions or Additional Information
Ecology is committed to providing assistance. Please review our web page at: www.ecy.wa.gov/programs/wq/stormwater/construction/. If you have questions about the construction stormwater general permit, please contact Joyce Smith at joyce.smith@ecy.wa.gov, or (360) 407-6858.

Sincerely,

Dewey Weaver (Acting for Bill Moore)

Bill Moore, P.E., Manager
Program Development Services Section
Water Quality Program

Enclosure

Construction Stormwater
SITE INSPECTION CHECKLIST

Project_____ Permit No._____ Inspector_____ Date_____ Time_____

Site BMPs	Overall Condition	Need Repair?	Comments/Observations
Clearing Limits			
• *Buffer Zones around sensitive areas*	G F P	Y N	
•	G F P	Y N	
•	G F P	Y N	
Construction Access/Roads			
• *Stabilized site entrance*	G F P	Y N	
• *Stabilized roads/parking area*	G F P	Y N	
•	G F P	Y N	
Control Flow Rates			
• *Swale*	G F P	Y N	
• *Dike*	G F P	Y N	
• *Sediment pond*	G F P	Y N	
• *Sediment trap*	G F P	Y N	
•	G F P	Y N	
•	G F P	Y N	
Install Sediment Controls			
• *Sediment pond/trap*	G F P	Y N	
• *Silt fence*	G F P	Y N	
• *Straw bale barriers*	G F P	Y N	
•	G F P	Y N	
•	G F P	Y N	
•	G F P	Y N	
Preserve Vegetation/Stabilize Soils			
• *Nets and blankets*	G F P	Y N	
• *Mulch*	G F P	Y N	
• *Seeding*	G F P	Y N	
•	G F P	Y N	
•	G F P	Y N	
Protect Slopes			
• *Terrace*	G F P	Y N	
• *Pipe slope drains*	G F P	Y N	
•	G F P	Y N	
•	G F P	Y N	
Protect Drain Inlets			
• *Inserts*	G F P	Y N	
•	G F P	Y N	
•	G F P	Y N	
Stabilize Channels and Outlets			
• *Conveyance channels*	G F P	Y N	
• *Energy dissipators*	G F P	Y N	
•	G F P	Y N	
Control Pollutants			
• *Chemical Storage Area covered*	G F P	Y N	
• *Concrete handling*	G F P	Y N	
•	G F P	Y N	
Control De-watering			
•	G F P	Y N	

G=Good F=Fair P=Poor Y=Yes N=No

Construction Stormwater
SITE INSPECTION CHECKLIST

Project_____ Permit No._____ Inspector_____ Date_____ Time_____

Will existing BMPs need to be modified or removed, or other BMPs installed? YES NO
IF YES, list the action items to be completed on the following table:

Actions to be Completed	Date Completed/ Initials
1.	
2.	
3.	
4.	
5.	
6.	

Describe current weather conditions

Approximate amount of precipitation since last inspection: _____ inches
and precipitation in the past 24 hours*: _____ inches
**based on an on-site rain gauge or local weather data.*

Describe discharging stormwater, if present. Note the presence of suspended sediment, "cloudiness", discoloration, or oil sheen.

Was water quality sampling part of this inspection? YES NO
If yes, record results below (attach separate sheet, if necessary):

Parameter:	Method (circle one)	Result	Units
Turbidity	tube, meter, laboratory		NTU (cm, if tube used)
pH	paper, kit, meter		pH standard units

Is the site in compliance with the SWPPP and the permit requirements? YES NO
If no, indicate tasks necessary to bring site into compliance on the "Actions to be Completed" table above, and include dates each job WILL BE COMPLETED.
If no, has the non-compliance been reported to Dept. of Ecology? YES NO
If no, should the SWPPP be modified: YES NO

Sign the following certification:
"I certify that this report is true, accurate, and complete, to the best of my knowledge and belief."

Inspection completed on:_____ by: (print+signature)_____

Title/Qualification of Inspector:_____

WAR-011991
Port of Chelan - Cashmere Mill Site
South of Sunset Hwy
Cashmere Chelan

Issuance Date: December 1, 2010
Effective Date: January 1, 2011
Expiration Date: December 31, 2015

CONSTRUCTION STORMWATER GENERAL PERMIT

National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Stormwater Discharges Associated with Construction Activity

State of Washington
Department of Ecology
Olympia, Washington 98504

In compliance with the provisions of
Chapter 90.48 Revised Code of Washington
(State of Washington Water Pollution Control Act)
and
Title 33 United States Code, Section 1251 et seq.
The Federal Water Pollution Control Act (The Clean Water Act)

Until this permit expires, is modified or revoked, Permittees that have properly obtained coverage under this general permit are authorized to discharge in accordance with the special and general conditions that follow.

Kelly Susewind, P.E., P.G.
Water Quality Program Manager
Washington State Department of Ecology

TABLE OF CONTENTS

LIST OF TABLES

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions within this permit for additional submittal requirements. Appendix A provides a list of definitions. Appendix B provides a list of acronyms.

Table 1. Summary of Permit Report Submittals

Permit Section	Submittal	Frequency	First Submittal Date
S5.A and S8	High Turbidity/Transparency Phone Reporting	As Necessary	Within 24 hours
S5.B	Discharge Monitoring Report	Monthly*	Within 15 days of applicable monitoring period
S5.F and S8	Noncompliance Notification	As necessary	Immediately
S5.F	Noncompliance Notification – Written Report	As necessary	Within 5 Days of non-compliance
G2.	Notice of Change in Authorization	As necessary	
G6.	Permit Application for Substantive Changes to the Discharge	As necessary	
G8.	Application for Permit Renewal	1/permit cycle	No later than 180 days before expiration
G9.	Notice of Permit Transfer	As necessary	
G20.	Notice of Planned Changes	As necessary	
G22.	Reporting Anticipated Non-compliance	As necessary	

SPECIAL NOTE: *Permittees must submit Discharge Monitoring Reports (DMRs) to the Washington State Department of Ecology monthly, regardless of site discharge, for the full duration of permit coverage. Refer to Section S5.B of this General Permit for more specific information regarding DMRs.

Table 2. Summary of Required On-site Documentation

Document Title	Permit Conditions
Permit Coverage Letter	See Conditions S2, S5
Construction Stormwater General Permit	See Conditions S2, S5
Site Log Book	See Conditions S4, S5
Stormwater Pollution Prevention Plan (SWPPP)	See Conditions S9, S5

SPECIAL CONDITIONS

S1. PERMIT COVERAGE

A. Permit Area

This Construction Stormwater General Permit (CSWGP) covers all areas of Washington State, except for federal and Tribal lands as specified in Special Condition S1.E.3.

B. Operators Required to Seek Coverage Under this General Permit:

1. Operators of the following construction activities are required to seek coverage under this CSWGP:

   a. Clearing, grading and/or excavation that results in the disturbance of one or more acres and discharges stormwater to surface waters of the State; and clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more and discharge stormwater to surface waters of the State.

      i. This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, and discharge to surface waters of the State (that is, forest practices that prepare a site for construction activities); and

   b. Any size construction activity discharging stormwater to waters of the State that the Department of Ecology ("Ecology"):

      i. Determines to be a significant contributor of pollutants to waters of the State of Washington.

      ii. Reasonably expects to cause a violation of any water quality standard.

2. Operators of the following activities are not required to seek coverage under this CSWGP (unless specifically required under Special Condition S1.B.1.b. above):

   a. Construction activities that discharge all stormwater and non-stormwater to ground water, sanitary sewer, or combined sewer, and have no point source discharge to either surface water or a storm sewer system that drains to surface waters of the State.

   b. Construction activities covered under an Erosivity Waiver (Special Condition S2.C).

   c. Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

C. Authorized Discharges:

1. Stormwater Associated with Construction Activity. Subject to compliance with the terms and conditions of this permit, Permittees are authorized to discharge stormwater associated with construction activity to surface waters of the State or to a storm sewer system that drains to surface waters of the State. (Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.)

2. Stormwater Associated with Construction Support Activity. This permit also authorizes stormwater discharge from support activities related to the permitted construction site (for example, an on-site portable rock crusher, off-site equipment staging yards, material storage areas, borrow areas, etc.) provided:

   a. The support activity relates directly to the permitted construction site that is required to have a NPDES permit; and

   b. The support activity is not a commercial operation serving multiple unrelated construction projects, and does not operate beyond the completion of the construction activity; and

   c. Appropriate controls and measures are identified in the Stormwater Pollution Prevention Plan (SWPPP) for the discharges from the support activity areas.

3. Non-Stormwater Discharges. The categories and sources of non-stormwater discharges identified below are authorized conditionally, provided the discharge is consistent with the terms and conditions of this permit:

   a. Discharges from fire-fighting activities.

   b. Fire hydrant system flushing.

   c. Potable water, including uncontaminated water line flushing.

   d. Pipeline hydrostatic test water.

   e. Uncontaminated air conditioning or compressor condensate.

   f. Uncontaminated ground water or spring water.

   g. Uncontaminated excavation dewatering water (in accordance with S9.D.10).

   h. Uncontaminated discharges from foundation or footing drains.

   i. Water used to control dust. Permittees must minimize the amount of dust control water used.

   j. Routine external building wash down that does not use detergents.

   k. Landscape irrigation water.

   The SWPPP must adequately address all authorized non-stormwater discharges, except for discharges from fire-fighting activities, and must comply with Special

Condition S3. At a minimum, discharges from potable water (including water line flushing), fire hydrant system flushing, and pipeline hydrostatic test water must undergo the following: dechlorination to a concentration of 0.1 parts per million (ppm) or less, and pH adjustment to within 6.5 – 8.5 standard units (su), if necessary.

D. Prohibited Discharges:

The following discharges to waters of the State, including ground water, are prohibited.

1. Concrete wastewater.
2. Wastewater from washout and clean-up of stucco, paint, form release oils, curing compounds and other construction materials.
3. Process wastewater as defined by 40 Code of Federal Regulations (CFR) 122.1 (see Appendix A of this permit).
4. Slurry materials and waste from shaft drilling.
5. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
6. Soaps or solvents used in vehicle and equipment washing.
7. Wheel wash wastewater, unless discharged according to Special Condition S9.D.9.d.
8. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed according to Special Condition S9.D.10.

E. Limits on Coverage

Ecology may require any discharger to apply for and obtain coverage under an individual permit or another more specific general permit. Such alternative coverage will be required when Ecology determines that this CSWGP does not provide adequate assurance that water quality will be protected, or there is a reasonable potential for the project to cause or contribute to a violation of water quality standards.

The following stormwater discharges are not covered by this permit:

1. Post-construction stormwater discharges that originate from the site after completion of construction activities and the site has undergone final stabilization.
2. Non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance, from which there is natural runoff as excluded in 40 CFR Subpart 122.
3. Stormwater from any federal project or project on federal land or land within an Indian Reservation except for the Puyallup Reservation. Within the Puyallup

Reservation, any project that discharges to surface water on land held in trust by the federal government may be covered by this permit.

4. Stormwater from any site covered under an existing NPDES individual permit in which stormwater management and/or treatment requirements are included for all stormwater discharges associated with construction activity.

5. Stormwater from a site where an applicable Total Maximum Daily Load (TMDL) requirement specifically precludes or prohibits discharges from construction activity.

S2. APPLICATION REQUIREMENTS

A. Permit Application Forms

1. Notice of Intent Form/Timeline

a. Operators of new or previously unpermitted construction activities must submit a complete and accurate permit application (Notice of Intent, or NOI) to Ecology.

b. The operator must submit the NOI at least 60 days before discharging stormwater from construction activities and must submit it on or before the date of the first public notice (see Special Condition S2.B below for details). The 30-day public comment period required by WAC 173-226-130(5) begins on the publication date of the second public notice. Unless Ecology responds to the complete application in writing, based on public comments, or any other relevant factors, coverage under the general permit will automatically commence on the thirty-first day following receipt by Ecology of a completed NOI, or the issuance date of this permit, whichever is later, unless Ecology specifies a later date in writing.

c. Applicants who propose to discharge to a storm or sewer system operated by Seattle, King County, Snohomish County, Tacoma, Pierce County, or Clark County must also submit a copy of the NOI to the appropriate jurisdiction.

d. If an applicant intends to use a Best Management Practice (BMP) selected on the basis of Special Condition S9.C.4 ("demonstrably equivalent" BMPs), the applicant must notify Ecology of its selection as part of the NOI. In the event the applicant selects BMPs after submission of the NOI, it must provide notice of the selection of an equivalent BMP to Ecology at least 60 days before intended use of the equivalent BMP.

e. Permittees must notify Ecology regarding any changes to the information provided on the NOI by submitting an updated NOI. Examples of such changes include, but are not limited to,

i. changes to the Permittee's mailing address,

ii. changes to the on-site contact person information, and

iii. changes to the area/acreage affected by construction activity.

2. Transfer of Coverage Form

The Permittee can transfer current coverage under this permit to one or more new operators, including operators of sites within a Common Plan of Development, provided the Permittee submits a Transfer of Coverage Form in accordance with General Condition G9. Transfers do not require public notice.

B. Public Notice

For new or previously unpermitted construction activities, the applicant must publish a public notice at least one time each week for two consecutive weeks, at least 7 days apart, in a newspaper with general circulation in the county where the construction is to take place. The notice must contain:

1. A statement that "The applicant is seeking coverage under the Washington State Department of Ecology's Construction Stormwater NPDES and State Waste Discharge General Permit."
2. The name, address and location of the construction site.
3. The name and address of the applicant.
4. The type of construction activity that will result in a discharge (for example, residential construction, commercial construction, etc.), and the number of acres to be disturbed.
5. The name of the receiving water(s) (that is, the surface water(s) to which the site will discharge), or, if the discharge is through a storm sewer system, the name of the operator of the system.
6. The statement: "Any persons desiring to present their views to the Washington State Department of Ecology regarding this application, or interested in Ecology's action on this application, may notify Ecology in writing no later than 30 days of the last date of publication of this notice. Ecology reviews public comments and considers whether discharges from this project would cause a measurable change in receiving water quality, and, if so, whether the project is necessary and in the overriding public interest according to Tier II antidegradation requirements under WAC 173-201A-320. Comments can be submitted to: Department of Ecology, P.O. Box 47696, Olympia, WA 98504-7696 Attn: Water Quality Program, Construction Stormwater."

C. Erosivity Waiver

Construction site operators may qualify for an erosivity waiver from the CSWGP if the following conditions are met:

1. The site will result in the disturbance of fewer than 5 acres and the site is not a portion of a common plan of development or sale that will disturb 5 acres or greater.

2. Calculation of Erosivity "R" Factor and Regional Timeframe:

   a. The project's rainfall erosivity factor ("R" Factor) must be less than 5 during the period of construction activity, as calculated using either the Texas A&M University online rainfall erosivity calculator at: http://ei.tamu.edu/ or EPA's calculator at http://cfpub.epa.gov/npdes/stormwater/lew/lewcalculator.cfm. The period of construction activity starts when the land is first disturbed and ends with final stabilization. In addition:

   b. The entire period of construction activity must fall within the following timeframes:

      i. For sites west of the Cascades Crest: June 15 – September 15.

      ii. For sites east of the Cascades Crest, excluding the Central Basin: June 15 – October 15.

      iii. For sites east of the Cascades Crest, within the Central Basin: no additional timeframe restrictions apply. The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches. For a map of the Central Basin (Region 2), refer to http://www.ecy.wa.gov/pubs/ecy070202.pdf.

3. Construction site operators must submit a complete Erosivity Waiver certification form at least one week before disturbing the land. Certification must include statements that the operator will:

   a. Comply with applicable local stormwater requirements; and

   b. Implement appropriate erosion and sediment control BMPs to prevent violations of water quality standards.

4. This waiver is not available for facilities declared significant contributors of pollutants as defined in Special Condition S1.B.1.b.

5. This waiver does not apply to construction activities which include non-stormwater discharges listed in Special Condition S1.C.3.

6. If construction activity extends beyond the certified waiver period for any reason, the operator must either:

   a. Recalculate the rainfall erosivity "R" factor using the original start date and a new projected ending date and, if the "R" factor is still under 5 and the entire

project falls within the applicable regional timeframe in Special Condition S2.C.2.b, complete and submit an amended waiver certification form before the original waiver expires; or

b. Submit a complete permit application to Ecology in accordance with Special Condition S2.A and B before the end of the certified waiver period.

S3. COMPLIANCE WITH STANDARDS

A. Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges not in compliance with these standards are not authorized.

B. Prior to the discharge of stormwater and non-stormwater to waters of the State, the Permittee must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate Stormwater Pollution Prevention Plan (SWPPP), with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.

C. Ecology presumes that a Permittee complies with water quality standards unless discharge monitoring data or other site-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards, when the Permittee complies with the following conditions. The Permittee must fully:

1. Comply with all permit conditions, including planning, sampling, monitoring, reporting, and recordkeeping conditions.

2. Implement stormwater BMPs contained in stormwater management manuals published or approved by Ecology, or BMPs that are demonstrably equivalent to BMPs contained in stormwater technical manuals published or approved by Ecology, including the proper selection, implementation, and maintenance of all applicable and appropriate BMPs for on-site pollution control. (For purposes of this section, the stormwater manuals listed in Appendix 10 of the Phase I Municipal Stormwater Permit are approved by Ecology.)

D. Where construction sites also discharge to ground water, the ground water discharges must also meet the terms and conditions of this CSWGP. Permittees who discharge to ground water through an injection well must also comply with any applicable requirements of the Underground Injection Control (UIC) regulations, Chapter 173-218 WAC.

S4. MONITORING REQUIREMENTS, BENCHMARKS AND REPORTING TRIGGERS

Table 3. Summary of Primary Monitoring Requirements

Size of Soil Disturbance[1]	Weekly Site Inspections	Weekly Sampling w/ Turbidity Meter	Weekly Sampling w/ Transparency Tube	Weekly pH Sampling[2]	Requires CESCL Certification?
Sites that disturb less than 1 acre, but are part of a larger Common Plan of Development	Required	Not Required	Not Required	Not Required	No
Sites that disturb 1 acre or more, but fewer than 5 acres	Required	Sampling Required – either method[3]		Required	Yes
Sites that disturb 5 acres or more	Required	Required	Not Required[4]	Required	Yes

A. Site Log Book

The Permittee must maintain a site log book that contains a record of the implementation of the SWPPP and other permit requirements, including the installation and maintenance of BMPs, site inspections, and stormwater monitoring.

B. Site Inspections

The Permittee's (operator's) site inspections must include all areas disturbed by construction activities, all BMPs, and all stormwater discharge points. (See Special Conditions S4.B.3 and B.4 below for detailed requirements of the Permittee's Certified Erosion and Sediment Control Lead [CESCL]).

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[1] Soil disturbance is calculated by adding together all areas affected by construction activity. Construction activity means clearing, grading, excavation, and any other activity that disturbs the surface of the land, including ingress/egress from the site.

[2] If construction activity results in the disturbance of 1 acre or more, and involves significant concrete work (1,000 cubic yards of poured or recycled concrete over the life of a project) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area drains to surface waters of the State or to a storm sewer stormwater collection system that drains to other surface waters of the State, the Permittee must conduct pH monitoring sampling in accordance with Special Condition S4.D.

[3] Sites with one or more acres, but fewer than 5 acres of soil disturbance, must conduct turbidity or transparency sampling in accordance with Special Condition S4.C.

[4] Sites equal to or greater than 5 acres of soil disturbance must conduct turbidity sampling using a turbidity meter in accordance with Special Condition S4.C.

Construction sites one acre or larger that discharge stormwater to surface waters of the State must have site inspections conducted by a certified CESCL. Sites less than one acre may have a person without CESCL certification conduct inspections; sampling is not required on sites that disturb less than an acre.

1. The Permittee must examine stormwater visually for the presence of suspended sediment, turbidity, discoloration, and oil sheen. The Permittee must evaluate the effectiveness of BMPs and determine if it is necessary to install, maintain, or repair BMPs to improve the quality of stormwater discharges.

   Based on the results of the inspection, the Permittee must correct the problems identified by:

   a. Reviewing the SWPPP for compliance with Special Condition S9 and making appropriate revisions within 7 days of the inspection.

   b. Immediately beginning the process of fully implementing and maintaining appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than within 10 days of the inspection. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.

   c. Documenting BMP implementation and maintenance in the site log book.

2. The Permittee must inspect all areas disturbed by construction activities, all BMPs, and all stormwater discharge points at least once every calendar week and within 24 hours of any discharge from the site. (For purposes of this condition, individual discharge events that last more than one day do not require daily inspections. For example, if a stormwater pond discharges continuously over the course of a week, only one inspection is required that week.) The Permittee may reduce the inspection frequency for temporarily stabilized, inactive sites to once every calendar month.

3. The Permittee must have staff knowledgeable in the principles and practices of erosion and sediment control. The CESCL (sites one acre or more) or inspector (sites less than one acre) must have the skills to assess the:

   a. Site conditions and construction activities that could impact the quality of stormwater, and

   b. Effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.

4. The SWPPP must identify the CESCL or inspector, who must be present on site or on-call at all times. The CESCL must obtain this certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160 in the manual referred to in Special Condition S9.C.1 and 2).

5. The Permittee must summarize the results of each inspection in an inspection report or checklist and enter the report/checklist into, or attach it to, the site log book. At a minimum, each inspection report or checklist must include:

   a. Inspection date and time.

   b. Weather information, the general conditions during inspection and the approximate amount of precipitation since the last inspection, and precipitation within the last 24 hours.

   c. A summary or list of all implemented BMPs, including observations of all erosion/sediment control structures or practices.

   d. A description of the locations:

      i. Of BMPs inspected.

      ii. Of BMPs that need maintenance and why.

      iii. Of BMPs that failed to operate as designed or intended, and

      iv. Where additional or different BMPs are needed, and why.

   e. A description of stormwater discharged from the site. The Permittee must note the presence of suspended sediment, turbidity, discoloration, and oil sheen, as applicable.

   f. Any water quality monitoring performed during inspection.

   g. General comments and notes, including a brief description of any BMP repairs, maintenance or installations made following the inspection.

   h. A summary report and a schedule of implementation of the remedial actions that the Permittee plans to take if the site inspection indicates that the site is out of compliance. The remedial actions taken must meet the requirements of the SWPPP and the permit.

   i. The name, title, and signature of the person conducting the site inspection, a phone number or other reliable method to reach this person, and the following statement: "I certify that this report is true, accurate, and complete to the best of my knowledge and belief."

C. Turbidity/Transparency Sampling Requirements

1. Sampling Methods

   a. If construction activity involves the disturbance of 5 acres or more, the Permittee must conduct turbidity sampling per Special Condition S4.C.

   b. If construction activity involves 1 acre or more but fewer than 5 acres of soil disturbance, the Permittee must conduct either transparency sampling **or** turbidity sampling per Special Condition S4.C.

2. Sampling Frequency

   a. The Permittee must sample all discharge locations at least once every calendar week when stormwater (or authorized non-stormwater) discharges from the site or enters any on-site surface waters of the state (for example, a creek running through a site).

   b. Samples must be representative of the flow and characteristics of the discharge.

   c. Sampling is not required when there is no discharge during a calendar week.

   d. Sampling is not required outside of normal working hours or during unsafe conditions.

   e. If the Permittee is unable to sample during a monitoring period, the Permittee must include a brief explanation in the monthly Discharge Monitoring Report (DMR).

   f. Sampling is not required before construction activity begins.

3. Sampling Locations

   a. Sampling is required at all points where stormwater associated with construction activity (or authorized non-stormwater) is discharged off site, including where it enters any on-site surface waters of the state (for example, a creek running through a site).

   b. The Permittee may discontinue sampling at discharge points that drain areas of the project that are fully stabilized to prevent erosion.

   c. The Permittee must identify all sampling point(s) on the SWPPP site map and clearly mark these points in the field with a flag, tape, stake or other visible marker.

   d. Sampling is not required for discharge that is sent directly to sanitary or combined sewer systems.

4. Sampling and Analysis Methods

   a. The Permittee performs turbidity analysis with a calibrated turbidity meter (turbidimeter) either on site or at an accredited lab. The Permittee must record the results in the site log book in nephelometric turbidity units (NTU).

   b. The Permittee performs transparency analysis on site with a 1¾-inch-diameter, 60-centimeter (cm)-long transparency tube. The Permittee will record the results in the site log book in centimeters (cm). Transparency tubes are available from: http://watermonitoringequip.com/pages/stream.html.

Table 4. Monitoring and Reporting Requirements

Parameter	Unit	Analytical Method	Sampling Frequency	Benchmark Value	Phone Reporting Trigger Value
Turbidity	NTU	SM2130 or EPA 180.1	Weekly, if discharging	25 NTU	250 NTU
Transparency	cm	Manufacturer instructions, or Ecology guidance	Weekly, if discharging	33 cm	6 cm

5. Turbidity/Transparency Benchmark Values and Reporting Triggers

The benchmark value for turbidity is 25 NTU or less. The benchmark value for transparency is 33 centimeters (cm). Note: Benchmark values do not apply to discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus; these discharges are subject to a numeric effluent limit for turbidity. Refer to Special Condition S8 for more information.

a. Turbidity 26 – 249 NTU, or Transparency 32 – 7 cm:

If the discharge turbidity is 26 to 249 NTU; or if discharge transparency is less than 33 cm, but equal to or greater than 6 cm, the Permittee must:

i. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.

ii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.

iii. Document BMP implementation and maintenance in the site log book.

b. Turbidity 250 NTU or greater, or Transparency 6 cm or less:

If a discharge point's turbidity is 250 NTU or greater, or if discharge transparency is less than or equal to 6 cm, the Permittee must complete the reporting and adaptive management process described below.

i. Telephone the applicable Ecology Region's Environmental Report Tracking System (ERTS) number within 24 hours, in accordance with Special Condition S5.F.

- Central Region (Okanogan, Chelan, Douglas, Kittitas, Yakima, Klickitat, Benton): (509) 575-2490

- Eastern Region (Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman): (509) 329-3400
- Northwest Region (Kitsap, Snohomish, Island, King, San Juan, Skagit, Whatcom): (425) 649-7000
- Southwest Region (Grays Harbor, Lewis, Mason, Thurston, Pierce, Clark, Cowlitz, Skamania, Wahkiakum, Clallam, Jefferson, Pacific): (360) 407-6300

These numbers are also listed at the following web site:
http://www.ecy.wa.gov/programs/wq/stormwater/construction/permit.html

ii. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.

iii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.

iv. Document BMP implementation and maintenance in the site log book.

v. Continue to sample discharges daily until:

a) Turbidity is 25 NTU (or lower); or

b) Transparency is 33 cm (or greater); or

c) The Permittee has demonstrated compliance with the water quality limit for turbidity:

1) No more than 5 NTU over background turbidity, if background is less than 50 NTU, or

2) No more than 10% over background turbidity, if background is 50 NTU or greater; or

d) The discharge stops or is eliminated.

D. pH Sampling Requirements -- Significant Concrete Work or Engineered Soils

If construction activity results in the disturbance of 1 acre or more, **and** involves significant concrete work (significant concrete work means greater than 1000 cubic yards poured concrete or recycled concrete used over the life of a project) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area

drains to surface waters of the State or to a storm sewer system that drains to surface waters of the state, the Permittee must conduct pH monitoring as set forth below. Note: In addition, discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for high pH are subject to a numeric effluent limit for pH; refer to Special Condition S8.

1. For sites with significant concrete work, the Permittee must begin the pH monitoring period when the concrete is first poured and exposed to precipitation, and continue weekly throughout and after the concrete pour and curing period, until stormwater pH is in the range of 6.5 to 8.5 (su).

2. For sites with engineered soils, the Permittee must begin the pH monitoring period when the soil amendments are first exposed to precipitation and must continue until the area of engineered soils is fully stabilized.

3. During the applicable pH monitoring period defined above, the Permittee must obtain a representative sample of stormwater and conduct pH analysis at least once per week.

4. The Permittee must monitor pH in the sediment trap/pond(s) or other locations that receive stormwater runoff from the area of significant concrete work or engineered soils before the stormwater discharges to surface waters.

5. The benchmark value for pH is 8.5 standard units. Anytime sampling indicates that pH is 8.5 or greater, the Permittee must either:

    a. Prevent the high pH water (8.5 or above) from entering storm sewer systems or surface waters; or

    b. If necessary, adjust or neutralize the high pH water until it is in the range of pH 6.5 to 8.5 (su) using an appropriate treatment BMP such as carbon dioxide (CO_2) sparging or dry ice. The Permittee must obtain written approval from Ecology before using any form of chemical treatment other than CO_2 sparging or dry ice.

6. The Permittee must perform pH analysis on site with a calibrated pH meter, pH test kit, or wide range pH indicator paper. The Permittee must record pH monitoring results in the site log book.

S5. REPORTING AND RECORDKEEPING REQUIREMENTS

A. High Turbidity Phone Reporting

Anytime sampling performed in accordance with Special Condition S4.C indicates turbidity has reached the 250 NTU phone reporting level, the Permittee must call Ecology's Regional office by phone within 24 hours of analysis. The web site is http://www.ecy.wa.gov/programs/wq/stormwater/construction/permit.html. Also see phone numbers in Special Condition S4.C.5.b.i.

B. Discharge Monitoring Reports

Permittees required to conduct water quality sampling in accordance with Special Conditions S4.C (Turbidity/Transparency), S4.D (pH), S8 (303[d]/TMDL sampling), and/or G13 (Additional Sampling) must submit the results to Ecology.

Permittees must submit monitoring data using Ecology's WebDMR program. To find out more information and to sign up for WebDMR go to: http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html.

Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper copy DMR at:

Mailing Address:
Department of Ecology
Water Quality Program
Attn: Stormwater Compliance Specialist
PO Box 47696
Olympia, WA 98504-7696

Permittees who obtain a waiver not to use WebDMR must use the forms provided to them by Ecology; submittals must be mailed to the address above. Permittees shall submit DMR forms to be received by Ecology within 15 days following the end of each month.

If there was no discharge during a given monitoring period, all Permittees must submit a DMR as required with "no discharge" entered in place of the monitoring results. For more information, contact Ecology staff using information provided at the following web site: http://www.ecy.wa.gov/programs/spills/response/assistancesoil%20map.pdf

C. Records Retention

The Permittee must retain records of all monitoring information (site log book, sampling results, inspection reports/checklists, etc.), Stormwater Pollution Prevention Plan, and any other documentation of compliance with permit requirements for the entire life of the construction project and for a minimum of three years following the termination of permit coverage. Such information must include all calibration and maintenance records, and records of all data used to complete the application for this

permit. This period of retention must be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

D. Recording Results

For each measurement or sample taken, the Permittee must record the following information:

1. Date, place, method, and time of sampling or measurement.
2. The first and last name of the individual who performed the sampling or measurement.
3. The date(s) the analyses were performed.
4. The first and last name of the individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

E. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Special Condition S4 of this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Permittee's DMR.

F. Noncompliance Notification

In the event the Permittee is unable to comply with any part of the terms and conditions of this permit, and the resulting noncompliance may cause a threat to human health or the environment, the Permittee must:

1. Immediately notify Ecology of the failure to comply by calling the applicable Regional office ERTS phone number (find at http://www.ecy.wa.gov/programs/spills/response/assistancesoil%20map.pdf) or refer to Special Condition S4.C.5.b.i.
2. Immediately take action to prevent the discharge/pollution, or otherwise stop or correct the noncompliance, and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to Ecology within five (5) days of becoming aware of the violation.
3. Submit a detailed written report to Ecology within five (5) days, unless requested earlier by Ecology. The report must contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Permittee must report any unanticipated bypass and/or upset that exceeds any effluent limit in the permit in accordance with the 24-hour reporting requirement contained in 40 C.F.R. 122.41(l)(6)).

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply. Refer to Section G14 of this permit for specific information regarding non-compliance.

G. Access to Plans and Records

1. The Permittee must retain the following permit documentation (plans and records) on site, or within reasonable access to the site, for use by the operator or for on-site review by Ecology or the local jurisdiction:

   a. General Permit.

   b. Permit Coverage Letter.

   c. Stormwater Pollution Prevention Plan (SWPPP).

   d. Site Log Book.

2. The Permittee must address written requests for plans and records listed above (Special Condition S5.G.1) as follows:

   a. The Permittee must provide a copy of plans and records to Ecology within 14 days of receipt of a written request from Ecology.

   b. The Permittee must provide a copy of plans and records to the public when requested in writing. Upon receiving a written request from the public for the Permittee's plans and records, the Permittee must either:

      i. Provide a copy of the plans and records to the requester within 14 days of a receipt of the written request; or

      ii. Notify the requester within 10 days of receipt of the written request of the location and times within normal business hours when the plans and records may be viewed; and provide access to the plans and records within 14 days of receipt of the written request; or

      Within 14 days of receipt of the written request, the Permittee may submit a copy of the plans and records to Ecology for viewing and/or copying by the requester at an Ecology office, or a mutually agreed location. If plans and records are viewed and/or copied at a location other than at an Ecology office, the Permittee will provide reasonable access to copying services for which a reasonable fee may be charged. The Permittee must notify the requester within 10 days of receipt of the request where the plans and records may be viewed and/or copied.

S6. PERMIT FEES

The Permittee must pay permit fees assessed by Ecology. Fees for stormwater discharges covered under this permit are established by Chapter 173-224 WAC. Ecology continues to assess permit fees until the permit is terminated in accordance with Special Condition S10 or revoked in accordance with General Condition G5.

S7. SOLID AND LIQUID WASTE DISPOSAL

The Permittee must handle and dispose of solid and liquid wastes generated by construction activity, such as demolition debris, construction materials, contaminated materials, and waste materials from maintenance activities, including liquids and solids from cleaning catch basins and other stormwater facilities, in accordance with:

A. Special Condition S3, Compliance with Standards.

B. WAC 173-216-110.

C. Other applicable regulations.

S8. DISCHARGES TO 303(D) OR TMDL WATER BODIES

A. Sampling and Numeric Effluent Limits For Certain Discharges to 303(d)-listed Water Bodies

1. Permittees who discharge to segments of water bodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, or phosphorus, must conduct water quality sampling according to the requirements of this section, and Special Conditions S4.C.2.b-f and S4.C.3.b-d, and must comply with the applicable numeric effluent limitations in S8.C and S8.D.

2. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current listing by Ecology of impaired waters (Category 5) that exists on January 1, 2011, or the date when the operator's complete permit application is received by Ecology, whichever is later.

B. Limits on Coverage for New Discharges to TMDL or 303(d)-listed Waters

Operators of construction sites that discharge to a 303(d)-listed water body are not eligible for coverage under this permit *unless* the operator:

1. Prevents exposing stormwater to pollutants for which the water body is impaired, and retains documentation in the SWPPP that details procedures taken to prevent exposure on site; or

2. Documents that the pollutants for which the water body is impaired are not present at the site, and retains documentation of this finding within the SWPPP; or

3. Provides Ecology with data indicating the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retains such data on site with the SWPPP. The operator must provide data and other technical information to Ecology that sufficiently demonstrate:

   a. For discharges to waters without an EPA-approved or -established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the water body; or

   b. For discharges to waters with an EPA-approved or -established TMDL, that there is sufficient remaining wasteload allocation in the TMDL to allow construction stormwater discharge and that existing dischargers to the water body are subject to compliance schedules designed to bring the water body into attainment with water quality standards.

   Operators of construction sites are eligible for coverage under this permit if Ecology issues permit coverage based upon an affirmative determination that the discharge will not cause or contribute to the existing impairment.

C. Sampling and Numeric Effluent Limits for Discharges to Water Bodies on the 303(d) List for Turbidity, Fine Sediment, or Phosphorus

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus must conduct turbidity sampling in accordance with Special Condition S4.C.2 and comply with either of the numeric effluent limits noted in Table 5 below.

2. As an alternative to the 25 NTU effluent limit noted in Table 5 below (applied at the point where stormwater [or authorized non-stormwater] is discharged off-site), permittees may choose to comply with the surface water quality standard for turbidity. The standard is: no more than 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or no more than a 10% increase in turbidity when the background turbidity is more than 50 NTU. In order to use the water quality standard requirement, the sampling must take place at the following locations:

   a. Background turbidity in the 303(d)-listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge.

   b. Turbidity at the point of discharge into the 303(d)-listed receiving water, inside the area of influence of the discharge.

3. Discharges that exceed the numeric effluent limit for turbidity constitute a violation of this permit.

4. Permittees whose discharges exceed the numeric effluent limit shall sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

Table 5. Turbidity, Fine Sediment & Phosphorus Sampling and Limits for 303(d)-Listed Waters

Parameter identified in 303(d) listing	Parameter Sampled	Unit	Analytical Method	Sampling Frequency	Numeric Effluent Limit[1]
• Turbidity • Fine Sediment • Phosphorus	Turbidity	NTU	SM2130 or EPA180.1	Weekly, if discharging	25 NTU, at the point where stormwater is discharged from the site; OR In compliance with the surface water quality standard for turbidity (S8.C.1.a)

[1]Permittees subject to a numeric effluent limit for turbidity may, at their discretion, choose either numeric effluent limitation based on site-specific considerations including, but not limited to, safety, access and convenience.

D. Discharges to Water Bodies on the 303(d) List for High pH

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for high pH must conduct pH sampling in accordance with the table below, and comply with the numeric effluent limit of pH 6.5 to 8.5 su (Table 6).

Table 6. pH Sampling and Limits for 303(d)-Listed Waters

Parameter identified in 303(d) listing	Parameter Sampled/Units	Analytical Method	Sampling Frequency	Numeric Effluent Limit
High pH	pH /Standard Units	pH meter	Weekly, if discharging	In the range of 6.5 – 8.5

2. At the Permittee's discretion, compliance with the limit shall be assessed at one of the following locations:

   a. Directly in the 303(d)-listed water body segment, inside the immediate area of influence of the discharge; or

   b. Alternatively, the permittee may measure pH at the point where the discharge leaves the construction site, rather than in the receiving water.

3. Discharges that exceed the numeric effluent limit for pH (outside the range of 6.5 – 8.5 su) constitute a violation of this permit.

4. Permittees whose discharges exceed the numeric effluent limit shall sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

E. Sampling and Limits for Sites Discharging to Waters Covered by a TMDL or Another Pollution Control Plan

1. Discharges to a water body that is subject to a Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus must be consistent with the TMDL. Refer to http://www.ecy.wa.gov/programs/wq/tmdl/index.html for more information on TMDLs.

    a. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges must be consistent with any specific waste load allocations or requirements established by the applicable TMDL.

        i. The Permittee must sample discharges weekly or as otherwise specified by the TMDL to evaluate compliance with the specific waste load allocations or requirements.

        ii. Analytical methods used to meet the monitoring requirements must conform to the latest revision of the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136. Turbidity and pH methods need not be accredited or registered unless conducted at a laboratory which must otherwise be accredited or registered.

    b. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but has not identified specific requirements, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.

    c. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.

    d. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.

2. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus that is completed and approved by EPA before January 1, 2011, or before the date the operator's complete permit application is received by Ecology, whichever is later. TMDLs completed after the operator's complete permit application is received by Ecology become applicable to the Permittee only if they are imposed through an administrative order by Ecology, or through a modification of permit coverage.

S9. STORMWATER POLLUTION PREVENTION PLAN

The Permittee must prepare and properly implement an adequate Stormwater Pollution Prevention Plan (SWPPP) for construction activity in accordance with the requirements of this permit beginning with initial soil disturbance and until final stabilization.

A. The Permittee's SWPPP must meet the following objectives:

1. To implement best management practices (BMPs) to prevent erosion and sedimentation, and to identify, reduce, eliminate or prevent stormwater contamination and water pollution from construction activity.

2. To prevent violations of surface water quality, ground water quality, or sediment management standards.

3. To control peak volumetric flow rates and velocities of stormwater discharges.

B. General Requirements

1. The SWPPP must include a narrative and drawings. All BMPs must be clearly referenced in the narrative and marked on the drawings. The SWPPP narrative must include documentation to explain and justify the pollution prevention decisions made for the project. Documentation must include:

   a. Information about existing site conditions (topography, drainage, soils, vegetation, etc.).

   b. Potential erosion problem areas.

   c. The 12 elements of a SWPPP in Special Condition S9.D.1-12, including BMPs used to address each element.

   d. Construction phasing/sequence and general BMP implementation schedule.

   e. The actions to be taken if BMP performance goals are not achieved—for example, a contingency plan for additional treatment and/or storage of stormwater that would violate the water quality standards if discharged.

   f. Engineering calculations for ponds and any other designed structures.

2. The Permittee must modify the SWPPP if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The Permittee must then:

   a. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the inspection or investigation.

   b. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than 10 days from the inspection or investigation. If

installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period,

c. Document BMP implementation and maintenance in the site log book.

The Permittee must modify the SWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

C. Stormwater Best Management Practices (BMPs)

BMPs must be consistent with:

1. Stormwater Management Manual for Western Washington (most recent edition), for sites west of the crest of the Cascade Mountains; or

2. Stormwater Management Manual for Eastern Washington (most recent edition), for sites east of the crest of the Cascade Mountains; or

3. Revisions to the manuals listed in Special Condition S9.C.1. & 2., or other stormwater management guidance documents or manuals which provide an equivalent level of pollution prevention, that are approved by Ecology and incorporated into this permit in accordance with the permit modification requirements of WAC 173-226-230; or

4. Documentation in the SWPPP that the BMPs selected provide an equivalent level of pollution prevention, compared to the applicable Stormwater Management Manuals, including:

   a. The technical basis for the selection of all stormwater BMPs (scientific, technical studies, and/or modeling) that support the performance claims for the BMPs being selected.

   b. An assessment of how the selected BMP will satisfy AKART requirements and the applicable federal technology-based treatment requirements under 40 CFR part 125.3.

D. SWPPP – Narrative Contents and Requirements

The Permittee must include each of the 12 elements below in Special Condition S9.D.1-12 in the narrative of the SWPPP and implement them unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the SWPPP.

1. Preserve Vegetation/Mark Clearing Limits

   a. Before beginning land-disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.

b. Retain the duff layer, native top soil, and natural vegetation in an undisturbed state to the maximum degree practicable.

2. Establish Construction Access

   a. Limit construction vehicle access and exit to one route, if possible.

   b. Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMPs, to minimize tracking sediment onto roads.

   c. Locate wheel wash or tire baths on site, if the stabilized construction entrance is not effective in preventing tracking sediment onto roads.

   d. If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or pickup and transport of the sediment to a controlled sediment disposal area.

   e. Conduct street washing only after sediment removal in accordance with Special Condition S9.D.2.d. Control street wash wastewater by pumping back on site or otherwise preventing it from discharging into systems tributary to waters of the State.

3. Control Flow Rates

   a. Protect properties and waterways downstream of development sites from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site, as required by local plan approval authority.

   b. Where necessary to comply with Special Condition S9.D.3.a, construct stormwater retention or detention facilities as one of the first steps in grading. Assure that detention facilities function properly before constructing site improvements (for example, impervious surfaces).

   c. If permanent infiltration ponds are used for flow control during construction, protect these facilities from siltation during the construction phase.

4. Install Sediment Controls

   The Permittee must design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, the Permittee must design, install and maintain such controls to:

   a. Construct sediment control BMPs (sediment ponds, traps, filters, etc.) as one of the first steps in grading. These BMPs must be functional before other land disturbing activities take place.

   b. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of

resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.

c. Direct stormwater runoff from disturbed areas through a sediment pond or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must meet the flow control performance standard of Special Condition S9.D.3.a.

d. Locate BMPs intended to trap sediment on site in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.

e. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.

f. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.

5. Stabilize Soils

a. The Permittee must stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base on areas to be paved, and dust control.

b. The Permittee must control stormwater volume and velocity within the site to minimize soil erosion.

c. The Permittee must control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.

d. Depending on the geographic location of the project, the Permittee must not allow soils to remain exposed and unworked for more than the time periods set forth below to prevent erosion:

West of the Cascade Mountains Crest
During the dry season (May 1 - Sept. 30): 7 days
During the wet season (October 1 - April 30): 2 days

East of the Cascade Mountains Crest, except for Central Basin*
During the dry season (July 1 - September 30): 10 days
During the wet season (October 1 - June 30): 5 days

The Central Basin*, East of the Cascade Mountains Crest

During the dry Season (July 1 - September 30): 30 days
During the wet season (October 1 - June 30): 15 days

*Note: The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches.

e. The Permittee must stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.

f. The Permittee must stabilize soil stockpiles from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.

g. The Permittee must minimize the amount of soil exposed during construction activity.

h. The Permittee must minimize the disturbance of steep slopes.

i. The Permittee must minimize soil compaction and, unless infeasible, preserve topsoil.

6. Protect Slopes

a. The Permittee must design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).

b. The Permittee must divert off-site stormwater (run-on) or ground water away from slopes and disturbed areas with interceptor dikes, pipes, and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.

c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion.

i. West of the Cascade Mountains Crest: Temporary pipe slope drains must handle the peak 10-minute velocity of flow from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as "landscaped area."

ii. East of the Cascade Mountains Crest: Temporary pipe slope drains must handle the expected peak flow velocity from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.

d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.

e. Place check dams at regular intervals within constructed channels that are cut down a slope.

7. Protect Drain Inlets

a. Protect all storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.

b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).

8. Stabilize Channels and Outlets

a. Design, construct and stabilize all on-site conveyance channels to prevent erosion from the following expected peak flows:

i. West of the Cascade Mountains Crest: Channels must handle the peak 10-minute velocity of flow from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the WWHM to predict flows, bare soil areas should be modeled as "landscaped area."

ii. East of the Cascade Mountains Crest: Channels must handle the expected peak flow velocity from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.

b. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches at the outlets of all conveyance systems.

9. Control Pollutants

Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. The Permittee must:

a. Handle and dispose of all pollutants, including waste materials and demolition debris that occur on site in a manner that does not cause contamination of stormwater.

b. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.

c. Conduct maintenance, fueling, and repair of heavy equipment and vehicles using spill prevention and control measures. Clean contaminated surfaces immediately following any spill incident.

d. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, such as closed-loop recirculation or upland land application, or to the sanitary sewer with local sewer district approval.

e. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers' label requirements for application rates and procedures.

f. Use BMPs to prevent contamination of stormwater runoff by pH-modifying sources. The sources for this contamination include, but are not limited to: bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters. (Also refer to the definition for "concrete wastewater" in Appendix A--Definitions.)

g. Adjust the pH of stormwater if necessary to prevent violations of water quality standards.

h. Assure that washout of concrete trucks is performed offsite or in designated concrete washout areas only. Do not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets, or streams. Do not dump excess concrete on site, except in designated concrete washout areas. Concrete spillage or concrete discharge to surface waters of the State is prohibited.

i. Obtain written approval from Ecology before using chemical treatment other than CO_2 or dry ice to adjust pH.

10. Control Dewatering

a. Permittees must discharge foundation, vault, and trench dewatering water, which have characteristics similar to stormwater runoff at the site, into a

controlled conveyance system before discharge to a sediment trap or sediment pond.

b. Permittees may discharge clean, non-turbid dewatering water, such as well-point ground water, to systems tributary to, or directly into surface waters of the State, as specified in Special Condition S9.D.8, provided the dewatering flow does not cause erosion or flooding of receiving waters. Do not route clean dewatering water through stormwater sediment ponds. Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.

c. Other treatment or disposal options may include:

   i. Infiltration.

   ii. Transport off site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters.

   iii. Ecology-approved on-site chemical treatment or other suitable treatment technologies.

   iv. Sanitary or combined sewer discharge with local sewer district approval, if there is no other option.

   v. Use of a sedimentation bag with discharge to a ditch or swale for small volumes of localized dewatering.

d. Permittees must handle highly turbid or contaminated dewatering water separately from stormwater.

11. Maintain BMPs

    a. Permittees must maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications.

    b. Permittees must remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

12. Manage the Project

    a. Phase development projects to the maximum degree practicable and take into account seasonal work limitations.

    b. Inspection and monitoring -- Inspect, maintain and repair all BMPs as needed to assure continued performance of their intended function. Conduct site inspections and monitoring in accordance with Special Condition S4.

    c. Maintaining an updated construction SWPPP -- Maintain, update, and implement the SWPPP in accordance with Special Conditions S3, S4 and S9.

E. SWPPP – Map Contents and Requirements

The Permittee's SWPPP must also include a vicinity map or general location map (for example, a USGS quadrangle map, a portion of a county or city map, or other appropriate map) with enough detail to identify the location of the construction site and receiving waters within one mile of the site.

The SWPPP must also include a legible site map (or maps) showing the entire construction site. The following features must be identified, unless not applicable due to site conditions:

1. The direction of north, property lines, and existing structures and roads.
2. Cut and fill slopes indicating the top and bottom of slope catch lines.
3. Approximate slopes, contours, and direction of stormwater flow before and after major grading activities.
4. Areas of soil disturbance and areas that will not be disturbed.
5. Locations of structural and nonstructural controls (BMPs) identified in the SWPPP.
6. Locations of off-site material, stockpiles, waste storage, borrow areas, and vehicle/equipment storage areas.
7. Locations of all surface water bodies, including wetlands.
8. Locations where stormwater or non-stormwater discharges off-site and/or to a surface water body, including wetlands.
9. Location of water quality sampling station(s), if sampling is required by state or local permitting authority.
10. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.

S10. NOTICE OF TERMINATION

A. The site is eligible for termination of coverage when it has met any of the following conditions:

1. The site has undergone final stabilization, the Permittee has removed all temporary BMPs (except biodegradable BMPs clearly manufactured with the intention for the material to be left in place and not interfere with maintenance or land use), and all stormwater discharges associated with construction activity have been eliminated; or
2. All portions of the site that have not undergone final stabilization per Special Condition S10.A.1 have been sold and/or transferred (per General Condition G9), and the Permittee no longer has operational control of the construction activity; or

3. For residential construction only, the Permittee has completed temporary stabilization and the homeowners have taken possession of the residences.

B. When the site is eligible for termination, the Permittee must submit a complete and accurate Notice of Termination (NOT) form, signed in accordance with General Condition G2, to:

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, Washington 98504-7696

The termination is effective on the date Ecology receives the NOT form, unless Ecology notifies the Permittee within 30 days that termination request is denied because the Permittee has not met the eligibility requirements in Special Condition S10.A.

Permittees transferring the property to a new property owner or operator/permittee are required to complete and submit the Notice of Transfer form to Ecology, but are not required to submit a Notice of Termination form for this type of transaction.

GENERAL CONDITIONS

G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this general permit must be consistent with the terms and conditions of this general permit. Any discharge of any pollutant more frequent than or at a level in excess of that identified and authorized by the general permit must constitute a violation of the terms and conditions of this permit.

G2. SIGNATORY REQUIREMENTS

A. All permit applications must bear a certification of correctness to be signed:

1. In the case of corporations, by a responsible corporate officer of at least the level of vice president of a corporation;
2. In the case of a partnership, by a general partner of a partnership;
3. In the case of sole proprietorship, by the proprietor; or
4. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

B. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Ecology.
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

C. Changes to authorization. If an authorization under paragraph G2.B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G2.B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a document under this section must make the following certification:

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering

information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G3. RIGHT OF INSPECTION AND ENTRY

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

A. To enter upon the premises where a discharge is located or where any records are kept under the terms and conditions of this permit.

B. To have access to and copy – at reasonable times and at reasonable cost -- any records required to be kept under the terms and conditions of this permit.

C. To inspect -- at reasonable times – any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.

D. To sample or monitor – at reasonable times – any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G4. GENERAL PERMIT MODIFICATION AND REVOCATION

This permit may be modified, revoked and reissued, or terminated in accordance with the provisions of Chapter 173-226 WAC. Grounds for modification, revocation and reissuance, or termination include, but are not limited to, the following:

A. When a change occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this permit.

B. When effluent limitation guidelines or standards are promulgated pursuant to the CWA or Chapter 90.48 RCW, for the category of dischargers covered under this permit.

C. When a water quality management plan containing requirements applicable to the category of dischargers covered under this permit is approved, or

D. When information is obtained that indicates cumulative effects on the environment from dischargers covered under this permit are unacceptable.

G5. REVOCATION OF COVERAGE UNDER THE PERMIT

Pursuant to Chapter 43.21B RCW and Chapter 173-226 WAC, the Director may terminate coverage for any discharger under this permit for cause. Cases where coverage may be terminated include, but are not limited to, the following:

A. Violation of any term or condition of this permit.

B. Obtaining coverage under this permit by misrepresentation or failure to disclose fully all relevant facts.

C. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

D. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

E. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.

F. Nonpayment of permit fees or penalties assessed pursuant to RCW 90.48.465 and Chapter 173-224 WAC.

G. Failure of the Permittee to satisfy the public notice requirements of WAC 173-226-130(5), when applicable.

The Director may require any discharger under this permit to apply for and obtain coverage under an individual permit or another more specific general permit. Permittees who have their coverage revoked for cause according to WAC 173-226-240 may request temporary coverage under this permit during the time an individual permit is being developed, provided the request is made within ninety (90) days from the time of revocation and is submitted along with a complete individual permit application form.

G6. REPORTING A CAUSE FOR MODIFICATION

The Permittee must submit a new application, or a supplement to the previous application, whenever a material change to the construction activity or in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application must be submitted at least sixty (60) days prior to any proposed changes. Filing a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G7. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit will be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G8. DUTY TO REAPPLY

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit.

G9. TRANSFER OF GENERAL PERMIT COVERAGE

Coverage under this general permit is automatically transferred to a new discharger, including operators of lots/parcels within a common plan of development or sale, **if**:

A. A written agreement (Transfer of Coverage Form) between the current discharger (Permittee) and new discharger, signed by both parties and containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to the Director; and

B. The Director does not notify the current discharger and new discharger of the Director's intent to revoke coverage under the general permit. If this notice is not given, the transfer is effective on the date specified in the written agreement.

When a current discharger (Permittee) transfers a portion of a permitted site, the current discharger must also submit an updated application form (NOI) to the Director indicating the remaining permitted acreage after the transfer.

G10. REMOVED SUBSTANCES

The Permittee must not re-suspend or reintroduce collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of stormwater to the final effluent stream for discharge to state waters.

G11. DUTY TO PROVIDE INFORMATION

The Permittee must submit to Ecology, within a reasonable time, all information that Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology, upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G13. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G14. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars ($10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars ($10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G15. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in Special Condition S5.F, and; 4) the Permittee complied with any remedial measures required under this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G16. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G17. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G18. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G19. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than $20,000 per day of violation, or imprisonment of not more than four (4) years, or both.

G20. REPORTING PLANNED CHANGES

The Permittee must, as soon as possible, give notice to Ecology of planned physical alterations, modifications or additions to the permitted construction activity. The Permittee should be aware that, depending on the nature and size of the changes to the original permit, a new public notice and other permit process requirements may be required. Changes in activities that require reporting to Ecology include those that will result in:

A. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).

B. A significant change in the nature or an increase in quantity of pollutants discharged, including but not limited to: for sites 5 acres or larger, a 20% or greater increase in acreage disturbed by construction activity.

C. A change in or addition of surface water(s) receiving stormwater or non-stormwater from the construction activity.

D. A change in the construction plans and/or activity that affects the Permittee's monitoring requirements in Special Condition S4.

Following such notice, permit coverage may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G21. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to Ecology, it must promptly submit such facts or information.

G22. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee must give advance notice to Ecology by submission of a new application or supplement thereto at least forty-five (45) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, must be scheduled during non-critical water quality periods and carried out in a manner approved by Ecology.

G23. REQUESTS TO BE EXCLUDED FROM COVERAGE UNDER THE PERMIT

Any discharger authorized by this permit may request to be excluded from coverage under the general permit by applying for an individual permit. The discharger must submit to the Director an application as described in WAC 173-220-040 or WAC 173-216-070, whichever is applicable, with reasons supporting the request. These reasons will fully document how an individual permit will apply to the applicant in a way that the general permit cannot. Ecology may make specific requests for information to support the request. The Director will either issue an individual permit or deny the request with a statement explaining the reason for the denial. When an individual permit is issued to a discharger otherwise subject to the construction stormwater general permit, the applicability of the construction stormwater general permit to that Permittee is automatically terminated on the effective date of the individual permit.

G24. APPEALS

A. The terms and conditions of this general permit, as they apply to the appropriate class of dischargers, are subject to appeal by any person within 30 days of issuance of this general permit, in accordance with Chapter 43.21B RCW, and Chapter 173-226 WAC.

B. The terms and conditions of this general permit, as they apply to an individual discharger, are appealable in accordance with Chapter 43.21B RCW within 30 days of the effective date of coverage of that discharger. Consideration of an appeal of general permit coverage of an individual discharger is limited to the general permit's applicability or nonapplicability to that individual discharger.

C. The appeal of general permit coverage of an individual discharger does not affect any other dischargers covered under this general permit. If the terms and conditions of this general permit are found to be inapplicable to any individual discharger(s), the matter

shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

G25. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

G26. BYPASS PROHIBITED

A. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited for stormwater events below the design criteria for stormwater management. Ecology may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, 3 or 4) is applicable.

1. Bypass of stormwater is consistent with the design criteria and part of an approved management practice in the applicable stormwater management manual.

2. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

   Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health.

3. Bypass of stormwater is unavoidable, unanticipated, and results in noncompliance of this permit.

   This bypass is permitted only if:

   a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

   b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.

c. Ecology is properly notified of the bypass as required in Special Condition S5.F of this permit.

4. A planned action that would cause bypass of stormwater and has the potential to result in noncompliance of this permit during a storm event.

   The Permittee must notify Ecology at least thirty (30) days before the planned date of bypass. The notice must contain:

   a. a description of the bypass and its cause

   b. an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.

   c. a cost-effectiveness analysis of alternatives including comparative resource damage assessment.

   d. the minimum and maximum duration of bypass under each alternative.

   e. a recommendation as to the preferred alternative for conducting the bypass.

   f. the projected date of bypass initiation.

   g. a statement of compliance with SEPA.

   h. a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated.

   i. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

5. For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above must be considered during preparation of the Stormwater Pollution Prevention Plan (SWPPP) and must be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

   Ecology will consider the following before issuing an administrative order for this type bypass:

   a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.

   b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

   c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve, conditionally approve, or deny the request. The public must be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under RCW 90.48.120.

B. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

APPENDIX A – DEFINITIONS

AKART is an acronym for "all known, available, and reasonable methods of prevention, control, and treatment." AKART represents the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants and controlling pollution associated with a discharge.

Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which was completed and approved by EPA before January 1, 2011, or before the date the operator's complete permit application is received by Ecology, whichever is later.

Applicant means an operator seeking coverage under this permit.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: stormwater associated with construction activity, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Buffer means an area designated by a local jurisdiction that is contiguous to and intended to protect a sensitive area.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

Calendar Day A period of 24 consecutive hours starting at 12:00 midnight and ending the following 12:00 midnight.

Calendar Week (same as Week) means a period of seven consecutive days starting at 12:01 a.m. (0:01 hours) on Sunday.

Certified Erosion and Sediment Control Lead (CESCL) means a person who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160 in the SWMM).

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; USC 1251 et seq.

Combined Sewer means a sewer which has been designed to serve as a sanitary sewer and a storm sewer, and into which inflow is allowed by local ordinance.

Common Plan of Development or Sale means a site where multiple separate and distinct construction activities may be taking place at different times on different schedules and/or by different contractors, but still under a single plan. Examples include: 1) phased projects and projects with multiple filings or lots, even if the separate phases or filings/lots will be constructed under separate contract or by separate owners (e.g., a development where lots are sold to separate builders); 2) a development plan that may be phased over multiple years, but is still under a

consistent plan for long-term development; 3) projects in a contiguous area that may be unrelated but still under the same contract, such as construction of a building extension and a new parking lot at the same facility; and 4) linear projects such as roads, pipelines, or utilities. If the project is part of a common plan of development or sale, the disturbed area of the entire plan must be used in determining permit requirements.

Composite Sample means a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots.

Concrete wastewater means any water used in the production, pouring and/or clean-up of concrete or concrete products, and any water used to cut, grind, wash, or otherwise modify concrete or concrete products. Examples include water used for or resulting from concrete truck/mixer/pumper/tool/chute rinsing or washing, concrete saw cutting and surfacing (sawing, coring, grinding, roughening, hydro-demolition, bridge and road surfacing). When stormwater comingles with concrete wastewater, the resulting water is considered concrete wastewater and must be managed to prevent discharge to waters of the state, including ground water.

Construction Activity means land disturbing operations including clearing, grading or excavation which disturbs the surface of the land. Such activities may include road construction, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Contaminant means any hazardous substance that does not occur naturally or occurs at greater than natural background levels. See definition of "hazardous substance" and WAC 173-340-200.

Demonstrably Equivalent means that the technical basis for the selection of all stormwater BMPs is documented within a SWPPP, including:

1. The method and reasons for choosing the stormwater BMPs selected.
2. The pollutant removal performance expected from the BMPs selected.
3. The technical basis supporting the performance claims for the BMPs selected, including any available data concerning field performance of the BMPs selected.
4. An assessment of how the selected BMPs will comply with state water quality standards.
5. An assessment of how the selected BMPs will satisfy both applicable federal technology-based treatment requirements and state requirements to use all known, available, and reasonable methods of prevention, control, and treatment (AKART).

Department means the Washington State Department of Ecology.

Detention means the temporary storage of stormwater to improve quality and/or to reduce the mass flow rate of discharge.

Dewatering means the act of pumping ground water or stormwater away from an active construction site.

Director means the Director of the Washington Department of Ecology or his/her authorized representative.

Discharger means an owner or operator of any facility or activity subject to regulation under Chapter 90.48 RCW or the Federal Clean Water Act.

Domestic Wastewater means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such ground water infiltration or surface waters as may be present.

Ecology means the Washington State Department of Ecology.

Engineered Soils means the use of soil amendments including, but not limited, to Portland cement treated base (CTB), cement kiln dust (CKD), or fly ash to achieve certain desirable soil characteristics.

Equivalent BMPs means operational, source control, treatment, or innovative BMPs which result in equal or better quality of stormwater discharge to surface water or to ground water than BMPs selected from the SWMM.

Erosion means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep.

Erosion and Sediment Control BMPs means BMPs intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, sediment traps, and ponds. Erosion and sediment control BMPs are synonymous with stabilization and structural BMPs.

Final Stabilization (same as fully stabilized or full stabilization) means the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (such as riprap, gabions or geotextiles) which prevents erosion.

Ground Water means water in a saturated zone or stratum beneath the land surface or a surface water body.

Hazardous Substance means any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) and (6), or any dangerous or extremely dangerous waste as designated by rule under chapter 70.105 RCW; any hazardous sub-stance as defined in RCW 70.105.010(14) or any hazardous substance as defined by rule under chapter 70.105 RCW; any substance that, on the effective date of this section, is a hazardous substance under section 101(14) of the federal cleanup law, 42 U.S.C., Sec. 9601(14); petroleum or petroleum products; and any substance or category of substances, including solid waste decomposition products, determined by the director

by rule to present a threat to human health or the environment if released into the environment. The term hazardous substance does not include any of the following when contained in an underground storage tank from which there is not a release: crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal, state, and local law.

Injection Well means a well that is used for the subsurface emplacement of fluids. (See Well.)

Jurisdiction means a political unit such as a city, town or county; incorporated for local self-government.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the State from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology.

Notice of Intent (NOI) means the application for, or a request for coverage under this general permit pursuant to WAC 173-226-200.

Notice of Termination (NOT) means a request for termination of coverage under this general permit as specified by Special Condition S10 of this permit.

Operator means any party associated with a construction project that meets either of the following two criteria:

- The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
- The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

Permittee means individual or entity that receives notice of coverage under this general permit.

pH means a liquid's measure of acidity or alkalinity. A pH of 7 is defined as neutral. Large variations above or below this value are considered harmful to most aquatic life.

pH monitoring period means the time period in which the pH of stormwater runoff from a site must be tested a minimum of once every seven days to determine if stormwater pH is between 6.5 and 8.5.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which pollutants are or may be discharged to surface waters of the State. This term does not include return flows from irrigated agriculture. (See Fact Sheet for further explanation.)

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste. This term does not include sewage from vessels within the meaning of section 312 of the CWA, nor does it include dredged or fill material discharged in accordance with a permit issued under section 404 of the CWA.

Pollution means contamination or other alteration of the physical, chemical, or biological properties of waters of the State; including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the State as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product (40 CFR 122.1).

Receiving water means the water body at the point of discharge. If the discharge is to a storm sewer system, either surface or subsurface, the receiving water is the water body to which the storm system discharges. Systems designed primarily for other purposes such as for ground water drainage, redirecting stream natural flows, or for conveyance of irrigation water/return flows that coincidentally convey stormwater are considered the receiving water.

Representative means a stormwater or wastewater sample which represents the flow and characteristics of the discharge. Representative samples may be a grab sample, a time-proportionate composite sample, or a flow proportionate sample. Ecology's Construction Stormwater Monitoring Manual provides guidance on representative sampling.

Sanitary sewer means a sewer which is designed to convey domestic wastewater.

Sediment means the fragmented material that originates from the weathering and erosion of rocks or unconsolidated deposits, and is transported by, suspended in, or deposited by water.

Sedimentation means the depositing or formation of sediment.

Sensitive area means a water body, wetland, stream, aquifer recharge area, or channel migration zone.

SEPA (State Environmental Policy Act) means the Washington State Law, RCW 43.21C.020, intended to prevent or eliminate damage to the environment.

Significant Amount means an amount of a pollutant in a discharge that is amenable to available and reasonable methods of prevention or treatment; or an amount of a pollutant that has a

reasonable potential to cause a violation of surface or ground water quality or sediment management standards.

Significant concrete work means greater than 1000 cubic yards poured concrete or recycled concrete over the life of a project.

Significant Contributor of Pollutants means a facility determined by Ecology to be a contributor of a significant amount(s) of a pollutant(s) to waters of the State of Washington.

Site means the land or water area where any "facility or activity" is physically located or conducted.

Source control BMPs means physical, structural or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. A few examples of source control BMPs are erosion control practices, maintenance of stormwater facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the sanitary sewer or a dead end sump.

Stabilization means the application of appropriate BMPs to prevent the erosion of soils, such as, temporary and permanent seeding, vegetative covers, mulching and matting, plastic covering and sodding. See also the definition of Erosion and Sediment Control BMPs.

Storm drain means any drain which drains directly into a storm sewer system, usually found along roadways or in parking lots.

Storm sewer system means a means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains designed or used for collecting or conveying stormwater. This does not include systems which are part of a combined sewer or Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Stormwater means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Stormwater Management Manual (SWMM) or Manual means the technical Manual published by Ecology for use by local governments that contain descriptions of and design criteria for BMPs to prevent, control, or treat pollutants in stormwater.

Stormwater Pollution Prevention Plan (SWPPP) means a documented plan to implement measures to identify, prevent, and control the contamination of point source discharges of stormwater.

Surface Waters of the State includes lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Temporary Stabilization means the exposed ground surface has been covered with appropriate materials to provide temporary stabilization of the surface from water or wind erosion. Materials include, but are not limited to, mulch, riprap, erosion control mats or blankets and temporary cover crops. Seeding alone is not considered stabilization. Temporary stabilization is not a substitute for the more permanent "final stabilization."

Total Maximum Daily Load (TMDL) means a calculation of the maximum amount of a pollutant that a water body can receive and still meet state water quality standards. Percentages of the total maximum daily load are allocated to the various pollutant sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDL calculations must include a "margin of safety" to ensure that the water body can be protected in case there are unforeseen events or unknown sources of the pollutant. The calculation must also account for seasonable variation in water quality.

Treatment BMPs means BMPs that are intended to remove pollutants from stormwater. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

Transparency means a measurement of water clarity in centimeters (cm), using a 60 cm transparency tube. The transparency tube is used to estimate the relative clarity or transparency of water by noting the depth at which a black and white Secchi disc becomes visible when water is released from a value in the bottom of the tube. A transparency tube is sometimes referred to as a "turbidity tube."

Turbidity means the clarity of water expressed as nephelometric turbidity units (NTU) and measured with a calibrated turbidimeter.

Uncontaminated means free from any contaminant, as defined in MTCA cleanup regulations. See definition of "contaminant" and WAC 173-340-200.

Waste Load Allocation (WLA) means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality based effluent limitation (40 CFR 130.2[h]).

Water quality means the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

Waters of the State includes those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the State" as defined in Chapter 90.48 RCW, which include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Well means a bored, drilled or driven shaft, or dug hole whose depth is greater than the largest surface dimension. (See Injection well.)

Wheel wash wastewater means any water used in, or resulting from the operation of, a tire bath or wheel wash (BMP C106: Wheel Wash), or other structure or practice that uses water to physically remove mud and debris from vehicles leaving a construction site and prevent track-out onto roads. When stormwater comingles with wheel wash wastewater, the resulting water is considered wheel wash wastewater and must be managed according to Special Condition S9.D.9.

APPENDIX B – ACRONYMS

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BMP	Best Management Practice
CESCL	Certified Erosion and Sediment Control Lead
CFR	Code of Federal Regulations
CKD	Cement Kiln Dust
cm	Centimeters
CTB	Cement-Treated Base
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
ESC	Erosion and Sediment Control
FR	Federal Register
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SWMM	Stormwater Management Manual
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control
USC	United States Code
USEPA	United States Environmental Protection Agency
WAC	Washington Administrative Code
WQ	Water Quality
WWHM	Western Washington Hydrology Model

What do I need to use the WQWebDMR system?

The WQWebDMR system requires a few common computer components:

- PC or Mac.
- DSL or Broadband Internet connection.
- Web browser (Internet Explorer 7.0 or higher, Chrome, FireFox, etc.).
- Personal e-mail account.
- Printer.

So how do I get started?

Step by step registration instructions, with screen shots, are provided at: www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html

Click on the "How to register for WQWebDMR" link to download the registration instructions.

The steps are summarized here:

1. Sign up for a Secure Access Washington (SAW) account or use an existing SAW account.
2. In SAW, register for a new service: Water Quality Permitting Portal (WQWebDMR).
3. Define a "role" under your permit.
4. Create an electronic signature account (if required).
5. Fill out the electronic signature agreement form (ESAF), print it, and mail to Ecology (if required).
6. Look for your approval e-mail and follow the instructions contained in it.

Need help?

Please feel free to contact Ecology if you have any questions about WQWebDMR.

For technical assistance and help getting registered, contact the WQWebDMR help staff at:

E-mail: WQWebPortal@ecy.wa.gov
Phone: 1-800-633-6193/Option 3
or 360-407-7097 (Local)

For permit-specific or urgent issues, please contact the one of the Ecology offices below:

Central Regional Office - Yakima
WQWebDMR-CRO@ecy.wa.gov

Eastern Regional Office - Spokane
WQWebDMR-ERO@ecy.wa.gov

Northwest Regional Office - Bellevue
WQWebDMR-NWRO@ecy.wa.gov

Southwest Regional Office - Lacey
WQWebDMR-SWRO@ecy.wa.gov

Major Industrial Unit (Ecology HQ)
WQWebDMR-Industrial@ecy.wa.gov

Stormwater Unit (Ecology HQ)
WQWebDMR-Stormwater@ecy.wa.gov

If you need this document in a version for the visually impaired, call the Water Quality Program at 360-407-6401. Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.

Water Quality Permitting Portal (WQWebDMR)

Washington State Department of Ecology

DEPARTMENT OF ECOLOGY
State of Washington

Publication No. 11-10-013
Rev. 09/2012

What is WQWebDMR?

WQWebDMR is a new approach to submitting your Discharge Monitoring Reports (DMRs) to the Department of Ecology. Unlike the current paper method, this new system is fast, available 24/7 over the Internet, and customized for your facility and permit(s).

There is no longer a need to calculate the delay for mailing your paper DMRs. Instead, log onto the Internet, select your permit information, select the begin date, enter your values, and then submit the data. We'll even store your data for you after you submit the DMR, just in case you need to redo or reprint it.

How much does it cost?

There are no fees for registering for and using the WQWebDMR system.

Must all DMR submittals be by WQWebDMR?

The WQWebDMR is currently voluntary for most permits. As Ecology reissues permits it is requiring use of WQWebDMR; for example facilities covered by the construction stormwater general permit must submit DMRs electronically. We encourage all facilities to try WQWebDMR and find out how easy it is to submit a DMR.

Who can have access & what does that access allow?

There are four different roles to choose from when you sign up for WQWebDMR. They are:

Facility Coordinator – Can assign staff to the signer and preparer roles to work on DMRs, and can sign and prepare DMRs themselves. Examples: permittee, responsible official, delegated authority (environmental manager).

Facility Signer – Can sign and prepare DMRs, and is usually granted access to WQWebDMR by a Facility Coordinator. Example: delegated authority (plant supervisor, CESCL).

Facility Preparer – Can prepare DMRs and is granted access to WQWebDMR only by a Facility Coordinator. Examples: contractors, secretaries, data entry staff.

Facility Administrator – Can assist Facility Coordinator with assigning others to prepare and sign DMRs and can also prepare DMRs. Examples: administrative assistant and project leads.

If I sign DMRs for more than one facility/permit, do I need a WQWebDMR account for each?

You can register more than one facility/permit under one account. All we ask is that when you register (as a coordinator or signer), you provide proof that you are responsible for each of your listed facilities/permits.

What sort of proof do I need to register?

Proof comes in the form of a copy of one of the following:

- A previously submitted DMR.
- A permit's cover sheet.
- A permit's letter of coverage.
- Mail from Ecology that includes both the facility's name and the permit number.
- Signature authority delegation letter signed by the permittee (responsible official).

What do I get out of this?

With this system you will have the following benefits:

- Available 24/7.
- Enter both daily and summarized data together.
- Enter your data over time or all at once.
- No delay between mailing the DMR and Ecology receiving it.
- Fill in the data at one location then inform your supervisor in another location to view and submit the DMR.
- Electronic DMRs are customized for both the facility and the permit, including specific reporting requirements for your permit.
- Person signing DMR gets immediate e-mail confirmation.
- Submitted DMRs can be accessed online for re-printing or re-submitting.
- You can add attachments (lab sheets, etc.) to your DMR submission.
- System tracks by whom and when a DMR was submitted.
- Notifies signatory the DMR is ready to sign.
- Add monitoring points when you need them (construction stormwater and sand & gravel general permits only).

NOTE: The WAWebDMR name changed to WQWebDMR on June 20

- The banner on the main WQWebDMR page has changed
- New web address is https://secureaccess.wa.gov/ecy/wqwebportal

APPENDIX C

STOCKPILE CHARACTERIZATION MEMORANDUM

MEMORANDUM

To: Laura Jaecks

Date: August 1, 2013

From: Justin Clary, PE

Project: 0779.02.01

RE: Excavated Material Stockpile Summary
Phase I Removal Action, Former Cashmere Mill Site, Cashmere, Washington

Maul Foster & Alongi, Inc. has prepared this memorandum to summarize chemical characteristics of stockpiles of excavated material created on site during completion of Phase I of the removal action at the former Cashmere Mill Site (the Site) located in Cashmere, Washington. Phase I of the removal action was completed primarily on the portion of the Site located between Mill Road and Sunset Highway. Field activities consisted predominately of excavation of wood waste and petroleum-contaminated soil (PCS) and backfilling with clean import fill during April through June 2013. Most of the wood waste was transported off site and disposed of by the remediation contractor. Soil, wood waste, and debris identified during excavation as potentially contaminated were stockpiled (in piles specific to origin and material type) in containment areas constructed on the Site south of Mill Road.

The stockpiles were created as excavation work continued. The stockpiles were named based on the area the materials were obtained from. If a stockpile was sampled for characterization purposes, no additional soil was added to the pile. Instead, a new pile was created and subsequently characterized. As a result, in some cases there is more than one stockpile for an associated excavated area.

The attached figure identifies the location and estimated volume of each stockpile, based on land survey results completed by the Phase I construction contractor's surveyor. Following are descriptions of each stockpile. The attached table provides the analytical characterization results of each stockpile, which were completed consistent with the Removal Action Work Plan and the Sampling and Analysis Plan specific to the removal action. Also attached are the soil classification sieve analysis results (ASTM International C-136 or D-422) provided by RH2 Engineering, Inc. Note that the sieve results are provided for each soil removal area (i.e., results associated with PCS Area 2 are associated with the removal area, not specific to each PCS Area 2 stockpile).

Debris Stockpile:
This stockpile consisted of wood waste material excavated from the southern extent of the wood waste excavation area; this material was found to be intermixed with refuse/debris and exhibited contamination during field screening (visual sheen on groundwater and strong odor).

Based on stockpile characterization analytical results, the material was transported to and disposed of at the Greater Wenatchee Landfill by the Phase I remediation contractor.

Wood Post Soil Stockpile:
Phase I removal action activities uncovered a number of treated wooden pilings that were driven vertically into the soil in the eastern portion of the Site. The wood pilings were found between Sunset Highway and Mill Road in an area generally bounded to the north by wood waste and the south by the former water structure. Soils surrounding the pilings were excavated and stockpiled in the Wood Post Soil Stockpile. The treated wood pilings were disposed of off-site by the removal action contractor. Stockpile characterization analytical results do not indicate exceedances of Model Toxics Control Act (MTCA) cleanup levels; however, RH2 Engineering has determined that physical properties of the soil indicate that it is not suitable for use as structural fill.

Storm Line PCS Area Stockpile 1:
During removal of a stormwater collection system, soil indicated by field screening methods (visual staining and odor) to be contaminated was stockpiled. The soils were later confirmed to be contaminated with petroleum hydrocarbon constituents through laboratory analysis of soil samples. Stockpile characterization analytical results indicate petroleum hydrocarbon concentrations in excess of the associated MTCA Method A cleanup levels, but suitable for use as landfill daily cover or in asphalt manufacturing, consistent with Washington State Department of Ecology (Ecology) guidance for reuse of PCS (Table 12.1, Ecology Publication No. 10-09-057) (Ecology guidance).

Storm Line PCS Area Stockpile 2:
Excavation associated with the Storm Line PCS Area was initially halted on May 23, 2013, based on field screening methods indicating contaminated soils had been removed. However, analytical results of confirmation soil samples collected from some of the excavation sidewalls indicated exceedances of cleanup levels. On May 30, 2013, excavation was conducted specific to the sidewall grids exhibiting cleanup level exceedances. Because characterization sampling activities had previously been conducted on the original Storm Line PCS Area stockpile (No. 1), a second stockpile was created. Stockpile characterization analytical results indicate that petroleum hydrocarbon concentrations comply with the associated MTCA Method A cleanup levels, and are suitable for use as commercial fill above the water table, consistent with Ecology guidance.

PCS Area 2 Stockpile 1:
Soil in PCS Area 2, indicated by field screening methods (visual staining and odor) to be contaminated, was initially excavated on May 16, 2013, and the soil stockpiled. Stockpile characterization analytical results indicate petroleum hydrocarbon concentrations in excess of the associated MTCA Method A cleanup levels, but suitable for use as landfill daily cover or in asphalt manufacturing, consistent with Ecology guidance.

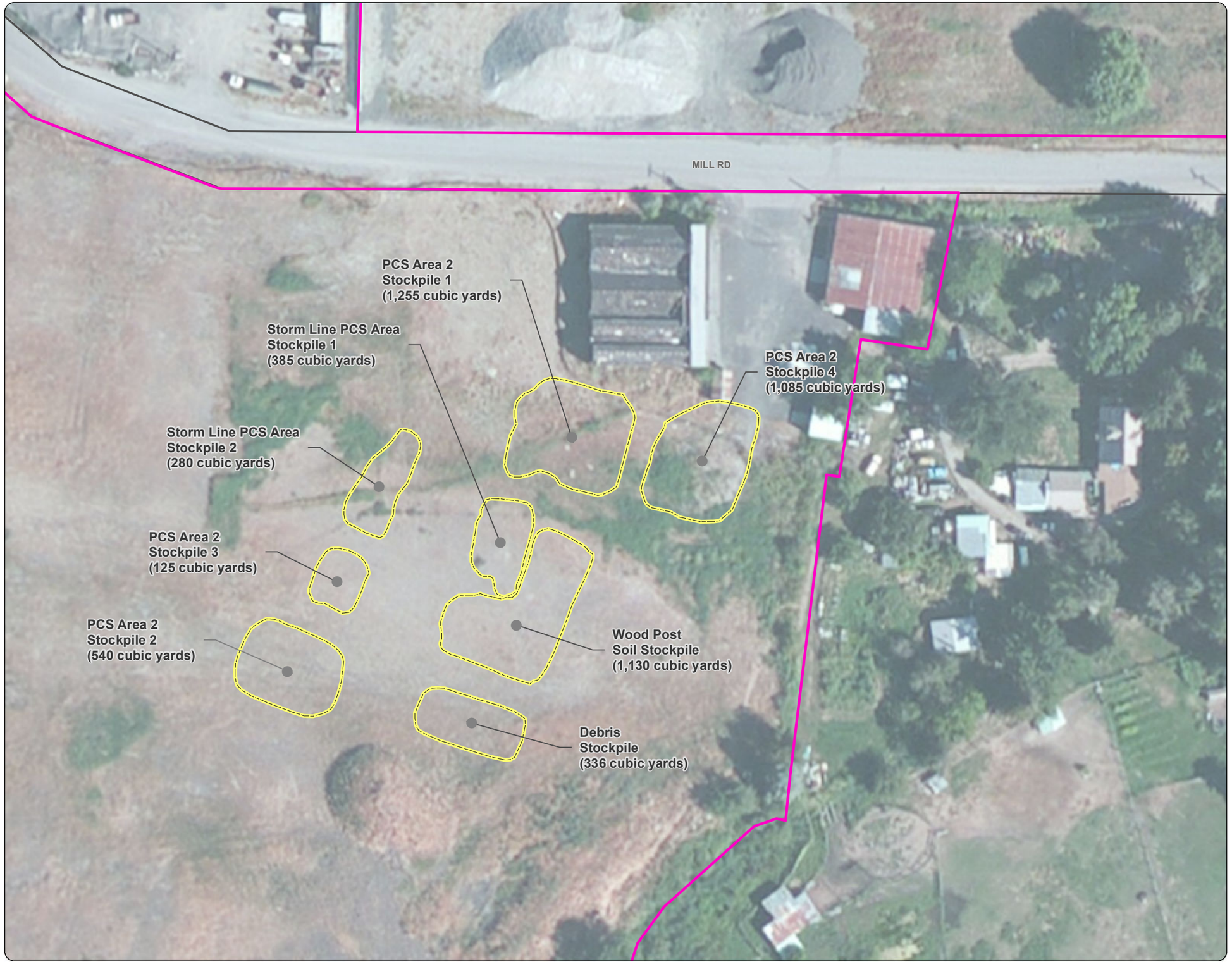
PCS Area 2 Stockpile 2:
Excavation associated with PCS Area 2 was initially halted on May 17, 2013, based on field screening methods indicating contaminated soils had been removed. However, analytical results of confirmation soil samples collected from some of the excavation sidewalls indicated exceedances of cleanup levels. On May 22, 2013, excavation was conducted specific to the sidewall grids exhibiting cleanup level exceedances. Because characterization sampling activities had previously been conducted on the original PCS Area 2 stockpile (No. 1), a second stockpile was created. Stockpile characterization analytical results indicate petroleum hydrocarbon concentrations in excess of the associated MTCA Method A cleanup levels, but suitable for use as landfill daily cover or in asphalt manufacturing, consistent with Ecology guidance.

PCS Area 2 Stockpile 3:
Additional excavation associated with PCS Area 2 was conducted on May 23, 2013, specific to the sidewall grids exhibiting cleanup level exceedances. A third stockpile was created, composed specifically of soil generated during the May 23 excavation. Stockpile characterization analytical results indicate that petroleum hydrocarbon concentrations comply with the associated MTCA Method A cleanup levels, but the stockpile is suitable for use as landfill daily cover or in asphalt manufacturing, consistent with Ecology guidance.

PCS Area 2 Stockpile 4:
Additional excavation associated with PCS Area 2 was conducted on May 30, 2013, specific to the sidewall grids exhibiting cleanup level exceedances. A fourth stockpile was created, composed specifically of soil generated during the May 30 excavation. Stockpile characterization analytical results indicate petroleum hydrocarbon concentrations in excess of the associated MTCA Method A cleanup levels, but suitable for use as landfill daily cover or in asphalt manufacturing, consistent with Ecology guidance.

Figure
Stockpiles Resulting from Removal Action Activities

Phase I Former Cashmere Mill Site
Removal Action
Cashmere, Washington



Legend

- Stockpile Area
- Site Boundary

Notes:
1. PCS = petroleum-contaminated soil.
2. Conditions depicted on the aerial image do not reflect current site conditions.

0 25 50
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online.

MAUL FOSTER ALONGI
p. 360 594 6262 | www.maulfoster.com

Path: X:\0779.02 Port of Chelan County\Projects\Fig_Stockpiles Resulting from Removal Action Activities.mxd
Print Date: 8/1/2013
Approved By: J. Clary
Produced By: apadilla
Project: 0779.02.01-01

Summary of Stockpile Analytical Results
Phase I Former Cashmere Mill Site Removal Action
Cashmere, Washington

Stockpile	Debris Stockpile				Wood Post Soil Stockpile								Storm Line PCS Area Stockpile 1		Storm Line PCS Area Stockpile 2			
Sample Identification No.	DEBRIS-SP-1		DEBRIS-SP-2		POST-SP-1		POST-SP-2		POST-SP-3		POST-SP-4		STORMPIPE-SP-1		SL-0503013-SP-1		SL-0503013-SP-2	
Sample Date	05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/23/2013		06/03/2013		06/03/2013	
Analyte	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals (mg/kg)																		
Arsenic	6		5 U		6		6		7		6 U		NA		NA		NA	
Chromium	46.9 J		38.3 J		39.7		35.5		47.0		36.9		NA		NA		NA	
Copper	24.8		25.3		24.6		24.1		27.2		23.4		NA		NA		NA	
Lead	14		12		15		13		16		11		**11**		**6.57**		**11.57**	
NWTPH-Dx (mg/kg)																		
Diesel	**16**		**25**		**50**		**71**		**35**		**50**		**760**		**59**		**50**	
Motor-Oil Range	**53**		**64**		**230**		**410**		**160**		**380**		**2,300**		**83**		**160**	
NWTPH-Gx (mg/kg)																		
Gasoline	6.3 U		5.9 U		6.5 U		6.6 U		6.3 U		5.9 U		**19**		**9.2**		6.6 U	
BTEX (mg/kg)																		
Benzene	0.016 U		0.015 U		0.016 U		0.016 U		0.016 U		0.015 U		0.020 U		0.015 U		0.016 U	
Ethylbenzene	0.016 U		0.015 U		0.016 U		0.016 U		0.016 U		0.015 U		0.020 U		0.015 U		0.016 U	
m,p-Xylene	0.032 U		0.030 U		0.032 U		0.033 U		0.032 U		0.029 U		0.040 U		0.030 U		0.033 U	
o-Xylene	0.016 U		0.015 U		0.016 U		0.016 U		0.016 U		0.015 U		0.020 U		0.015 U		0.016 U	
Toluene	0.016 U		0.015 U		0.016 U		0.016 U		0.016 U		0.015 U		0.020 U		**0.036**		**0.025**	
SVOCs (mg/kg)																		
1,2,4-Trichlorobenzene	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
1,2-Dichlorobenzene	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
1,3-Dichlorobenzene	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
1,4-Dichlorobenzene	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
2,4,5-Trichlorophenol	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
2,4,6-Trichlorophenol	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
2,4-Dichlorophenol	0.370 U		0.180 U		0.190 U		0.190 U		0.190 U		0.190 U		NA		NA		NA	
2,4-Dimethylphenol	0.073 U		0.036 U		0.038 U		0.038 U		0.038 U		0.038 U		NA		NA		NA	
2,4-Dinitrophenol	1.600 U		0.760 U		0.810 U		0.820 U		0.820 U		0.800 U		NA		NA		NA	
2,4-Dinitrotoluene	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
2,6-Dinitrotoluene	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
2-Chloronaphthalene	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
2-Chlorophenol	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
2-Methylphenol	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
2-Nitroaniline	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
2-Nitrophenol	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
3,3-Dichlorobenzidine	0.280 U		0.130 U		0.140 U		0.140 U		0.140 U		0.140 U		NA		NA		NA	
3-Nitroaniline	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
4,6-Dinitro-2-methylphenol	0.370 U		0.180 U		0.190 U		0.190 U		0.190 U		0.190 U		NA		NA		NA	
4-Bromophenylphenyl ether	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
4-Chloro-3-methylphenol	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
4-Chloroaniline	0.500 U		0.240 U		0.260 U		0.260 U		0.260 U		0.260 U		NA		NA		NA	
4-Chlorophenylphenyl ether	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	

Summary of Stockpile Analytical Results
Phase I Former Cashmere Mill Site Removal Action
Cashmere, Washington

Stockpile	Debris Stockpile				Wood Post Soil Stockpile								Storm Line PCS Area Stockpile 1		Storm Line PCS Area Stockpile 2			
Sample Identification No.	DEBRIS-SP-1		DEBRIS-SP-2		POST-SP-1		POST-SP-2		POST-SP-3		POST-SP-4		STORMPIPE-SP-1		SL-0503013-SP-1		SL-0503013-SP-2	
Sample Date	05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/23/2013		06/03/2013		06/03/2013	
Analyte	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
4-Methylphenol	**0.037**		**0.062**		**0.082**		**0.046**		**0.067**		**0.064**		NA		NA		NA	
4-Nitroaniline	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
4-Nitrophenol	0.180 U		0.089 U		0.095 U		0.096 U		0.096 U		0.094 U		NA		NA		NA	
Benzoic acid	0.730 UJ		0.360 UJ		0.380 UJ		0.380 UJ		0.380 UJ		0.380 UJ		NA		NA		NA	
Benzyl alcohol	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Bis(2-chloro-1-methylethyl) ether	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Bis(2-chloroethoxy)methane	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Bis(2-chloroethyl)ether	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Bis(2-ethylhexyl)phthalate	0.046 U		0.025 U		0.029 U		0.032 U		0.036 U		0.024 U		NA		NA		NA	
Butylbenzylphthalate	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Carbazole	**0.095**		**0.069**		**0.070**		**0.020**		**0.050**		0.019 U		NA		NA		NA	
Diethylphthalate	0.092 U		0.045 U		0.047 U		0.048 U		0.048 U		0.047 U		NA		NA		NA	
Dimethyl phthalate	0.037 U		0.018 U		0.019 U		**0.071**		0.019 U		0.019 U		NA		NA		NA	
Di-n-butyl phthalate	0.037 U		0.018 U		**0.021**		**0.025**		0.019 U		**0.024**		NA		NA		NA	
Di-n-octyl phthalate	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Hexachlorobenzene	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Hexachlorobutadiene	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Hexachlorocyclopentadiene	0.730 U		0.360 U		0.380 U		0.380 U		0.380 U		0.380 U		NA		NA		NA	
Hexachloroethane	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Isophorone	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Nitrobenzene	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
N-Nitrosodiphenylamine	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
N-Nitrosodipropylamine	0.037 U		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Pentachlorophenol	0.370 UJ		0.180 UJ		0.190 UJ		0.190 UJ		0.190 UJ		0.190 UJ		NA		NA		NA	
Phenol	0.037 U		0.018 U		**0.028**		0.019 U		0.019 U		0.019 U		NA		NA		NA	
PAHs (mg/kg)																		
1-Methylnaphthalene	0.037 U		**0.044**		**0.140**		**0.028**		**0.043**		**0.036**		NA		NA		NA	
2-Methylnaphthalene	0.037 U		**0.063**		**0.150**		**0.046**		**0.065**		**0.050**		NA		NA		NA	
Acenaphthene	**0.110**		**0.230**		**0.310**		**0.100**		**0.180**		**0.220**		NA		NA		NA	
Acenaphthylene	**0.120**		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Anthracene	**2.0**		**0.077**		**0.160**		**0.027**		**0.045**		**0.061**		NA		NA		NA	
Benzo(a)anthracene	**1.0**		**0.049**		**0.130**		**0.029**		**0.028**		**0.056**		NA		NA		NA	
Benzo(b)fluoranthene	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(k)fluoranthene	NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(a)pyrene	**1.3**		**0.021**		**0.070**		0.019 U		0.019 U		**0.020**		NA		NA		NA	
Benzo(ghi)perylene	**0.520**		0.018 U		**0.038**		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Chrysene	**1.8**		**0.058**		**0.140**		**0.039**		**0.036**		**0.069**		NA		NA		NA	
Dibenzo(a,h)anthracene	**0.270**		0.018 U		0.019 U		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Dibenzofuran	**0.070**		**0.160**		**0.210**		**0.077**		**0.120**		**0.140**		NA		NA		NA	

Summary of Stockpile Analytical Results
Phase I Former Cashmere Mill Site Removal Action
Cashmere, Washington

Stockpile	Debris Stockpile				Wood Post Soil Stockpile								Storm Line PCS Area Stockpile 1		Storm Line PCS Area Stockpile 2			
Sample Identification No.	DEBRIS-SP-1		DEBRIS-SP-2		POST-SP-1		POST-SP-2		POST-SP-3		POST-SP-4		STORMPIPE-SP-1		SL-0503013-SP-1		SL-0503013-SP-2	
Sample Date	05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/23/2013		06/03/2013		06/03/2013	
Analyte	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Fluoranthene	**1.100**		**0.290**		**0.620**		**0.120**		**0.160**		**0.280**		NA		NA		NA	
Fluorene	**0.083**		**0.170**		**0.290**		**0.078**		**0.110**		**0.160**		NA		NA		NA	
Indeno(1,2,3-cd)pyrene	**0.580**		0.018 U		**0.031**		0.019 U		0.019 U		0.019 U		NA		NA		NA	
Naphthalene	**0.068**		**0.150**		**0.082**		**0.082**		**0.160**		**0.081**		NA		NA		NA	
Phenanthrene	**0.350**		**0.580**		**1.200**		**0.270**		**0.320**		**0.420**		NA		NA		NA	
Pyrene	**0.80**		**0.240**		**0.510**		**0.120**		**0.140**		**0.260**		NA		NA		NA	
Total Benzofluoranthenes	**3.0**		**0.048**		**0.140**		0.038 U		0.038 U		**0.050**		NA		NA		NA	
cPAH TEQ	**1.80**		**0.033**		**0.10**		**0.017**		**0.016**		**0.033**		NA		NA		NA	

Summary of Stockpile Analytical Results
Phase I Former Cashmere Mill Site Removal Action
Cashmere, Washington

Stockpile	PCS Area 2 Stockpile 1								PCS Area 2 Stockpile 2		PCS Area 2 Stockpile 3		PCS Area 2 Stockpile 4							
Sample Identification No.	AREA2-SP-1		AREA2-SP-2		AREA2-SP-3		AREA2-SP-4		AREA2-052213-SP-1		AREA2-052313-SP-1		AREA2-053013-SP-1		AREA2-053013-SP-2		AREA2-053013-SP-3		AREA2-053013-SP-4	
Sample Date	05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/23/2013		05/23/2013		06/03/2013		06/03/2013		06/03/2013		06/03/2013	
Analyte	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Metals (mg/kg)																				
Arsenic	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chromium	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Copper	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Lead	28		29		25		32		**23**		**43**		**9.25**		**11.75**		**19.99**		**27.37**	
NWTPH-Dx (mg/kg)																				
Diesel	**450**		**430**		**680**		**990**		**800**		**180**		**550**	J	**98**		**320**	J	**200**	
Motor-Oil Range	**1,900**		**1,900**		**2,000**		**1,800**		**1,600**		**1,300**		**2,800**	J	**620**	J	**2,200**	J	**1,600**	J
NWTPH-Gx (mg/kg)																				
Gasoline	6.0	U	6.2	U	6.2	U	6.0	U	6.8	U	7.5	U	5.6	U	6.5	U	6.0	U	6.2	U
BTEX (mg/kg)																				
Benzene	0.015	U	0.016	U	0.016	U	0.015	U	0.017	U	0.019	U	0.014	U	0.016	U	0.015	U	0.016	U
Ethylbenzene	0.015	U	0.016	U	0.016	U	0.015	U	0.017	U	0.019	U	0.014	U	0.016	U	0.015	U	0.016	U
m,p-Xylene	0.030	U	0.031	U	0.031	U	0.030	U	0.034	U	0.038	U	0.028	U	0.033	U	0.030	U	0.031	U
o-Xylene	0.015	U	0.016	U	0.016	U	0.015	U	0.017	U	0.019	U	0.014	U	0.016	U	0.015	U	0.016	U
Toluene	0.015	U	**0.016**		0.016	U	0.015	U	**0.017**		**0.024**		**0.032**		**0.033**		**0.019**		**0.025**	
SVOCs (mg/kg)																				
1,2,4-Trichlorobenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,2-Dichlorobenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,3-Dichlorobenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
1,4-Dichlorobenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4,5-Trichlorophenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4,6-Trichlorophenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4-Dichlorophenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4-Dimethylphenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4-Dinitrophenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4-Dinitrotoluene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,6-Dinitrotoluene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Chloronaphthalene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Chlorophenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Methylphenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Nitroaniline	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Nitrophenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3,3-Dichlorobenzidine	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3-Nitroaniline	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4,6-Dinitro-2-methylphenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Bromophenylphenyl ether	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Chloro-3-methylphenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Chloroaniline	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Chlorophenylphenyl ether	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

Summary of Stockpile Analytical Results
Phase I Former Cashmere Mill Site Removal Action
Cashmere, Washington

Stockpile	PCS Area 2 Stockpile 1								PCS Area 2 Stockpile 2		PCS Area 2 Stockpile 3		PCS Area 2 Stockpile 4							
Sample Identification No.	AREA2-SP-1		AREA2-SP-2		AREA2-SP-3		AREA2-SP-4		AREA2-052213-SP-1		AREA2-052313-SP-1		AREA2-053013-SP-1		AREA2-053013-SP-2		AREA2-053013-SP-3		AREA2-053013-SP-4	
Sample Date	05/17/2013		05/17/2013		05/17/2013		05/17/2013		05/23/2013		05/23/2013		06/03/2013		06/03/2013		06/03/2013		06/03/2013	
Analyte	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
4-Methylphenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Nitroaniline	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Nitrophenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzoic acid	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzyl alcohol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Bis(2-chloro-1-methylethyl) ether	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Bis(2-chloroethoxy)methane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Bis(2-chloroethyl)ether	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Bis(2-ethylhexyl)phthalate	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Butylbenzylphthalate	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Carbazole	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Diethylphthalate	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Dimethyl phthalate	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Di-n-butyl phthalate	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Di-n-octyl phthalate	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Hexachlorobenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Hexachlorobutadiene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Hexachlorocyclopentadiene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Hexachloroethane	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Isophorone	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Nitrobenzene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
N-Nitrosodiphenylamine	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
N-Nitrosodipropylamine	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Pentachlorophenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Phenol	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PAHs (mg/kg)																				
1-Methylnaphthalene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Methylnaphthalene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Acenaphthene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Acenaphthylene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Anthracene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(a)anthracene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(b)fluoranthene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(k)fluoranthene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(a)pyrene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(ghi)perylene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chrysene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Dibenzo(a,h)anthracene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Dibenzofuran	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

Summary of Stockpile Analytical Results
Phase I Former Cashmere Mill Site Removal Action
Cashmere, Washington

Stockpile	PCS Area 2 Stockpile 1								PCS Area 2 Stockpile 2		PCS Area 2 Stockpile 3		PCS Area 2 Stockpile 4							
Sample Identification No. Sample Date	AREA2-SP-1 05/17/2013		AREA2-SP-2 05/17/2013		AREA2-SP-3 05/17/2013		AREA2-SP-4 05/17/2013		AREA2-052213-SP-1 05/23/2013		AREA2-052313-SP-1 05/23/2013		AREA2-053013-SP-1 06/03/2013		AREA2-053013-SP-2 06/03/2013		AREA2-053013-SP-3 06/03/2013		AREA2-053013-SP-4 06/03/2013	
Analyte	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Fluoranthene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Fluorene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Indeno(1,2,3-cd)pyrene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Naphthalene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Phenanthrene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Pyrene	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Total Benzofluoranthenes	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
cPAH TEQ	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

NOTES:
Detections are in **bold.**
Total concentrations were calculated using one-half the detection limit for non-detects.
Where all components were non-detect, the calculated total is "ND " (not detected).
BTEX = benzene, toluene, ethylbenzene, xylenes.
cPAH TEQ = carcinogenic polycyclic aromatic hydrocarbon toxic equivalency quotient.
—calculated from laboratory-provided cPAH data.
J = Result is an estimated value.
mg/kg = milligrams per kilogram (parts per million).
MTCA = Model Toxics Control Act.
MTCA A = MTCA Method A screening level value.
MTCA B CAR = MTCA Method B screening level value for carcinogenic compounds.
MTCA B NCAR = MTCA Method B screening level value for noncarcinogenic compounds.
NA = not analyzed.
NWTPH-Dx = Northwest Total Petroleum Hydrocarbon—Diesel- and Heavy-Oil-Range Organics Method.
NWTPH-Gx = Northwest Total Petroleum Hydrocarbon—Gasoline-Range Organics Method.
PAH = polycyclic aromatic hydrocarbon.
PCS = petroleum-contaminated soil.
SVOC = semivolatile organic compound.
U = Analyte was not detected at or above method reporting limit.

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East Ninth Street
Wenatchee, WA 98801
(509) 664-4843

CLASSIFICATION SIEVE ANALYSIS ASTM C-136 OR D-422

CLIENT:	RH2	LAB NO:	13-0962
PROJ. NO:	13-38	DATE REC'D:	5/10/2013
PROJECT:	Cashmerer Mill	DATE TESTED:	5/13/2013
CONTRACTOR:	Scarsella	SUBMITTED BY:	Black sack
LOCATION:	Black Sack	DEPTH:	

PERCENT MOISTURE OF FINES: 2.6%

SAMPLE DESCRIPTION: Poorly graded sand W/silt

SCREEN SIZE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	FRACTURE COUNT		TOTAL PERCENT	
6							
3	0	0%	100%				
2	114	1%	99%				
1 1/2	114	1%	99%				
1	114	1%	99%				
3/4	114	1%	99%				
3/8	127	1%	99%				
4	170	1.6%	98.4%				
TOTAL	10738						
SIEVE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	X-FACTOR			
10	16.4	2%	98%	0.984		**96%**	
16	48.0	7%	93%	0.984		**92%**	
30	138.5	20%	80%	0.984		**79%**	
40	227.7	33%	67%	0.984		**66%**	
80	541.8	78%	22%	0.984		**22%**	
100	582.4	84%	16%	0.984		**16%**	
200	650.0	93.3%	6.7%	0.984		**6.6%**	
	8.0						
TOTAL	696.5						

WGT. OF PAN SAMPLE:	10847	PAN I.D & WGT..:	V	298.6
WGT. OF PAN SAMPLE - MOISTURE:	10568	WGT. PAN & WET SOIL	1013.5	18.4
		WGT. PAN & DRY SOIL:	995.1	

REMARKS:

TECHNICIAN: R. GILL PROJ. MGR J.HILLS

Note: All sample material will be discarded after 30 days of receipt unless otherwise notified.

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MOISTURE DENSITY RELATIONSHIP ASTM-D1557 or ASTM D-698 PROCTOR
UNIT WEIGHT AND WATER CONTENT CORRECTIONS FOR SOILS CONTAINING OVERSIZE PARTICLES - ASTM D-4718

CLIENT:	RH2	LAB NO:	13-0963
PROJ. NO:	13-38	SIEVE NO:	13-0962
PROJECT:	Cashmere Mill	DATE TESTED:	5/14/2013
CONTRACTOR:	Scarsella	TEST METHOD:	D1557-A
LOCATION:	Black sack	SUBMITTED BY:	Black sack

SAMPLE DESCRIPTION: Poorly graded sand W/silt

OPTIMUM MOISTURE: 13.0 PCT. + #4 = 1.6

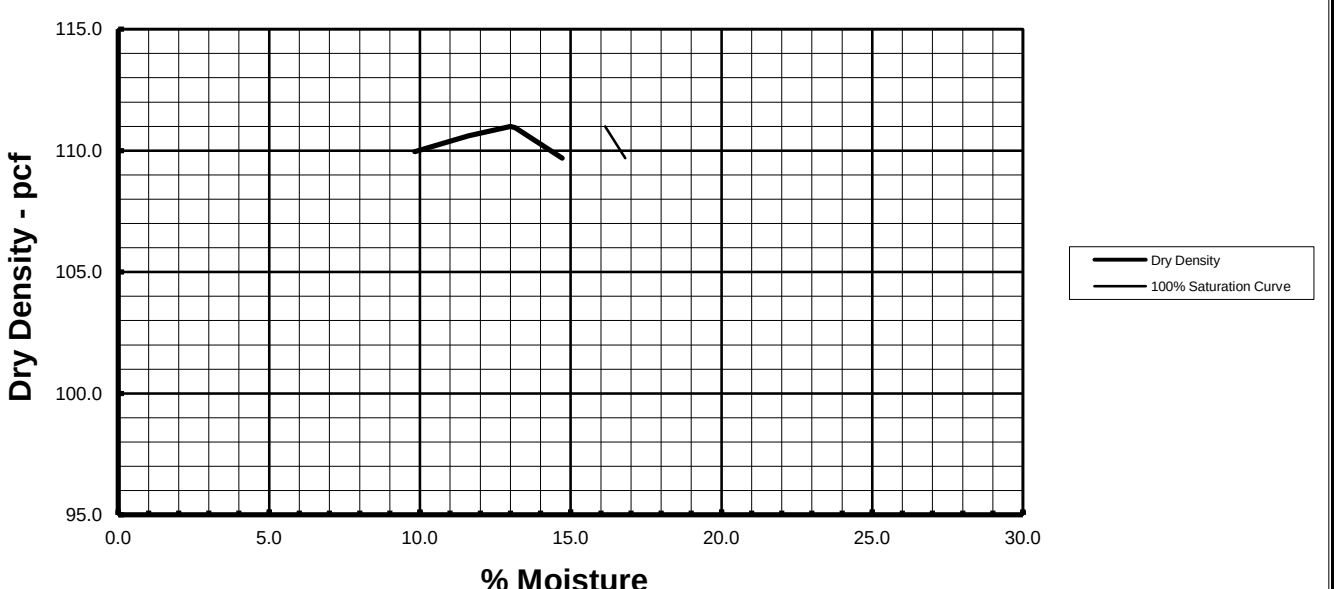
MAXIMUM DRY DENSITY: 111.0 * PCT. + 3/8" = 1

PCT. + 3/4" = 1

PREPARATION METHOD: DRY MOIST X

WATER ADDED	200	250		300	350		
MOLD + WET SOIL	13.27	13.36		13.43	13.44		
WEIGHT OF MOLD	9.23	9.23		9.23	9.23		
WT. OF WET SOIL	4.04	4.13		4.20	4.21		
WET DENSITY PCF	120.8	123.4		125.5	125.8		

PAN/PAN NUMBER	E-1	G-1		A-1	X-1		
PAN + WET SOIL	879.6	857.4		761.3	882.8		
PAN + DRY SOIL	817.9	788.4		694.5	795.1		
WEIGHT OF PAN	189.9	194.0		186.9	199.1		
WT. OF WATER	61.7	69.0		66.8	87.7		
WT. OF DRY SOIL	628.0	594.4		507.6	596.0		
PERCENT WATER	9.8	11.6		13.2	14.7		
DRY DENSITY PCF	110.0	110.6		110.9	109.7		



* Rock Correction using Bulk Specific Gravity of 2.50 Calculated Estimated X

* Moisture Correction = %

Field Moisture = 2.6 % Rammer: Manual Mechanical X

REMARKS:

TECHNICIAN: R. GILL PROJECT MGR: J.HILLS

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CLASSIFICATION SIEVE ANALYSIS ASTM C-136 OR D-422

CLIENT:	Scarsella	LAB NO:	13-1010
PROJ. NO:	13-38	DATE REC'D:	5/31/2013
PROJECT:	Cashmere Mill	DATE TESTED:	5/31/2013
CONTRACTOR:	Client	SUBMITTED BY:	MB
LOCATION:	PCS area 2	DEPTH:	Stockpile

PERCENT MOISTURE OF FINES: 13.8%

SAMPLE DESCRIPTION: Well graded sand W/silt & gravel

SCREEN SIZE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	FRACTURE COUNT		TOTAL PERCENT	
2	0	0%	100%				
1 1/2	604	7%	93%				
1	828	10%	90%				
3/4	1193	14%	86%				
3/8	2233	26%	74%				
4	3340	39.4%	60.6%				
TOTAL	8468						
SIEVE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	X-FACTOR			
10	75.2	14%	86%	0.606		**52%**	
16	135.2	26%	74%	0.606		**45%**	
30	225.4	43%	57%	0.606		**34%**	
40	278.5	53%	47%	0.606		**28%**	
80	372.4	71%	29%	0.606		**17%**	
100	388.1	74%	26%	0.606		**16%**	
200	434.6	83.2%	16.8%	0.606		**10.2%**	
TOTAL	522.1						

		PAN I.D & WGT..:	291.7	
WGT. OF PAN SAMPLE:	5875	WGT. PAN & WET SOIL	889.8	76
WGT. OF PAN SAMPLE - MOISTURE:	5128	WGT. PAN & DRY SOIL:	813.8	

REMARKS:

TECHNICIAN: R. GILL PROJ. MGR J.HILLS

Note: All sample material will be discarded after 30 days of receipt unless otherwise notified.

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CLASSIFICATION SIEVE ANALYSIS ASTM C-136 OR D-422

CLIENT:	Scarsella	LAB NO:	13-1011
PROJ. NO:	13-38	DATE REC'D:	5/31/2013
PROJECT:	Cashmere Mill	DATE TESTED:	5/31/2013
CONTRACTOR:	Client	SUBMITTED BY:	MB
LOCATION:	PCS area 2	DEPTH:	Stockpile

PERCENT MOISTURE OF FINES: 13.8%

SAMPLE DESCRIPTION: Well graded sand W/silt & gravel

SCREEN SIZE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	FRACTURE COUNT		TOTAL PERCENT	
3	0	0%	100%				
2	1450	13%	87%				
1 1/2	1794	16%	84%				
1	2617	23%	77%				
3/4	2973	26%	74%				
3/8	4279	37%	63%				
4	5522	47.9%	52.1%				
TOTAL	11520						
SIEVE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	X-FACTOR			
10	60.9	12%	88%	0.521		**46%**	
16	123.2	24%	76%	0.521		**40%**	
30	223.1	43%	57%	0.521		**30%**	
40	281.5	54%	46%	0.521		**24%**	
80	377.8	73%	27%	0.521		**14%**	
100	392.9	76%	24%	0.521		**13%**	
200	437.4	84.2%	15.8%	0.521		**8.2%**	
TOTAL	519.4						

		PAN I.D & WGT..:	J 294.4	
WGT. OF PAN SAMPLE:	6827	WGT. PAN & WET SOIL	885.6	71.8
WGT. OF PAN SAMPLE - MOISTURE:	5998	WGT. PAN & DRY SOIL:	813.8	

REMARKS:

TECHNICIAN: R. GILL PROJ. MGR J.HILLS

Note: All sample material will be discarded after 30 days of receipt unless otherwise notified.

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CLASSIFICATION SIEVE ANALYSIS ASTM C-136 OR D-422

CLIENT:	Scarsella	LAB NO:	13-1012
PROJ. NO:	13-38	DATE REC'D:	5/31/2013
PROJECT:	Cashmere Mill	DATE TESTED:	6/3/2013
CONTRACTOR:	Client	SUBMITTED BY:	MB
LOCATION:	PCS storm water	DEPTH:	

PERCENT MOISTURE OF FINES: 6.6%

SAMPLE DESCRIPTION: Well graded sand W/silt & gravel

SCREEN SIZE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	FRACTURE COUNT		TOTAL PERCENT	
2	0	0%	100%				
1 1/2	108	1%	99%				
1	637	5%	95%				
3/4	895	7%	93%				
3/8	2441	20%	80%				
4	4743	38.1%	61.9%				
TOTAL	12437						
SIEVE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	X-FACTOR			
10	121.6	20%	80%	0.619		**49%**	
16	217.1	36%	64%	0.619		**39%**	
30	315.2	53%	47%	0.619		**29%**	
40	364.5	61%	39%	0.619		**24%**	
80	457.8	77%	23%	0.619		**14%**	
100	471.8	79%	21%	0.619		**13%**	
200	506.9	85.0%	15.0%	0.619		**9.3%**	
TOTAL	596.4						

WGT. OF PAN SAMPLE:	8201	PAN I.D & WGT..:	291.7	
WGT. OF PAN SAMPLE - MOISTURE:	7694	WGT. PAN & WET SOIL	927.3	37.3
		WGT. PAN & DRY SOIL:	888.0	

REMARKS:

TECHNICIAN: R. GILL PROJ. MGR J.HILLS

Note: All sample material will be discarded after 30 days of receipt unless otherwise notified.

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CLASSIFICATION SIEVE ANALYSIS ASTM C-136 OR D-422

CLIENT:	RH2	LAB NO:	13-0985
PROJ. NO:	13-38	DATE REC'D:	5/17/2013
PROJECT:	CashmereMill	DATE TESTED:	5/17/2013
CONTRACTOR:	Scarsella	SUBMITTED BY:	Josh
LOCATION:	Debris Pile	DEPTH:	

PERCENT MOISTURE OF FINES: 11.5%

SAMPLE DESCRIPTION: Silty sand W/gravel

SCREEN SIZE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	FRACTURE COUNT		TOTAL PERCENT	
3	0	0%	100%				
2	262	4%	96%				
1 1/2	507	8%	92%				
1	643	10%	90%				
3/4	932	14%	86%				
3/8	1554	24%	76%				
4	2159	32.9%	67.1%				
TOTAL	6565						
SIEVE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	X-FACTOR			
10	73.4	13%	87%	0.716		**62%**	
16	131.1	23%	77%	0.716		**55%**	
30	212.7	38%	62%	0.716		**45%**	
40	261.5	46%	54%	0.716		**38%**	
80	368.4	65%	35%	0.716		**25%**	
100	386.5	68%	32%	0.716		**23%**	
200	438.5	77.7%	22.3%	0.716		**16.0%**	
TOTAL	564.6						

		PAN I.D & WGT..:	Y 290.7	
WGT. OF PAN SAMPLE:	4915	WGT. PAN & WET SOIL	920.5	65.2
WGT. OF PAN SAMPLE - MOISTURE:	4406	WGT. PAN & DRY SOIL:	855.3	

REMARKS: Assume fines as silt

TECHNICIAN: R. GILL PROJ. MGR J.HILLS

Note: All sample material will be discarded after 30 days of receipt unless otherwise notified.

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CLASSIFICATION SIEVE ANALYSIS ASTM C-136 OR D-422

CLIENT:	RH2	LAB NO:	13-0984
PROJ. NO:	13-38	DATE REC'D:	5/17/2013
PROJECT:	CashmereMill	DATE TESTED:	5/17/2013
CONTRACTOR:	Scarsella	SUBMITTED BY:	Josh
LOCATION:	Post Pile	DEPTH:	

PERCENT MOISTURE OF FINES: 13.9%

SAMPLE DESCRIPTION: Silty sand W/gravel

SCREEN SIZE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	FRACTURE COUNT	TOTAL PERCENT	
3	0	0%	100%			
2	227	4%	96%			
1 1/2	227	4%	96%			
1	322	6%	94%			
3/4	464	9%	91%			
3/8	924	17%	83%			
4	1548	28.4%	71.6%			
TOTAL	5457					

SIEVE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	X-FACTOR			
10	95.7	16%	84%	0.716		**60%**	
16	158.5	26%	74%	0.716		**53%**	
30	233.5	38%	62%	0.716		**44%**	
40	273.9	45%	55%	0.716		**39%**	
80	366.5	60%	40%	0.716		**28%**	
100	382.1	63%	37%	0.716		**27%**	
200	431.8	71.1%	28.9%	0.716		**20.7%**	
TOTAL	607.6						

WGT. OF PAN SAMPLE:	2251	PAN I.D & WGT..:	U 292.2	
WGT. OF PAN SAMPLE - MOISTURE:	3909	WGT. PAN & WET SOIL	984.1	84.3
		WGT. PAN & DRY SOIL:	899.8	

REMARKS: Assume fines as silt

TECHNICIAN: R. GILL PROJ. MGR J.HILLS

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CLASSIFICATION SIEVE ANALYSIS ASTM C-136 OR D-422

CLIENT:	Scarsella	LAB NO:	13-1012
PROJ. NO:	13-38	DATE REC'D:	5/31/2013
PROJECT:	Cashmere Mill	DATE TESTED:	6/3/2013
CONTRACTOR:	Client	SUBMITTED BY:	MB
LOCATION:	PCS storm water	DEPTH:	

PERCENT MOISTURE OF FINES: 6.6%

SAMPLE DESCRIPTION: Well graded sand W/silt & gravel

SCREEN SIZE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	FRACTURE COUNT		TOTAL PERCENT	
2	0	0%	100%				
1 1/2	108	1%	99%				
1	637	5%	95%				
3/4	895	7%	93%				
3/8	2441	20%	80%				
4	4743	38.1%	61.9%				
TOTAL	12437						
SIEVE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	X-FACTOR			
10	121.6	20%	80%	0.619		**49%**	
16	217.1	36%	64%	0.619		**39%**	
30	315.2	53%	47%	0.619		**29%**	
40	364.5	61%	39%	0.619		**24%**	
80	457.8	77%	23%	0.619		**14%**	
100	471.8	79%	21%	0.619		**13%**	
200	506.9	85.0%	15.0%	0.619		**9.3%**	
TOTAL	596.4						

WGT. OF PAN SAMPLE:	8201	PAN I.D & WGT..:	291.7	
WGT. OF PAN SAMPLE - MOISTURE:	7694	WGT. PAN & WET SOIL	927.3	37.3
		WGT. PAN & DRY SOIL:	888.0	

REMARKS:

TECHNICIAN: R. GILL PROJ. MGR J.HILLS

Note: All sample material will be discarded after 30 days of receipt unless otherwise notified.

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CLASSIFICATION SIEVE ANALYSIS ASTM C-136 OR D-422

CLIENT:	Scarsella	LAB NO:	13-1013
PROJ. NO:	13-38	DATE REC'D:	5/31/2013
PROJECT:	Cashmere Mill	DATE TESTED:	6/3/2013
CONTRACTOR:	Client	SUBMITTED BY:	MB
LOCATION:	PCS Storm Water	DEPTH:	

PERCENT MOISTURE OF FINES: 9.2%

SAMPLE DESCRIPTION: Well graded sand W/silt & gravel

SCREEN SIZE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	FRACTURE COUNT	TOTAL PERCENT	
3	0	0%	100%			
2	195	2%	98%			
1 1/2	707	7%	93%			
1	1111	11%	89%			
3/4	1434	14%	86%			
3/8	2770	28%	72%			
4	4521	45.6%	54.4%			
TOTAL	9915					

SIEVE	ACC. WT. RETAINED	PERCENT RETAINED	PERCENT PASSING	X-FACTOR		TOTAL PERCENT	
10	87.2	18%	82%	0.544		**45%**	
16	142.3	29%	71%	0.544		**39%**	
30	219.4	44%	56%	0.544		**30%**	
40	262.3	53%	47%	0.544		**26%**	
80	349.8	71%	29%	0.544		**16%**	
100	364.8	74%	26%	0.544		**14%**	
200	401.0	81.1%	18.9%	0.544		**10.3%**	
TOTAL	494.2						

WGT. OF PAN SAMPLE:	5891	PAN I.D & WGT..: J	294.4
WGT. OF PAN SAMPLE - MOISTURE:	5394	WGT. PAN & WET SOIL	834.1
		WGT. PAN & DRY SOIL:	788.6

REMARKS:

TECHNICIAN: R. GILL PROJ. MGR J.HILLS

Note: All sample material will be discarded after 30 days of receipt unless otherwise notified.

APPENDIX D

BACKFILL COMPACTION TESTING RESULTS

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Wenatchee, WA 98801

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STANDARD MECHANICAL SIEVE ASTM C-136 or ASTM D-422

CLIENT:	Scarsella	LAB NO:	13-0955
PROJECT NO:	13-38	DATE RCVD:	5/8/2013
PROJECT:	Cashmere Mill	DATE TESTED:	5/8/2013
CONTRACTOR:	Client	SUBMITTED BY:	Client
LOCATION:	NA	SAMPLE DEPTH:	

DESCRIPTION: Silty sand

SIEVE SIZE	ACCUMULATED WT. RETAINED (grams)	PERCENT RETAINED	PERCENT PASSING		PERCENT FRACTURE
10			100%		
16			100%		
30	0.1	0%	100%		
40	0.2	0%	100%		
80	12.1	2%	98%		
100	33.3	5%	95%		
200	443.7	72.1%	27.9%		
TOTAL	615.3				

FIELD MOISTURE: 7.5%

REMARKS:

TECHNICIAN: R. GILL PROJ. MGR. J.HILLS

Note: All sample material will be discarded after 30 days of receipt unless otherwise notified.

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MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
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509-664-4843

DAILY REPORT

DATE:	5/9/2013
CLIENT:	RH2
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Scarsella

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

2:25 Enroute job site

2:50 Arrived on site for compaction. The area being tested was the final grade for the south side of the new road. The material is a sandy mix with a proctor of 119.0. The area tested was dry and did not meet compaction. Area to be tested at a later time and date.

3:30 Offsite.

TECHNICIAN: J.Holve PROJECT MGR: J. Hills

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MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	4/22/2013
CLIENT:	Scarsella
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Client

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

9:20 Enroute to Cashmere.

9:50 Onsite for compaction testing as requested.

Upon arrival met with the contractor and was informed of what they had planned and what they were needing as far as testing. The contractor was placing fill over the entire area that was being imported in. The material was a silty sand with some rock in it. The material was also very wet so no water was being added onsite.

After a small area was leveled and then rolled a few density tests were taken. The tests all had passing results but due to the higher moisture content it was decided to have a large area of fill be placed and spread out and left to dry before rolling it to avoid pumping.

11:30 Offsite.

11:50 Onsite to continue testing.

Upon arrival the contractor had a large area spread out but had not started rolling it yet. After a lift was placed on most of the west half of the project the contractor began rolling it with a large single drum roller. After a few passes the ground was still wanting to become soft and pump so an area was done with no vibes only a few static passes to see if they could get compaction. After the area was done density tests were again taken with the tests having passing results. The contractor informed that they would keep the lift thin and let it dry more and just static roll it from there on out or until the materials moisture content lowered.

See attached nuke report for all test results and locations.

12:55 Offsite.

TECHNICIAN: A. Hill PROJECT MGR: J. Hills

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MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	4/23/2013
CLIENT:	Scarsella
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Client

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

9:05 Enroute to Cashmere.

9:30 Onsite for daily compaction testing on fill being placed as requested.

Upon arrival the contractor had placed another lift over the entire west side of the project and was rolling it. The contractor was still using the same method as the day before by spreading out a lift and letting it dry out as much as possible then roll it without vibes. Density tests were taken on all the fill with all tests having passing results.

See attached nuke report for test results and locations.

11:15 Offsite

TECHNICIAN: A. Hill PROJECT MGR: J. Hills

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MATERIALS TESTING & SPECIAL INSPECTION

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509-664-4843

DAILY REPORT

DATE: 4/24/2013
CLIENT: Scarsella Bros.
PROJECT NO.: 13-38
PROJECT: Cashmere Mill
CONTRACTOR: Client

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

9:00 Enroute to the Cashmere mill.

9:05 Onsite for morning visit to take density tests on fill being placed as requested.

Upon arrival the client informed that they would be stock piling material to fill in the large hole as soon as it was drained so no material would be placed for a few days and that they would inform us when the started placing fill again.

9:15 Offsite.

TECHNICIAN: A. Hill PROJECT MGR: J. Hills

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DAILY REPORT

DATE:	4/26/2013
CLIENT:	Scarsella
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Scarsella

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

10:05 Enroute to site.

10:30 Arrived onsite to take density tests.

Upon arrival met with Contractor and was informed that they were placing material in the large hole. They placed and compacted a 2 foot lift that was not tested because the contractor was trying to get above the water table. All the rest of the lifts were to 12" and tested. Various tests were taken all with passing results.

12:30 Offsite

2:50 Enroute to site

3:10 Arrived on site to continue taking density tests

Upon arrival met with contractor and was informed that they had placed another lift in the hole and had it compacted and ready for testing's. Various tests were taken all with passing results.

4:10 Offsite

TECHNICIAN: M. Ballew PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	4/29/2013
CLIENT:	Scarsella
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Client

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

9:15 Enroute to Cashmere.

9:30 Onsite for the morning visit to take density tests on fill being placed as requested.

Upon arrival the contractor was placing the new imported material on the west end of the project. The contractor informed that they would not be needing density tests on the east end where the water was being removed. There was only a few trucks of the new material placed on the west end at time of arrival. The contractor finished blading out all the material that was in place and then wet it down and rolled it. Density tests were taken on the material using the proctor given to us by Dennis. All density tests taken had passing results.

10:35 Offsite.

2:05 Onsite for afternoon visit.

Upon arrival the contractor was still placing the imported material along the north side west end. The contractor bladed the west section that had material and then rolled it. Density tests were again taken with all tests having passing results.

See attached nuke report for all test results and locations.

TECHNICIAN: A. Hill PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	4/30/2013
CLIENT:	Scarsella
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Client

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

7:40 Enroute to site.

8:00 Arrived onsite to take density tests

Upon arrival the contractor was placing the new imported material. Contractor informed that since the previous visit they had got about a 6" lift down. The contractor finished blading out all the material that was in place and then wet it down and rolled it. Various tests were taken using the proctor given by the Client rep.. All density tests taken had passing results.

9:00 Offsite.

3:35 Enroute to site

3:40 Arrived onsite to continue taking density tests

Upon arrival the contractor was still placing the imported material along the north side of the west end. The contractor bladed the center section that had material and then rolled it. Density tests were again taken with all tests having passing results.

4:00 Offsite

See attached nuke report for all test results and locations.

TECHNICIAN: M. Ballew PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	5/1/2013
CLIENT:	Scarsella
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Client

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

9:30 Enroute to site

10:00 Arrived onsite to take density tests

Upon arrival the contractor had finished putting in the 2 foot lift in the bottom of the east hole and had started compacted the first 1 foot lift. After the contractor had rolled the lift various tests were taken all with passing results.

10:40 Offsite

3:30 Enroute to site

4:00 Arrived onsite to continue taking density tests

Upon arrival the contractor was placing the new imported material on the West end of the site. Upon arrival the contractor had placed and rolled another lift. Various tests were taken using the proctor given by the Client rep.. All density tests taken had passing results.

4:45 Offsite

See attached nuke report for all test results and locations.

TECHNICIAN: M. Ballew PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE: 5/2/2013
CLIENT: RH2
PROJECT NO.: 13-38
PROJECT: Cashmere Mill
CONTRACTOR: Scarsella

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

1:35 Enroute to site

1:45 Arrived onsite to take density tests

Upon arrival met with contractor and was informed that they had nothing that could be tested and to come back the next day.

2:00 Offsite

TECHNICIAN: M. Ballew PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	5/3/2013
CLIENT:	RH2
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Scarsella

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

9:20 Enroute to site

9:50 Arrived onsite to take density tests

Upon arrival the contractor was placing the new imported material on the West end of the site. Upon arrival the contractor had placed and rolled another lift. Various tests were taken using the proctor given by the Client rep.. All density tests taken had passing results.

10:20 Offsite

See attached nuke report for all test results and locations.

TECHNICIAN: M. Ballew PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE: 5/7/2013
CLIENT: Scarsella
PROJECT NO.: 13-38
PROJECT: Cashmere Mill
CONTRACTOR: Scarsella

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

9:15 Enroute to job site.

9:40 Arrived on site for compaction. The area being tested was South of the new road. Compaction was checked in various locations at a depth of 12 inches. See attached density report for more information.

10:20 Offsite.

TECHNICIAN: J.Holve PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	5/9/2013
CLIENT:	Scarsella
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Scarsella

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

9:00 Enroute job site.

9:20 Arrived on site for compaction testing. The material being tested is a sandy mix. The area Being checked is east of the new entry road. Compaction was done in random locations. See attached density report for more information.

9:50 Offsite

TECHNICIAN: J.Holve PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE: 5/13/2013
CLIENT: RH2
PROJECT NO.: 13-38
PROJECT: Cashmere Mill
CONTRACTOR: Scarsella Bros.

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

7:50 Enroute to job.

8:20 Arrived on site for compaction testing. The area being tested is from the new road south. The area is at final grade and the material being tested is a sandy mix. A proctor of 119.0 is being used. See attached density report for more information.

9:15 Offsite.

3:50 arrived on site to continue testing

4:10 Offsite.

TECHNICIAN: J.Holve PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE: 5/15/2013
CLIENT: RH2
PROJECT NO.: 13-38
PROJECT: Cashmere Mill
CONTRACTOR: Scarsella bros

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

7:30 Enroute to job site.

7:40 Arrived on site for compaction testing. The area being tested is a sand mix. Its is the final grade for the portion tested. All area south of the new road has been checked for compaction. The hole that was filled in was also tested for compaction. All tests were done at various location. See attached density report for more information.

8:30 off site.
1:15 Enroute to job.
1:40 Arrived on site
2:15 Offsite

TECHNICIAN: J.Holve PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE: 5/17/2013
CLIENT: RH2
PROJECT NO.: 13-38
PROJECT: Cashmere mill
CONTRACTOR: Scarsella

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

9:25 Enroute to site.

9:40 Arrived on site to take soil samples. The area that the samples were taken from were removed prior to samples being taken. The piles were referred to as being The Post Pile and The Debris Pile. Tests required were just a gradation.

9:50 Offsite

TECHNICIAN: J.Holve PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	5/20/2013
CLIENT:	Port of Chelan
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Scarsella Bros.

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

8:45 Enroute to site

9:10 Arrived onsite for density testing

Upon arrival met with Contractor and was informed that they had nothing to tests and to come back later in the day.

9:15 Offsite

2:15 Enroute to site

2:45 Arrived onsite

Upon arrival met with Contractor rep. and was informed that they went doing any compaction that day and to come back the next morning.

2:55 Offsite

TECHNICIAN: M. Ballew PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	5/21/2013
CLIENT:	Port of Chelan
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Scarsella Bros.

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

8:50 Enroute to site

9:20 Arrived onsite to take density tests

Upon arrival met with contractor and was informed that they had placed the final lift and had a portion of it rolled and ready for testing. Various tests were taken all with passing results. Contractor rep. informed to come back later in the day to get tests on the rest of the material.

10:00 Offsite

2:35 Enroute to site

3:00 Arrived onsite to continue taking density tests

Upon arrival met with Contractor rep. and was informed that they had rolled the rest of the material and had it ready for testing. Various tests were taken all with passing results.

3:30 Offsite

See attached nuke report for all test locations and results

TECHNICIAN: M. Ballew PROJECT MGR: J. Hills

CSI: Construction Special Inspection

MATERIALS TESTING & SPECIAL INSPECTION

104 East 9th Street
Wenatchee, WA 98801
509-664-4843

DAILY REPORT

DATE:	5/30/2013
CLIENT:	RH2
PROJECT NO.:	13-38
PROJECT:	Cashmere Mill
CONTRACTOR:	Scarsella Bros.

WEATHER	CLEAR	PT. CLOUDY	OVERCAST	RAIN	SNOW
TEMP.	10-32	33-50	51-70	71-85	86+
WIND	STILL	MOD.	HIGH		
HUMIDITY	DRY	MOD.	HUMID		

3:00 Enroute to site

3:30 Arrived onsite to pick up samples

Upon arrival met with Contractor and RH2 rep. and was informed that they had various piles of PCS (Petroleum Contaminated Sample) and wanted to get a couple samples. RH2 rep. informed that there were 2 different types of PCS that were being sampled, PCS area 2 and PCS storm water. 2 samples were taken of each material and brought back to CSI lab for further testing.

4:00 Offsite

TECHNICIAN: M. Ballew PROJECT MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella Bros.	PROCTOR NO.	13-0918	GAGE NO.	1
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	124.5	DENS. STD CNT:	2407
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):	10.1	MOIST. STD CNT:	687
CONTRACTOR:	Scarsella Bros.	DATE TESTED:	4/23/2013		
LOCATION:	West of new road				
MATERIAL:	Select Borrow Site #1				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	8"	250' W. of new road 30' S. of Sunset road	1	5.2	124.4	118.3	95.0		95
2	8"	300' W. of new road 30' S. of Sunset road	1	7.3	127.2	118.5	95.2		95
3	8"	300' W. of new road 100' S. of Sunset road	1	8.9	131.4	120.7	96.9		95
4	6"	225' W. of new road 100' S of Sunset road	1	5.5	125.6	119.1	95.7		95
5	4"	260' W of new road 75' S. of Sunset road	1	8.0	129.8	120.2	96.5		95
6	10"	325' W of new road 150' S. of Sunset road	1	6.4	126.3	118.7	95.3		95
7	10"	225' W. of new road 150' S. of Sunset road	1	7.1	128.4	119.9	96.3		95
8									
9									
10									
11									
12									
13									

REMARKS:

TECHNICIAN: J.Holve PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella	PROCTOR NO.		GAGE NO.	5
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	DENS. STD CNT:	2023
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		MOIST. STD CNT:	665
CONTRACTOR:	Scarsella	DATE TESTED:	5/9/2013		.
LOCATION:	South of New road				
MATERIAL:	Sand and rock mix				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	12"	40' S. of Grid Line 25' E. of sidewalk		1.5	114.9	113.2	95.1		95
2	12"	100' S. of grid line 25' E of sidewalk		3.4	121.7	117.7	98.9		95
3	12"	175' S. of grid line 25' E of sidewalk		3.3	122.4	118.5	99.6		95
4	12"	250'S of grid line 30' E of sidewalk		6.4	125.7	118.1	99.2		95
5	12"	250' S of grid line 100' E of sidewalk		8.3	128.0	118.2	99.3		95
6	12"	175' S. of grid line 100' E of sidewalk		9.7	130.2	118.7	99.7		95
7									
8									
9									
10									
11									
12									
13									

REMARKS:

TECHNICIAN: J.Holve PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella	PROCTOR NO.	13-0918	GAGE NO.	1
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	124.5	DENS. STD CNT:	2401
PROJECT :	Scashmere Mill	OPTIMUM MOIST (%):	10.0	MOIST. STD CNT:	693
CONTRACTOR:	Client	DATE TESTED:	4/22/2013		
LOCATION:	NW fill area				
MATERIAL:	Import				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	8''	+- 100' south of roadway 25' W of new entry	1	12.5	134.5	119.6	96.1		95
2	8''	+- 110' south of roadway 50' W of new entry	1	7.7	127.8	118.7	95.3		95
3	8''	125' S of roadway 50' W of new entry	1	10.2	131.3	119.2	95.7		95
4	8''	+- 50' W of new entry150' S of roadway	1	8.7	130.1	119.7	96.1		95
5	8''	+- 10' W of new entry 150' S of roadway	1	10.6	131.1	118.5	95.2		95
6	8''	+- 100' S of roadway 50' W of new entry	1	11.0	133.1	119.9	96.3		95
7									
8									
9									
10									
11									
12									
13									

REMARKS:

TECHNICIAN: A. Hill PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella bros.	PROCTOR NO.	13-0918	GAGE NO.	1
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	124.5	DENS. STD CNT:	2407
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):	10.0	MOIST. STD CNT:	687
CONTRACTOR:	Client	DATE TESTED:	4/23/2013		
LOCATION:	Fill area				
MATERIAL:	Select Borrow				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	10''	+- 50' from the Rd. 100' W of new entry	3	10.3	136.4	118.6	97.8		95
2	10''	+- 100' from the Rd. 50' W of new entry	3	12.8	129.4	117.8	97.6		95
3	8''	Across from new entry 150' from road	2	9.9	134.1	121.7	100.5		95
4	8''	150' from the Rd. 50' W of new entry	2	13.2	137.7	119.5	98.8		95
5	10''	50' from the Rd. 50' W of new entry	3	10.5	132.1	119.5	98.8		95
6	10''	35' from the Rd. 100' W of new entry	3	11.8	133.7	119.6	98.8		95
7	8''	50' from the Rd. 40' E of new entry	2	12.5	132.3	117.5	97.1		95
8	8''	100' from the Rd. 50' E of new entry	2	9.9	133.7	120.6	99.8		95
9	6''	50' from the Rd. 100' E of new enrty	1	10.9	127.5	114.9	95.0		95
10	10''	75' from the Rd. 30' W of new enrty	3	8.8	127.4	117.1	96.8		95
11	6''	40' from the Rd. 75' E of new entry	1	10.5	133.8	121.0	100.0		95
12									
13									

REMARKS:

TECHNICIAN: A. Hill PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella bros.	PROCTOR NO.	13-0918	GAGE NO.	4
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	124.5	DENS. STD CNT:	2346
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):	10.0	MOIST. STD CNT:	582
CONTRACTOR:	Client	DATE TESTED:	4/26/2013		
LOCATION:	Fill area				
MATERIAL:	Select Borrow				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	12"	20' from NW side, 70' from NE side	1	7.3	137.5	128.2	103.0		95
2	10"	50' from NW side, 30' from NE side	1	6.1	138.3	130.3	104.7		95
3	10"	80' from NW side, 75' from NE side	1	7.9	135.5	125.6	100.9		95
4	10"	35' from NW side, 80' from NE side	2	6.6	133.2	125.0	100.4		95
5	12"	45' from NW side, 70' from NE side	2	6.6	135.7	127.3	102.2		95
6	6"	80' from NW side, 30' from NE side	2	4.7	134.3	128.3	103.1		95
7	6"	30' from NW side, 70' from NE side	3	8.9	129.0	118.5	95.2		95
8	10"	50' from NW side, 50' from NE side	3	6.2	133.4	125.6	100.9		95
9	12"	80' from NW side, 70' from NE side	3	6.0	139.3	131.4	105.5		95
10									
11									
12									
13									

REMARKS:

TECHNICIAN: M. Ballew PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella Bros.	PROCTOR NO.	6915	GAGE NO.	4
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	DENS. STD CNT:	2348
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		MOIST. STD CNT:	588
CONTRACTOR:	Client	DATE TESTED:	4/29/2013		
LOCATION:	NW side fill				
MATERIAL:	Imported select borrow				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	8''	40' from Sunset 150' E of W end	1	5.1	121.4	115.5	97.1		95
2	8''	40' from Sunset 75' E of W end	1	4.1	122.6	117.8	99.0		95
3	4''	75' from Sunset 100' E of W end	1	5.4	124.9	118.5	99.6		95
4	10''	15' from Sunset 50' E of W end	2	4.4	125.7	120.4	101.2		95
5	10''	20' from Sunset 15' E of W end	2	8.2	125.4	115.9	97.4		95
6	6''	40' from Sunset 50' E of W end	1	7.1	127.1	118.7	99.8		95
7									
8									
9									
10									
11									
12									
13									

REMARKS:

TECHNICIAN: A. Hill PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella bros.	PROCTOR NO.	6915	GAGE NO.	4
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	DENS. STD CNT:	2346
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		MOIST. STD CNT:	582
CONTRACTOR:	Client	DATE TESTED:	4/30/2013		
LOCATION:	Fill area				
MATERIAL:	Select Borrow				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	6"	250' from W side, 35' from N side	787'	3.7	122.2	117.8	99.0		95
2	6"	200" from W side, 50' from N side	787.5'	5.3	126.1	119.7	100.6		95
3	6"	230' from W side, 65' from N side	787.5'	6.4	123.9	116.4	97.8		95
4	6"	260' from W side, 55' from N side	787'	5.0	124.4	118.5	99.6		95
5	6"	310' from W side, 45' from N side	788'	7.2	122.4	114.2	96.0		95
6	6"	305' from w side, 25' from N side	788'	5.0	119.5	113.8	95.6		95
7	6"	230' from W side, 30' from N side	787.5'	4.6	119.0	113.8	95.6		95
8	6"	140' from w side, 45' from N side	787.5'	4.4	122.1	116.9	98.2		95
9									
10									
11									
12									
13									

REMARKS: Contractor placed approx. 1-1.5' of material in the NW section of the lot.

TECHNICIAN: M. Ballew PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella bros.	PROCTOR NO.	6915	13-0918	GAGE NO.	4	
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	124.5	DENS. STD CNT:	2346	
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		10.0	MOIST. STD CNT:	582	
CONTRACTOR:	Client	DATE TESTED:	5/1/2013				
LOCATION:	Fill area						
MATERIAL:	Select Borrow						

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	10"	40', 60' from NE property stake	1	5.3	136.0	129.1		103.7	95
2	10"	75', 30'	1	6.4	136.5	128.3		103.1	95
3	10"	30', 50'	1	10.8	137.9	124.5		100.0	95
4	4"	150', 30' from center of driveways	787.5'	8.4	129.1	119.1	100.1		95
5	4"	210', 45'	787.5'	8.9	130.5	119.8	100.7		95
6	6"	220', 110'	787.5'	8.3	128.7	118.8	99.8		95
7	6"	175', 130'	787'	3.8	124.4	119.8	100.7		95
8	6"	110', 75'	788.5'	5.5	123.4	117.0	98.3		95
9	6"	170', 40'	788.5'	4.7	130.5	124.6	104.7		95
10	6"	250', 60'	788.5'	3.9	123.3	118.7	99.7		95
11	6"	165', 100'	788'	6.7	121.8	114.1	95.9		95
12	8"	10', 95'	787.5'	3.5	118.7	114.7	96.4		95
13									

REMARKS:

TECHNICIAN: M. Ballew PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	RH2	PROCTOR NO.	6915	GAGE NO.	1
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	DENS. STD CNT:	2407
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		MOIST. STD CNT:	689
CONTRACTOR:	Scarsella	DATE TESTED:	5/3/2013		
LOCATION:	Fill area				
MATERIAL:	Select Borrow				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	6"	40', 120' from center of driveways	788.5'	4.2	123.2	118.2	99.3		95
2	6"	90', 80' from center of driveways	788.5'	3.9	118.4	114.0	95.8		95
3	6"	160', 130' from center of driveways	788.5	4.1	123.2	118.3	99.4		95
4	6"	210', 145' from center of driveways	788.5'	4.2	120.6	115.7	97.2		95
5	6"	280', 210' from center of driveways	788.5'	4.4	118.4	113.4	95.3		95
6									
7									
8									
9									
10									
11									
12									
13									

REMARKS:

TECHNICIAN: M. Ballew PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella Bros.	PROCTOR NO.		GAGE NO.	5
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	DENS. STD CNT:	2041
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		MOIST. STD CNT:	668
CONTRACTOR:	Scarsella Bros.	DATE TESTED:	5/7/2013		
LOCATION:	South of new road				
MATERIAL:	Select Borrow				

TEST NO.	TEST MODE	Location	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	12"	30' East of sidewalk Center of grid line	-1.5'	7.5	127.9	119.0	100.0		95
2	12"	30' East of sidewalk 75' South of grid line	-1.5'	4.5	126.0	120.6	101.3		95
3	12"	75' East of sidewalk 125' South of grid line	-1.5'	4.5	127.4	121.9	102.4		95
4	12"	75' East of sidewalk 30' South of grid line	-1.5'	4.8	121.5	115.9	97.4		95
5	12"	125' East of sidewalk 75' South of grid line	-1.5'	4.2	126.5	121.4	102.0		95
6	12"	124' East of sidewalk 125' South of grid line	-1.5'	3.6	128.6	124.1	104.3		95
7									
8									
9									
10									
11									
12									
13									

REMARKS:

TECHNICIAN: J.Holve PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella	PROCTOR NO.		GAGE NO.	5
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	DENS. STD CNT:	2023
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		MOIST. STD CNT:	665
CONTRACTOR:	Scarsella	DATE TESTED:	5/9/2013		.
LOCATION:	South of New road				
MATERIAL:	Sand and rock mix				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	12"	40' S. of Grid Line 25' E. of sidewalk		1.5	114.9	113.2	95.1		95
2	12"	100' S. of grid line 25' E of sidewalk		3.4	121.7	117.7	98.9		95
3	12"	175' S. of grid line 25' E of sidewalk		3.3	122.4	118.5	99.6		95
4	12"	250'S of grid line 30' E of sidewalk		6.4	125.7	118.1	99.2		95
5	12"	250' S of grid line 100' E of sidewalk		8.3	128.0	118.2	99.3		95
6	12"	175' S. of grid line 100' E of sidewalk		9.7	130.2	118.7	99.7		95
7									
8									
9									
10									
11									
12									
13									

REMARKS:

TECHNICIAN: J.Holve PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Scarsella Bros	PROCTOR NO.		GAGE NO.	5
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	DENS. STD CNT:	2021
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		MOIST. STD CNT:	661
CONTRACTOR:	Scarsella Bros	DATE TESTED:	5/13/2013		
LOCATION:	South of new road				
MATERIAL:	Sand				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	12"	Grid Line 125' E. of sidewalk	final	3.2	119.1	115.4	97.0		95
2	10"	100' S. of grid line 125' E. of sidewalk	final	3.1	116.5	113.0	95.0		95
3	12"	200' S. of grid line 150' E. of sidewalk	final	3.2	120.1	116.4	97.8		95
4	12"	100' S. of grid line 225' E. of sidewalk	final	2.7	116.0	113.0	95.0		95
5	12"	Grid line 225' E. of sidewalk	final	6.0	120.0	113.2	95.1		95
6	12"	75' N. of grid line 225' E. of sidewalk	final	2.1	116.5	114.1	95.9		95
7	12"	50' N. of grid line 100' E. of sidewalk	final	2.7	116.2	113.1	95.0		95
8	12"	25' N. of grid line 175' E. of sidewalk	final	5.0	123.2	117.3	98.6		95
9	12"	50' S. of grid line 175' E. of sidewalk	final	6.0	120.0	113.2	95.1		95
10									
11									
12									
13									

REMARKS:

TECHNICIAN: J.Holve PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	RH2	PROCTOR NO.		GAGE NO.	5
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	DENS. STD CNT:	2027
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		MOIST. STD CNT:	662
CONTRACTOR:	RH2	DATE TESTED:	5/15/2013		
LOCATION:					
MATERIAL:	Sand				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	12"	grid line 200' E. of sidewalk	final	3.9	121.7	117.1	98.4		95
2	12"	100' S. of grid 200' E. of sidewalk	final	3.6	121.3	117.1	98.4		95
3	12"	50' N of grid 30' E. of sidewalk	final	3.8	121.1	116.7	98.1		95
4	12"	150' N of grid 30' E. of sidewalk	final	5.4	124.3	117.9	99.1		95
5	12"	250' N. of grid 20' E. of sidewalk	final	4.9	119.2	113.6	95.5		95
6	12"	70' S. of job trailer 15' E. of sidewalk	final	3.1	116.9	113.4	95.3		95
7	12"	75' S. of grid 75' W. of Mill St.	final	4.9	122.3	116.6	98.0		95
8	12"	100' S. of grid 75' W. of Mill St.	final	2.3	117.1	114.5	96.2		95
9	12"	100' S. of grid 30' W. of Mill St.	final	0.8	119.5	118.5	99.6		95
10	10"	25' S. of grid 30' W. of Mill St.	final	6.9	123.5	115.5	97.1		95
11	12"	Middle of hole		5.1	119.9	114.1	95.9		95
12									
13									

REMARKS:

TECHNICIAN: J.Holve PROJ. MGR: J. Hills

CSI: Construction Special Inspection

TESTING - INSPECTION

104 East 9th Street

Wenatchee, WA 98801

509-664-4843

SOIL NUCLEAR DENSITY FIELD REPORT

CLIENT :	Port of Chelan	PROCTOR NO.	6915	GAGE NO.	5
PROJ. NO:	13-38	MAX DRY DENSITY (pcf):	119.0	DENS. STD CNT:	2031
PROJECT :	Cashmere Mill	OPTIMUM MOIST (%):		MOIST. STD CNT:	657
CONTRACTOR:	Client	DATE TESTED:	5/21/2013		
LOCATION:	Fill area				
MATERIAL:	Select Borrow				

TEST NO.	TEST MODE	TEST LOCATION	ELEV. FT. or LIFT NO.	FIELD MOIST.	WET DENSITY	DRY DENSITY	PCT. COMP. PROCTOR NO.1	PCT. COMP. PROCTOR NO.2	PCT. REQ'D.
1	10"	45', 30' from NE Property stake	Final	3.7	117.7	113.5	95.4		95
2	12"	200', 175'	Final	4.3	118.6	113.7	95.5		95
3	12"	75', 100'	Final	3.1	121.5	117.9	99.1		95
4	12"	120', 200' from Center of driveways	Final	4.1	119.7	115.0	96.6		95
5	12"	75', 40'	Final	3.2	118.1	114.4	96.1		95
6	12"	50', 160'	Final	2.8	117.3	114.1	95.9		95
7									
8									
9									
10									
11									
12									
13									

REMARKS:

TECHNICIAN: M. Ballew PROJ. MGR: J. Hills

APPENDIX E

FIELD SAMPLING DATA SHEETS

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	Port of Chelan County	**Sample Location**	B-1
Project #	0779.02.01	**Sampler**	TJS
Project Name	Former Cashmere Mill Site	**Sampling Date**	3/28/2013
Sampling Event	Before Construction	**Sample Name**	B1-032813
Sub Area	Former Mill Pond Area	**Sample Depth**	8
FSDS QA:	TJS 02/10/14	**Easting**	**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
3/28/2013	8:20	10.3		5.32		4.98	0.81

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

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**EH**	**Turbidity**
(2) Peristaltic Pump	8:45:00 AM	1.5	0.5	5.95	10.79	501	0.79	-1.2	175.1
	8:58:00 AM	3	0.5	5.99	11.31	484	0.6	-18.9	297.1
	9:07:00 AM	4	0.5	5.99	11.45	486	1.23	-23.8	334.2
	9:17:00 AM	5	0.5	5.96	11.16	485	1.31	-20.5	480.4
Final Field Parameters	9:27:00 AM	6	0.5	5.97	11.12	486	1.39	-18.9	470.3

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Turbid. Turbidity increases while purging.
Alternating sun then clouds may affect temperature in flow through cell.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	9:40:00 AM	VOA-Glass	12	No
			Amber Glass	12	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly	2	No
			Red Dissolved Poly		
			Total Bottles	26	

General Sampling Comments

Bottom of well feels soft when measuring depth to bottom.
Lower tubing into water column during third set of readings as air bubbles appear in tubing.
Ecology Unique Well ID = BRR-904.

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	Port of Chelan County	**Sample Location**	GP4				
Project #	0779.02.01	**Sampler**	KRT				
Project Name	Former Cashmere Mill Site	**Sampling Date**	7/26/2013				
Sampling Event	July 2013	**Sample Name**	GP4-W-2.5				
Sub Area	PCS Area 4	**Sample Depth**	2.5				
FSDS QA:	SVH 8/5/2013	**Easting**		**Northing**		**TOC**	

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
7/25/2013	12:25			4			

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

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**EH**	**Turbidity**
(2) Peristaltic Pump									
Final Field Parameters	12:25:00 PM	8		6.95	23	661	0.48	-105.5	727

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Cloudy; gray in color.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	10:45:00 AM	VOA-Glass	7	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	9	

General Sampling Comments

Sun and warm weather may affect temperature in flow cell.
Temporary PVC well screen set from 0 to 5.0 feet bgs.
Field parameters were collected at GP4 from 2.5 to 7.5 feet bgs on 7/25/13 at 12:25, with the exception of turbidity.
Turbidity units are AU.

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	Port of Chelan County	**Sample Location**	GP6		
Project #	0779.02.01	**Sampler**	KRT		
Project Name	Former Cashmere Mill Site	**Sampling Date**	7/26/2013		
Sampling Event	July 2013	**Sample Name**	GP6-W-2.5		
Sub Area	PCS Area 4	**Sample Depth**	2.5		
FSDS QA:	SVH 8/5/2013	**Easting**		**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
7/25/2013	16:50			4			

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

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**EH**	**Turbidity**
(2) Peristaltic Pump									
Final Field Parameters	4:50:00 PM	2.5		6.98	20.43	671	0.57	-116.5	47.7

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Slightly cloudy.
Mild hydrocarbon-like odor.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	4:50:00 PM	VOA-Glass	7	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	9	

General Sampling Comments

Sun and warm weather may affect temperature in flow cell.
Temporary PVC well screen set from 0 to 5.0 feet bgs.
Field parameters were collected at GP6 from 3.0 to 8.0 feet bgs on 7/25/13 at 16:50, with the exception of turbidity.

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	Port of Chelan County	**Sample Location**	GP10
Project #	0779.02.01	**Sampler**	KRT
Project Name	Former Cashmere Mill Site	**Sampling Date**	7/26/2013
Sampling Event	July 2013	**Sample Name**	GP10-W-3.5
Sub Area	PCS Area 2	**Sample Depth**	3.5
FSDS QA:	SVH 8/5/2013	**Easting**	**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
7/26/2013	11:35			5			

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

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**EH**	**Turbidity**
(2) Peristaltic Pump									
Final Field Parameters	11:35:00 AM	5		7.13	29.5	730	0.59	-15.8	2.04

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	1:15:00 PM	VOA-Glass	7	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	9	

General Sampling Comments

Sun and warm weather may affect temperature in flow through cell.
Temporary PVC well screen set from 1.5 to 6.5 feet below ground surface.

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	Port of Chelan County	**Sample Location**	GP11		
Project #	0779.02.01	**Sampler**	KRT		
Project Name	Former Cashmere Mill Site	**Sampling Date**	7/26/2013		
Sampling Event	July 2013	**Sample Name**	GP11-W-4.5		
Sub Area	Between PCS Area 2 / Stormline Area	**Sample Depth**	4.5		
FSDS QA:	SVH 8/5/2013	**Easting**		**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
7/26/2013	13:45			5			

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

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**EH**	**Turbidity**
(2) Peristaltic Pump									
Final Field Parameters	1:45:00 PM	6		7.07	24.03	646	0.67	-60.7	10.27

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	1:45:00 PM	VOA-Glass	7	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	9	

General Sampling Comments

Sun and warm weather may affect temperature in flow through cell.
Temporary PVC well screen set from 2.0 to 7.0 feet below ground surface.

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	Port of Chelan County	**Sample Location**	GP12
Project #	0779.02.01	**Sampler**	KRT
Project Name	Former Cashmere Mill Site	**Sampling Date**	7/26/2013
Sampling Event	July 2013	**Sample Name**	GP12-W-4.5
Sub Area	Stormline Area	**Sample Depth**	4.5
FSDS QA:	SVH 8/5/2013	**Easting**	**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
7/26/2013	13:15			5.5			

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

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**EH**	**Turbidity**
(2) Peristaltic Pump									
Final Field Parameters	1:15:00 PM	2.5		7.23	30.25	679	0.68	-133.2	9.47

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Clear and colorless; trace amounts of suspended sediment.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	1:15:00 PM	VOA-Glass	7	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	9	

General Sampling Comments

Sun and warm weather may affect temperature in flow through cell.
Temporary PVC well screen set from 2.0 to 7.0 feet below ground surface.

Signature _____

APPENDIX F

AREA 4 CHARACTERIZATION APPROACH

MEMORANDUM

To: Mary Monahan Date: April 22, 2013

From: Justin Clary, PE Project: 0779.02.01

RE: Area 4 Petroleum-Contaminated Soil Characterization Approach
2013 Former Cashmere Mill Site Removal Action

The Port of Chelan County, through support provided by the Washington State Department of Ecology, is currently undertaking a removal action at the former Cashmere Mill Site in Cashmere, Washington. The removal action consists of removal of woodwaste-related materials resulting from former mill activities from the developable areas of the site, removal of petroleum-hydrocarbon-contaminated soil (PCS) above applicable criteria, and backfilling the excavated areas with structural import fill. Based on available funding, the removal action has been separated into two phases: Phase I activities being conducted on the site largely in the area north of Mill Road; and Phase II activities planned for the site area south of Mill Road. Phase I field activities began in early April 2013; Phase II field activities are anticipated to begin in July 2013. The February 2013 Former Cashmere Mill Site Removal Action Work Plan (Work Plan) prepared by RH2 Engineering, Inc. (RH2) defines the removal action activities to be conducted. To gain efficiencies during Phase II removal action activities, further characterization of the Area 4 PCS area has been identified for completion during Phase I. The purpose of this memorandum is to document the approach to be implemented associated with Area 4 characterization activities during Phase I of the removal action.

The Area 4 PCS site was identified during field activities conducted by RH2 in July 2011 (refer to Section 2.5.3.4 of the Work Plan for previous investigation results specific to Area 4). To assess whether PCS exists near the previous sample location at concentrations exceeding the Washington State Model Toxics Control Act Method A cleanup criteria for soils, a test pit will be installed in the approximate location of test pit S-1-2011. The soil from the excavation will be field screened for volatiles, consistent with methods defined in the Work Plan. A soil sample will be collected consistent with soil sampling methods defined in the Work Plan. The sample will be collected from soils exhibiting the apparent highest volatiles concentration, based on photoionization detector readings. Should field screening not indicate the presence of volatiles, a soil sample will be collected from near the groundwater table as observed in the excavation. The table below defines the analytical methods associated with the Area 4 characterization soil sampling.

In addition to the test pit near the test pit S-1-2011 location, three test pits will be installed through the existing concrete pad (thickness undefined), following the same field screening and soil sampling methodology. A total of four test pits will be advanced. The test pits will be spaced generally 20 feet apart going westward from the test pit S-1-2011 location (see the attached figure).

The following table provides the analytical methods to be conducted on the soil samples. It is assumed that up to four soil samples will be collected for analysis and submitted to the laboratory on a normal turnaround basis.

Table
Analytical Summary for Area 4 Characterization Soil Samples

Parameter	Analytical Method	Detection Limit (mg/kg)	MTCA Method A Cleanup Level[a] (mg/kg)
Gasoline-Range Hydrocarbons	Ecology NWTPH-Gx by U.S. Environmental Protection Agency (USEPA) 5035	5.0	30 (100 if benzene—ND, TEX < 1%)
BTEX	USEPA SW8021	0.01255	0.03—benzene 7—toluene 6—ethylbenzene 9—total xylenes
Ethylene dibromide (EDB)[b] Ethylene dichloride (EDC)[b] Methyl Tertiary Butyl Ether (MTBE)[b]	USEPA SW8260	0.001	0.005—EDB EDC—Method B 0.1—MTBE
Diesel-Range Hydrocarbons	Ecology NWTPH-Dx with Acid/Silica Gel Cleanup	5—Diesel 10—Heavy Oils, Mineral Oil	2,000—Diesel 2,000—Heavy Oils 4,000—Mineral Oil
Arsenic	USEPA SW6010C	5	20
Chromium (trivalent criteria used)	USEPA SW6010C	0.5	2,000
Copper	USEPA SW6010C	0.2	3,200 (Method B)
Lead[b]	USEPA SW6010C	0.2	250

NOTES:
Ecology = Washington State Department of Ecology.
mg/kg = milligrams per kilogram.
MTCA = Model Toxics Control Act.
ND = not detected.
TEX = toluene, ethylbenzene, total xylenes.
[a]From Table 740-1 in WAC 173-340-900.
[b]If gasoline is detected in the soil.

Figure
2013 PCS Area 4 Characterization

Port of Chelan County
Cashmere, WA

Legend

- Proposed Test Pit Location
- Historical Test Pit Location
- Approximate UST Location
- Site Boundary

0 20 40
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online; historical site features obtained from RH2 Engineering, Inc.

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Path: X:\0779.02 Port of Chelan County\Projects\Area 4 Characterization Memo\Fig_2013 PCS Area 4 Characterization.mxd
Print Date: 4/19/2013
Approved By: J. Clary
Produced By: apadilla
Project: 0779.02.01-01

APPENDIX H

DATA VALIDATION MEMORANDA

DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 0779.02.01 | JUNE 19, 2013 | PORT OF CHELAN COUNTY

This report reviews the analytical results for groundwater and soil samples collected by the Maul Foster & Alongi, Inc. (MFA) project team at the former Cashmere Mill Site in Cashmere, Washington. The samples were collected in March, April, May, and June 2013.

Analytical Resources, Inc. (ARI) and ALS Environmental (ALS) performed the analyses. ARI report numbers WK02, WM43, WO34, WO44, WO53, WP04, WP19, WP36, WP53, WQ44-I, WQ44-II, WQ44-III, WQ45, WQ46, WQ47, WR25, WR26, WR33, WR39/WR40, WS07, WS28, WS31, WS51, WS54, WS55, WS56, WS84, and subcontracted report ALS report K1302998 (included in ARI report WK02) were reviewed. The analyses performed are listed below.

Analysis	Reference
Diesel- and Motor-Oil-Range Organic Hydrocarbons	NWTPH-Dx
Gasoline-Range Organic Hydrocarbons	NWTPH-Gx
Hydrocarbon Identification	NWTPH-HCID
VOCs by Purge and Trap GC/MS	USEPA 8260C
SVOCs	USEPA 8270D
Low-Level PAHs	USEPA 8270D SIM
PCP by GC/ECD	USEPA 8041
VOCs by PID	USEPA 8021B Mod
Total Metals	USEPA 6010C
Organic Compounds in Drinking Water	USEPA 504.1
EPH	NWTPH-EPH
VPH	NWTPH-VPH

EPH = extractable petroleum hydrocarbons.
GC/ECD = gas chromatography-electron capture detector.
GC/MS = gas chromatography-mass spectrometry.
Mod = modified.
NWTPH = Northwest Total Petroleum Hydrocarbons.
PAH = polycyclic aromatic hydrocarbon.
PCP = pentachlorophenol.
PID = photoionization detection.
SIM = selective ion monitoring.
SVOC = semivolatile organic compound.
VOC= volatile organic compound.
VPH = volatile petroleum hydrocarbons.
USEPA = U.S. Environmental Protection Agency.

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 2008, 2010) and appropriate laboratory and method-specific guidelines (ALS, 2013; ARI, 2009a,b, 2012a,b,c,d,e, 2013a,b,c,d,e; USEPA, 1986).

ARI does not report batch quality control (QC) prepared with samples from different work orders.

USEPA Method 6010C recommends including a sample duplicate and a matrix spike (MS) or an MS/matrix spike duplicate (MS/MSD) pair with the QC for each analytical batch. In reports WK02, WO34, WO44, WO53, WP04, WR26, and WS51 the USEPA Method 6010C batch QC did not include a batch duplicate or MS/MSD. The batch duplicate associated with samples in reports WQ44-II and WQ44-III is reported in WQ44-I. The remaining reports either included the required batch QC samples or are associated with other ARI reports, also reviewed for this validation memo, that contain the required batch QC samples.

USEPA Method 8041 states that a duplicate, a laboratory control sample (LCS), and an MS should be included with the QC for each analytical batch. In report WP19, the reported batch QC for USEPA Method 8041 does not include a batch QC duplicate, LCS, or MS.

USEPA Method 8270D states that a duplicate unspiked sample or an MSD should be included with the QC for each analytical batch. In reports WP19, WR25, and WR33, the reported batch QC for USEPA Method 8270D and Method 8270D SIM analyses do not include a batch QC duplicate or MSD.

NWTPH-Dx method states that a duplicate sample should be included with the QC for each analytical batch. In reports WP36, WP53, WR26, WR33, WS28, WS31, WS54, and WS55 the reported batch QC for NWTPH-Dx does not include a batch QC duplicate sample, laboratory control sample duplicate (LCSD), or MSD.

NWTPH-EPH and NWTPH-VPH methods state that batch QC should include an LCS, a sample or laboratory duplicate, and an MS. In reports WR25 and WR33, the reported batch QC for NWTPH-EPH does not include a batch QC duplicate or MS. In reports WR25 and WR33, the reported batch QC for NWTPH-VPH includes an LCSD, but no MS.

Data validation procedures were modified, as appropriate, to accommodate QC requirements for methods not specifically addressed by the functional guidelines (i.e., NWTPH methods).

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

The samples associated with report WP36 were received at the laboratory above the recommended storage temperature of 6°, at 10.9° and 9.9° Celsius. Samples associated with report WP19 were received at the laboratory above the recommended storage temperature at 6.7°, 7.1°, and 10.9° Celsius. The temperature exceedances were slight and the analyses performed likely would not be significantly affected by the receipt temperatures. No results were qualified.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the method blanks were associated with all samples prepared in the analytical batch. If an analyte was detected above the method reporting limit (MRL) in a sample and in the associated method blank, and the concentration was less than ten times the method blank concentration, the sample result was qualified. MRLs were elevated to the concentration detected in the samples, and results were qualified as not detected, "U," at the elevated MRL.

In reports WQ44-I and WQ44-II, based on a USEPA Method 8270D method blank detection of 25 micrograms per kilogram (µg/kg) for bis(2-ethylhexyl)phthalate, the associated sample detection was qualified as follows:

Report	Sample	Component	Original Result (µg/kg)	Qualified Result (µg/kg)
WQ44-I	DEBRIS-SP-2	Bis(2-ethylhexyl)phthalate	25	25 U
WQ44-II	POST-SP-1	Bis(2-ethylhexyl)phthalate	29	29 U
WQ44-II	POST-SP-2	Bis(2-ethylhexyl)phthalate	32	32 U
WQ44-II	POST-SP-3	Bis(2-ethylhexyl)phthalate	36	36 U
WQ44-II	POST-SP-4	Bis(2-ethylhexyl)phthalate	24	24 U

µg/kg = micrograms per kilogram.
U = not detected.

The NWTPH-Dx method blank reported in WQ44-I is also associated with NWTPH-Dx results reported in WQ44-II and WQ44-III. The method blank was reported with samples in WQ44-I, but not in reports WQ44-II and WQ44-III.

All remaining laboratory method blanks were non-detect to the MRL.

Trip Blanks

A trip blank was submitted with sample delivery group WK02. The trip blank was non-detect.

Equipment Rinsate Blanks

Equipment rinsate blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples.

In report WK02, the USEPA Method 8270D surrogate p-terphenyl-d14 exceeded the lower acceptance limit for sample B1-032813. The remaining surrogate recoveries were within acceptance limits; thus, no data were qualified.

In report WP19, the USEPA Method 8270D surrogate p-terphenyl-d14 exceeded the lower acceptance limit for sample TP-28-050713. The surrogate 2,4,6-tribromophenol was not reported for sample TP-30-050713. The remaining surrogate recoveries for these samples were within acceptance limits; thus, no results were qualified.

In report WP19, the NWTPH-Gx and the USEPA Method 8021B Mod surrogates exceeded the lower acceptance limits for water sample TP-37-050713. The laboratory reanalyzed the sample with comparable surrogate recoveries. The surrogate recoveries appear to be affected by the sample matrix. The sample was non-detect and the surrogate percent recovery exceedances were minor, so the associated results were not qualified.

In report WP36, the USEPA Method 8021B Mod surrogates exceeded the lower acceptance limit for water samples TP-38-050713 and TP-42-050813, and NWTPH-Gx surrogates exceeded the lower acceptance limit for TP-42-050813. The samples were reanalyzed and all surrogate recoveries were within acceptance limits for sample TP-38-050713, but not for sample TP-42-050813. Sample TP-42-050813 was non-detect for both analyses. The surrogate percent recovery exceedances for TP-42-050813 were minor, so the associated results were not qualified.

The reviewer took no action based on minor surrogate outliers or surrogate percent recoveries that were outside of acceptance limits because of matrix interference or dilutions necessary to quantify high concentrations of target analytes present in the samples.

The laboratory appropriately documented and qualified surrogate outliers. Associated batch quality assurance and QC for samples with surrogate outliers were within acceptance limits. All remaining surrogate recoveries were within acceptance limits.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

MS/MSD results are used to evaluate laboratory precision and accuracy. All MS/MSD samples were extracted and analyzed at the required frequency.

In report WR25, the MS/MSD recoveries for diesel-range organic hydrocarbons by Method NWTPH-Dx were not reported because of the presence of a significant amount of target analyte in the sample. The LCS had acceptable recovery, so the results were not qualified.

All recoveries were within acceptance limits for percent recovery and relative percent differences (RPDs).

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. All duplicate samples were extracted and analyzed at the required frequency.

In reports WM43 and WQ44-I, the USEPA Method 6010C laboratory duplicate exceeded the RPD for total chromium. No additional batch QC duplicates were reported. The associated sample results were qualified with a "J," as estimated.

Report	Sample	Component	Original Result (mg/kg)	Qualified Result (mg/kg)
WM43	G-S-1	Chromium (total)	42.0	42.0 J
WQ44-I	DEBRIS-SP-1	Chromium (total)	46.9	46.9 J
WQ44-I	DEBRIS-SP-2	Chromium (total)	38.3	38.3 J

J = estimated.
mg/kg = milligrams per kilogram.

All other duplicate sample RPDs were within acceptance limits.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

An LCS/LCSD is spiked with target analytes to provide information on laboratory precision and accuracy. The LCS/LCSD samples were extracted and analyzed at the required frequency. Some LCS/LCSD percent recovery and RPD control limits were provided by ARI in separate documents (ARI, 2012a,c,d,e, 2013a,b,c,d,e). For NWTPH-VPH, ARI uses spike recovery control limits (ARI, 2009a,b) as well as control limits specified in the NWTPH-VPH method.

In report WK02, the USEPA Method 8270D LCS and LCSD exceeded the upper acceptance limit for 4-chloroaniline and 3-nitroaniline. The associated sample was non-detect; thus, the results were not qualified.

In ALS report K1302998 (reported with ARI report WK02), no batch QC duplicates were reported for USEPA Method 504.1. The method does not specify a batch QC duplicate, and the samples were non-detect, so no data were qualified.

In report WP19, the USEPA Method 8270D water LCS exceeded the upper acceptance limits for 4-chloroaniline and 3-nitroaniline. The associated samples were non-detect for these analytes, so results for 4-chloroaniline and 3-nitroaniline were not qualified. The LCS also significantly exceeded the lower acceptance limit for benzoic acid, so the associated samples were qualified with a "J," as estimated.

Report	Sample	Component	Original Result (µg/L)	Qualified Result (µg/L)
WP19	TP-28-050713 (water)	Benzoic Acid	20 U	20 UJ
WP19	TP-29-050713 (water)	Benzoic Acid	20 U	20 UJ
WP19	TP-30-050713 (water)	Benzoic Acid	20 U	20 UJ

J = estimated.
µg/L = micrograms per liter.
U = not detected.

In report WO44, the USEPA Method 8021B Mod LCSD analyzed on May 3, 2013, exceeded the lower acceptance limits for m,p-xylene and o-xylene. The exceedances were minor and the LCS recoveries were within the acceptance limits; thus, no results were qualified.

In reports WQ44-I and WQ44-II, the USEPA Method 8270D LCS and LCSD exceeded the lower acceptance limit for benzoic acid and the LCS exceeded the upper limit for diethylphthalate. The LCS/LCSD benzoic acid exceedances were significant, and the continuing calibration verification (CCV) also exceeded acceptance limits for benzoic acid, so the associated sample results were qualified with a "J," as estimated. The LCS exceedance for diethylphthalate was minor and the samples were non-detect, so the associated sample results for diethylphthalate were not qualified.

Report	Sample	Component	Original Result (µg/kg)	Qualified Result (µg/kg)
WQ44-I	DEBRIS-SP-1	Benzoic Acid	730 U	730 UJ
WQ44-I	DEBRIS-SP-2	Benzoic Acid	360 U	360 UJ
WQ44-II	POST-SP-1	Benzoic Acid	380 U	380 UJ
WQ44-II	POST-SP-2	Benzoic Acid	380 U	380 UJ
WQ44-II	POST-SP-3	Benzoic Acid	380 U	380 UJ
WQ44-II	POST-SP-4	Benzoic Acid	380 U	380 UJ

J = estimated.
µg/L = micrograms per kilogram.
U = not detected.

In reports WQ44-I, WQ44-II, WQ44-III, and WQ45, the USEPA Method 8021B Mod LCSD analyzed on May 17, 2013, exceeded the lower acceptance limit for o-xylene. The exceedance was minor and the LCS was within acceptance limits, so no results were qualified.

In reports WQ46 and WQ47, the USEPA Method 8021B Mod LCSD analyzed on May 21, 2013, exceeded the lower acceptance limits for toluene, m,p-xylene, and o-xylene. The exceedances were minor and the LCS was within acceptance limits, so no results were qualified.

In report WS84, the USEPA Method 8620C LCS exceeded the upper acceptance limit for methyl-tert-butyl-ether (MTBE). The LCSD was within acceptance limits and the associated samples were non-detect, so no results were qualified.

All remaining LCS/LCSD analytes were within acceptance limits for percent recovery.

FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. Four field duplicates were submitted for analysis in reports WQ45 (A2-W9-S-4/A2-W10-S-4), WQ46 (A2-F3-S-6/A2-F4-S-6), WS28 (A2-F50-S-6/A2-F51-S-6), and WS31 (A2-W34-S-4/A2-W35-S-4). MFA uses acceptance criteria of 100 percent RPD for results that are less than five times the MRL, or 50 percent RPD for results that are greater than five times the MRL. Non-detect data are not used in the evaluation of field duplicate results. Analytes were within the acceptance criteria, with the following exceptions. In report WS31, the field duplicate exceeded the RPD acceptance limit for method NWTPH-Dx Motor-Oil-Range Organic Hydrocarbons. The associated LCS had acceptable recovery; however, the analytical batch did not include additional duplicate samples or QC duplicates such as an LCSD to demonstrate batch precision. All detected results in report WS31 for Motor-Oil-Range Organic Hydrocarbons were qualified with a "J," as estimated.

Report	Sample	Field Duplicate Sample	Component	Field Sample Result (mg/kg)	Field Duplicate Result (mg/kg)	RPD (%)
WS31	A2-W34-S-4	A2-W35-S-4	Motor-Oil-Range Organic Hydrocarbons	56	200	113

mg/kg = milligrams per kilogram.
RPD = relative percent difference.

Report	Sample	Component	Original Result (mg/kg)	Qualified Result (mg/kg)
WS31	A2-W34-S-4	Motor-Oil-Range Organic Hydrocarbons	56	56 J
WS31	A2-W35-S-4	Motor-Oil-Range Organic Hydrocarbons	200	200 J
WS31	A2-W36-S-4	Motor-Oil-Range Organic Hydrocarbons	16	16 J
WS31	A2-W37-S-4	Motor-Oil-Range Organic Hydrocarbons	4,200	4,200 J
WS31	A2-W38-S-4	Motor-Oil-Range Organic Hydrocarbons	4,200	4,200 J
WS31	A2-W39-S-4	Motor-Oil-Range Organic Hydrocarbons	5,400	5,400 J

J = estimated.
mg/kg = milligrams per kilogram.

CONTINUING CALIBRATION VERIFICATION RESULTS

CCV results are used to demonstrate instrument precision and accuracy through the end of the sample batch. CCV exceedances were reported by the laboratory in the report cover letters, but CCV results were not included in the reports, except for some percent drift exceedance summaries.

USEPA Methods 8260C and 8270D both state that CCV percent drift acceptance criteria must be met for more than 20 percent of the compounds included in the initial calibration. When at least 80 percent of the compounds have met acceptance criteria, non-detects may be reported for compounds that exceed acceptance limits if the laboratory demonstrates that quantitation limit sensitivity can still be achieved. Detected compounds with CCV percent drift exceedances may be reported as estimated values. National Functional Guidelines

(USEPA, 2008) for low/medium volatile and semivolatile data review state that non-detect compounds associated with percent drift exceedances of less than -50 percent for closing CCVs should be qualified with a "J," as estimated.

Detected compounds associated with the exceedances of the above CCV acceptance criteria were qualified with a "J," as estimated. If the percent drift exceedance was not reported, then non-detected compounds associated with CCV exceedances were qualified with a "J," as estimated. The non-detect compounds associated with percent drift exceedances reported between -20 percent and -50 percent were not qualified.

In report WK02, the laboratory indicated in the cover letter that a CCV for USEPA Method 8260C exceeded the lower acceptance limit for MTBE. The percent exceedance was not reported. The laboratory also indicated in the cover letter that a CCV for USEPA Method 8270D exceeded the lower acceptance limit for 2,2'-oxybis(1-chloropropane) and exceeded the upper acceptance limit for 4-nitrophenol. The batch LCS/LCSD recoveries were within acceptance limits for these compounds. The associated sample results were non-detect and were qualified with a "J," as estimated.

Report	Sample	Component	Original Result (µg/L)	Qualified Result (µg/L)
WK02	B1-032813	MTBE	0.50 U	0.50 UJ
WK02	B1-032813	2,2'-oxybis(1-chloropropane)	1.0 U	1.0 UJ
WK02	B1-032813	4-Nitrophenol	10 U	10 UJ

J = estimated.
MTBE = methyl-tert-butyl-ether.
µg/L = micrograms per liter.
U = not detected.

In report WM43, the laboratory indicated in the cover letter that a CCV for USEPA Method 8270D exceeded the lower acceptance limit for hexachlorocyclopentadiene. The value of the percent exceedance was not reported. The batch LCS recovery was within the acceptance limits. The associated sample result was non-detect and was qualified with a "J," as estimated.

In report WP04, the laboratory indicated in the cover letter that a CCV for USEPA Method 8270D exceeded the 20 percent control limit for several analytes. A CCV percent drift exceedance summary was included with the report. Less than 20 percent of the reported 8270D compounds were affected, and the exceedances were all between -20 percent and -50 percent. The associated sample results were non-detect and were not qualified.

In report WP19, the laboratory reported in the cover letter that a CCV for USEPA Method 8270D water analysis exceeded the 20 percent control limit for several analytes. The laboratory also reported in the cover letter that a CCV for USEPA Method 8270D soil analysis exceeded the 20 percent control limit for benzoic acid. CCV percent drift exceedance summaries were included with the report. Less than 20 percent of the reported soil and water 8270D compounds were affected, and the exceedances were all between -20 percent and -50 percent. The associated sample results were non-detect and were not qualified.

In report WP19, the laboratory stated in the cover letter that a CCV for USEPA Method 8270D soil analysis exceeded the 20 percent control limit for benzoic acid. A CCV percent drift exceedance summary was included with the report. Less than 20 percent of the reported soil 8270D compounds were affected, and the exceedance was between -20 percent and -50 percent. The associated sample results were non-detect and were not qualified.

In reports WQ44-I and WQ44-II, the laboratory stated in the cover letter that a CCV for USEPA Method 8270D exceeded the 20 percent control limit for several compounds. A CCV percent drift exceedance summary was included in both reports. Less than 20 percent of the reported soil 8270D compounds were affected. The percent drift exceedances for benzoic acid and PCP were less than -50 percent, and the remaining exceedances were between -20 percent and -50 percent. The associated sample results for benzoic acid and PCP were qualified with a "J," as estimated. The sample results associated with the remaining exceedances were non-detect and were not qualified.

In report WR25, the laboratory stated in the cover letter that the closing CCV for NWTPH-EPH exceeded the upper acceptance limit for Aromatics C16-C21. The batch LCS had acceptable recoveries. The associated sample had a detection, which was qualified with a "J," as estimated.

Report	Sample	Component	Original Result (µg/kg)	Qualified Result (µg/kg)
WM43	G-S-1	Hexachlorocyclopentadiene	360 U	360 UJ
WQ44-I	DEBRIS-SP-1	Benzoic Acid	730 U	730 UJ
WQ44-I	DEBRIS-SP-1	PCP	370 U	370 U
WQ44-I	DEBRIS-SP-2	Benzoic Acid	360 U	360 UJ
WQ44-I	DEBRIS-SP-2	PCP	180 U	180 UJ
WQ44-II	POST-SP-1	Benzoic Acid	380 U	380 UJ
WQ44-II	POST-SP-1	PCP	190 U	190 UJ
WQ44-II	POST-SP-2	Benzoic Acid	380 U	380 UJ
WQ44-II	POST-SP-2	PCP	190 U	190 UJ
WQ44-II	POST-SP-3	Benzoic Acid	380 U	380 UJ
WQ44-II	POST-SP-3	PCP	190 U	190 UJ
WQ44-II	POST-SP-4	Benzoic Acid	380 U	380 UJ
WQ44-II	POST-SP-4	PCP	190 U	190 UJ
WR25	A2-W22-S-4	Aromatics C16-C21	18,000	18,000 J

J = estimated.
µg/kg = micrograms per kilogram.
PCP = pentachlorophenol.
U = not detected.

The remaining CCVs were within acceptance limits for percent recovery or percent drift.

REPORTING LIMITS

ARI and ALS used routine reporting limits for non-detect results, except when samples required dilutions because of limited sample or extract volume, high analyte concentrations, and/or matrix interferences.

DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies.

The trip blank for sample delivery group WK02 was not recorded on the chain of custody.

The chain of custody for sample delivery group WO44 shows a request for "EDB, EDC, MTBE 8260 only if Gx detected." At MFA's request, these analyses were not performed.

The chain of custody for sample delivery group WO53 does not have a completed sample analysis section. The analyses were added by the laboratory, based on those indicated at the top of the chain of custody.

In report WP36, the chain of custody was submitted to the laboratory with incorrect sample names; samples TP-38-050713 and TP-39-050713 should be TP-38-050813 and TP-39-050813, respectively.

The chain of custody for sample delivery group WR25 shows a request for total lead and VOC (1,2-dibromoethane, 1,2-dichloroethane, and MTBE) analyses to be performed only if gasoline-range organic hydrocarbons were detected. Total lead and VOCs were not reported for samples with gasoline-range organic hydrocarbon detections, and, at MFA's request, VOCs were reported only for sample A2-W22-S-4.

In report WR25, the cover letter states that "matrix spike and matrix spike percent recoveries were not reported for diesel for sample SL-W2-S-4." The statement is incorrect and should be "matrix spike and matrix spike duplicate percent recoveries were not reported for diesel for sample SL-W2-S-4."

In report WP19, the chain of custody was not fully completed before samples were submitted to the laboratory. The report includes e-mail records that show analysis requests, sample compositing instructions, and sample location names. Not all sample names and matrices are stated explicitly on the chain of custody and in attached e-mails, but they may be inferred. Analyses by NWTPH-Gx and USEPA Method 8021B Mod benzene, toluene, ethylbenzene, and xylenes were requested for water and soil samples TP-28-050713, TP-29-050713, and TP-30-050713, but were not performed because of limited sample volume.

The chain of custody for report WP53 was submitted to the laboratory without requested analyses indicated. The laboratory confirmed the analyses with MFA.

In report WQ45, NWTPH-Dx analysis was added to all samples and USEPA Method 6010C total lead analysis was removed from all samples at the request of MFA.

Reports WR39 and WR40 were combined by the laboratory and reported as a single report.

The chain of custody for report WS07 includes a request for total lead and VOC analysis for samples with NWTPH-Gx detections. The total lead and VOC results are reported in ARI report WS51.

The chains of custody for reports WS55 and WS56 were delivered to the laboratory in an e-mail communication and were not relinquished by the sampler. The sample analysis section of each chain of custody was not completed; analyses were performed based on the analyses listed at the top of each form. Additionally, USEPA Method 6010C total lead analysis was added to WS55 at the request of MFA.

No additional issues were found.

ALS. 2013. Quality assurance manual. ALS Environmental, Kelso, Washington.

ARI. 2009a. Spike recovery control limits for extractable petroleum hydrocarbons (EPH) Washington Department of Ecology interim method. Analytical Resources, Inc., Tukwila, Washington. May 1.

ARI. 2009b. Spike recovery control limits for volatile petroleum hydrocarbons (VPH) Washington Department of Ecology method. Analytical Resources, Inc., Tukwila, Washington. May 1.

ARI. 2012a. Quality control criteria. Total petroleum hydrocarbons (diesel & motor oil). Analytical Resources, Inc., Tukwila, Washington. March 20.

ARI. 2012b. Quality assurance plan. Analytical Resources, Inc., Tukwila, Washington. April 1.

ARI. 2012c. DL, LOD, LOQ and control limits summary for VOA analysis of water. 10 mL purge volume. EPA Method 8260C. Analytical Resources, Inc., Tukwila, Washington. June 11.

ARI. 2012d. DL, LOD, LOQ and control limits summary for VOA analysis of soil. EPA Method 8260C. Analytical Resources, Inc., Tukwila, Washington. July 30.

ARI. 2012e. Quality control criteria. Gasoline and BTEX. Analytical Resources, Inc., Tukwila, Washington. August 27.

ARI. 2013a. DL, LOD, LOQ and control limits summary. GC-MS—SVOA analysis of sediment. EPA Method 8270 full scan & SIM. Analytical Resources, Inc., Tukwila, Washington. March 15.

ARI. 2013b. Chlorinated phenols. DL, LOD, LOQ and control limits summary. EPA Method 8041A. Analytical Resources, Inc., Tukwila, Washington. April 8.

ARI. 2013c. LOD, LOQ and control limits summary. GC-MS—SVOA analysis of aqueous samples. EPA Method 8270D. Continuous liquid-liquid extraction. Analytical Resources, Inc., Tukwila, Washington. April 12.

ARI. 2013d. DL, LOD, LOQ and control limits summary. Analysis of solid samples for PNA EPA Method 8270—SIM. Analytical Resources, Inc., Tukwila, Washington. April 17.

ARI. 2013e. DL, LOD, LOQ and control limits summary. Analysis of water samples for PNA. EPA Method 8270—SIM. Analytical Resources, Inc., Tukwila, Washington. April 17.

USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (revision 6, February 2007).

USEPA. 2008. USEPA contract laboratory program, national functional guidelines for organics data review. EPA 540/R-08/01. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. June.

USEPA. 2010. USEPA contract laboratory program national functional guidelines for inorganic superfund data review. EPA 540/R-10/011. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. January.

DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 0779.02.01 | AUGUST 7, 2013 | PORT OF CHELAN COUNTY

This report reviews the analytical results for groundwater and soil samples collected by the Maul Foster & Alongi, Inc. (MFA) project team at the former Cashmere Mill Site in Cashmere, Washington. The samples were collected in July 2013.

Analytical Resources, Inc. (ARI) performed the analyses. ARI report numbers WY96, WY97, and WZ26 were reviewed. The analyses performed are listed below.

Analysis	Reference
Diesel- and Motor-Oil-Range Organic Hydrocarbons	NWTPH-Dx
Gasoline-Range Organic Hydrocarbons	NWTPH-Gx
BTEX	USEPA 8021B Mod
Volatile Organic Compounds	USEPA 8260C

BTEX = benzene, toluene, ethylbenzene, and xylenes.
Mod = modified.
NWTPH = Northwest Total Petroleum Hydrocarbons.
USEPA = U.S. Environmental Protection Agency.

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 2008, 2010) and appropriate laboratory and method-specific guidelines (ARI, 2012a,b,c,d; USEPA, 1986).

ARI does not report batch quality control prepared with samples from different work orders.

Data validation procedures were modified, as appropriate, to accommodate quality-control requirements for methods not specifically addressed by the functional guidelines (i.e., NWTPH analyses).

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the method blanks were associated with all samples prepared in the analytical batch. All laboratory method blanks were non-detect to the method reporting limit.

Trip Blanks

A trip blank was submitted with sample delivery group WY97 for analysis by Method USEPA 504.1. At the request of the MFA project manager, this analysis was placed on hold and was not performed. A trip blank was not submitted with sample delivery group WY97 for USEPA Method 8021B Mod. All groundwater samples analyzed for USEPA Method 8021B Mod were non-detect, so no data were qualified.

Equipment Rinsate Blanks

Equipment rinsate blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples. All surrogate recoveries were within acceptance limits.

INTERNAL STANDARD RESULTS

Internal standard results are used to quantify target analytes and evaluate instrument performance.

In report WZ26, the laboratory indicated in the cover letter that USEPA Method 8260C internal standard 1,4-dichlorobenzene-d4 was below the lower acceptance limit for sample GP6-S-4.0. Internal standard recoveries were not included in the report. The reviewer confirmed with the laboratory that 1,4-dichlorobenzene-d4 is not associated with the reported analyte, benzene, and that the remaining internal standards had acceptable recoveries. The laboratory reanalyzed the sample at a dilution to confirm that the low recovery was due to matrix interference. Since the internal standard associated with benzene had acceptable recovery, the results were not qualified.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate laboratory precision and accuracy. No MS/MSD samples were reported.

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. No laboratory duplicate samples were reported.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) is spiked with target analytes to provide information on laboratory precision and accuracy. The LCS/LCSD samples were extracted and analyzed at the required frequency. Some LCS/LCSD percent recovery and relative percent difference control limits were provided by ARI in separate documents (ARI, 2012a,c,d). All LCS/LCSD analytes were within acceptance limits for percent recovery.

FIELD DUPLICATE RESULTS

Field duplicate samples were not submitted for analysis.

CONTINUING CALIBRATION VERIFICATION RESULTS

Continuing calibration verification (CCV) results are used to demonstrate instrument precision and accuracy through the end of the sample batch. CCV results were not reported.

REPORTING LIMITS

ARI used routine reporting limits for non-detect results, except when samples required dilutions because of limited sample or extract volume, high analyte concentrations, and/or matrix interferences.

DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies.

In report WY97, neither the time of relinquishment nor the trip blank submitted for analysis was recorded on the chain of custody.

No additional issues were found.

REFERENCES

ARI. 2012a. Quality control criteria. Total petroleum hydrocarbons (diesel & motor oil). Analytical Resources, Inc., Tukwila, Washington. March 20.

ARI. 2012b. Quality assurance plan. Analytical Resources, Inc., Tukwila, Washington. April 1.

ARI. 2012c. DL, LOD, LOQ and control limits summary for VOA analysis of soil. EPA Method 8260C. Analytical Resources, Inc., Washington. July 30.

ARI. 2012d. Quality control criteria. Gasoline and BTEX. Analytical Resources, Inc., Tukwila, Washington. August 27.

USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (revision 6, February 2007).

USEPA. 2008. USEPA contract laboratory program, national functional guidelines for organics data review. EPA 540/R-08/01. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. June.

USEPA. 2010. USEPA contract laboratory program national functional guidelines for inorganic superfund data review. EPA 540/R-10/011. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. January.

APPENDIX I

MTCA TPH CUL CALCULATION LETTER

MAUL FOSTER ALONG
1329 North State Street, Suite 301 | Bellingham, WA 98225 | 360 594 6262 | www.maulfoster.com

June 10, 2013
Project No. 0779.02.01

Laura Jaecks
Port of Chelan County
285 Technology Center Way, Suite 102
Wenatchee, Washington 98801

Re: Site-specific Total Petroleum Hydrocarbon Cleanup Level Calculation, Former Cashmere Mill Site

Dear Ms. Jaecks:

Maul Foster and Alongi, Inc. (MFA) has prepared this letter to provide methods and discuss results for a site-specific total petroleum hydrocarbon (TPH) cleanup level (CUL) calculation for the former Cashmere Mill Site (the site). Wood waste and petroleum-contaminated soil (PCS) were excavated from selected areas of the site during the first phase of a removal action. Excavated soil has been stockpiled on site, and composite samples collected from stockpiles exhibit minimal TPH exceedances of the Model Toxics Control Act (MTCA; Washington Administrative Code [WAC] 173-340) Method A CUL. MTCA allows for calculation of site-specific CULs under Method B or C, and, in particular, for site-specific petroleum mixtures. Using petroleum fractionation data to characterize the specific petroleum mixture present at the site, MFA calculated Method B TPH CULs for four samples collected from an excavation. The goal was to evaluate whether a site-specific CUL could be developed to screen stockpiled soil for potential reuse or on-site disposal, and to establish excavation boundaries for PCS remaining in some areas of the site. However, because of the observed variability in TPH concentrations and the resultant calculated CULs, it is not reasonable to apply a site-wide TPH CUL.

METHODS

Four samples were collected from excavation boundaries for petroleum fractionation testing: one from the sidewall of the excavation at approximately 4 feet below ground surface (sample A2-W22-S-4) and three from the bottom of the excavation at approximately 6 feet below ground surface (samples A2-F32-S-6, A2-F37-S-6, and A2-F42-S-6) (see the attached figure). The samples were analyzed for extractable/volatile petroleum hydrocarbon (EPH/VPH) fractions, as well as for additional petroleum-related constituents, including diesel- and gasoline-range petroleum hydrocarbons; volatile organic compounds (VOCs), including benzene, toluene, ethylene, and xylenes (BTEX) as well as ethylene dibromide (EDB), 1,2 dichloroethane (EDC), and methyl tert-butyl ether (MTBE); and polycyclic aromatic hydrocarbons (PAHs). Analytical results are summarized in the attached table. The data were validated and are considered acceptable for their intended use, with the appropriate data

qualifiers assigned. Laboratory analytical reports and a data validation memorandum, summarizing data evaluation procedures, usability of data, and deviations from specific field and/or laboratory methods, will be provided in the forthcoming removal action summary report.

Concentrations of TPH and other petroleum-related compounds varied among the four samples. Sample A2-W22-S-4 exhibited a petroleum hydrocarbon concentration above the MTCA A CUL; the diesel-range hydrocarbon concentration (2,620 milligrams per kilogram [mg/kg], which represents the sum of the diesel and motor oil fractions) exceeds the MTCA A CUL of 2,000 mg/kg.[1] The highest EPH/VPH concentrations were also observed in this sample. However, other petroleum-related compounds (e.g., PAHs and toluene) were not detected in this sample. PAHs and toluene were detected in the other excavation samples, which exhibited lower TPH and EPH/VPH concentrations. To evaluate the effect of this chemical variability on TPH CULs, individual CULs were calculated for each excavation sample.

The MTCATPH 11.1 workbook tool was used to calculate site-specific TPH CULs for the direct contact and groundwater leaching pathways. Soil was not screened for vapor or terrestrial ecological exposure pathways. Constituent concentrations for each sample were entered into the MTCATPH 11.1 workbook (user inputs and a summary of results are attached). The default workbook values were used for the hydrogeological inputs. Non-detect results were handled as follows:

- Concentrations of 0 were entered for constituents that were not detected previously at the site and that were not detected in the excavation samples. This includes the following compounds:
  - Aliphatic carbon fractions C5 to C6, C6 to C8, C8 to C10, C10 to C12
  - Aromatic carbon fractions C12 to C16
  - Non-BTEX VOCs (n-hexane, MTBE, EDB, and 1,2-EDC)

- One-half the method detection limit (MDL) was entered for constituents that were not detected at or above the MDL but that were detected previously at the site. The MDL value was entered for constituents that were detected above the MDL but not detected above the method reporting limit. No MDLs were generated by the laboratory for the EPH/VPH test methods, as they are not specifically required by the methods. Therefore, one-half the method reporting limit was entered for non-detect petroleum fractions that were detected previously at the site.

[1] Note that the sidewall where sample A2-W22-S-4 was collected has been over-excavated and the soil stockpiled on site.

In addition, constituent concentrations already accounted for in a petroleum fraction concentration were subtracted from their corresponding petroleum fraction concentration in order to avoid double-counting. This procedure, which is consistent with the MTCATPH 11.1 user guidance,[2] applied only to the aromatic C21 to C34 fraction concentration. The carcinogenic PAH compound concentrations were subtracted from this fraction concentration.

RESULTS

Site-specific TPH CULs were calculated for the direct contact and groundwater leaching pathways, using the constituent concentrations for the four excavation samples (see the attachment). The site-specific Method B TPH CULs calculated for direct contact with soil at the site ranged from 1,057 to 13,936 mg/kg (calculated CULs are summarized in the attached table). These concentrations range from a little more than half to seven times greater than the MTCA A CUL for diesel-range hydrocarbons (2,000 mg/kg) that is currently being used for screening TPH concentrations. Although the calculated CUL is less than the MTCA A value for two of the samples, the MTCA A CUL may still be applicable for use if the site qualifies for use of Method A.

Diesel-range hydrocarbon concentrations observed in the excavation samples are below the sample-specific Method B CULs for direct contact, and gasoline-range hydrocarbons were not detected (see the attached table). The workbook-calculated TPH concentrations are also below the Method B CULs. Therefore, soil remaining in the floor of the excavation and soil (now stockpiled on site) excavated from the sidewall are not likely to present a human health risk via direct contact.

The workbook tool indicates that TPH concentrations in soil would have to result in the accumulation of nonaqueous-phase liquid (NAPL) in or on groundwater in order to result in unacceptable groundwater conditions for two of the samples (A2-W22-S-4 and A2-F32-S-6, indicated in the attached table as 100 percent NAPL). Therefore, for these samples, the soil TPH cleanup standard for protection of groundwater is based on the residual saturation, or the concentration at which NAPL will be held in the soil and will not accumulate in or on groundwater. MTCA provides residual saturation screening levels for various fuel types (Table 747-5, WAC 173-340-900); however, these concentrations are based on standard fuel compositions and soil conditions. An acceptable alternative is to visually screen soil for NAPL. The presence of NAPL indicates that soil may cause unacceptable groundwater conditions, whereas the absence of NAPL indicates that the TPH concentrations in soil will not impact groundwater.

[2] Ecology. Workbook tools for calculating soil and groundwater cleanup levels under the Model Toxics Control Act cleanup regulation, user's guide. Publication No. 01-09-073. Washington State Department of Ecology, Toxics Cleanup Program. December 2007.

The calculated soil CULs for protection of groundwater quality for the two other samples (A2-F37-S-6 and A2-F42-S-6) are 5,994 and 2,605 mg/kg, respectively. Both of these CULs are greater than the MTCA A CUL. The sample-specific CULs and the 100 percent NAPL cleanup standard for protection of groundwater are less stringent than the MTCA A value.

NAPL was not observed in the excavation area, and TPH concentrations (both the analytical and workbook-calculated values) are below the calculated CULs for protection of groundwater. Therefore, stockpiled soil and soil remaining in the excavation area are not expected to result in unacceptable groundwater conditions.

The sample-specific TPH CULs were evaluated for development of site-wide Method B CULs. The workbook tool calculates composition ratios for petroleum and related compounds for a sample. In addition to the observed variability in the chemical concentrations and the calculated CULs, as discussed above, the composition ratios vary among the samples. These observations suggest that either there are different sources of impacts or fate and transport processes have changed the composition of the impacts at these locations. Historical information regarding types of products in use or potential releases at the site is lacking. Therefore, evidence to support the use of a calculated CUL site-wide is not available. In light of this, and the variable product compositions observed in the excavation, it is not reasonable to develop site-specific TPH CULs. However, CULs developed on a sample-specific basis indicate that soil removed from the excavation sidewall and soil remaining in the floor of the excavation do not pose a threat to human health via direct contact or to groundwater quality via leaching. Further, sample-specific CULs may still be used for risk screening on a case-by-case basis.

CONCLUSIONS

The sample-specific TPH CULs calculated using the MTCATPH 11.1 workbook tool are acceptable for use at the site on a case-by-case basis. However, given the variability in observed petroleum compositions, it is not reasonable to develop CULs for use site-wide.

All four excavation samples passed the sample- and petroleum-specific screening criteria for direct contact and protection of groundwater. Therefore, the soil remaining in the excavation area and the soil removed from the sidewall and stockpiled on site are not likely to pose a threat to groundwater quality or human health via direct contact.

Sincerely,

Maul Foster & Alongi, Inc.

Heather Hirsch, LHG
Project Hydrogeologist

Justin Clary, PE
Principal Engineer

Attachments: Limitations
Table
Figure
User Inputs and Summary of Results

cc: Mary Monahan, Washington State Department of Ecology
Randy Asplund, RH2 Engineering

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.

TABLE

Table
Soil Analytical Results
Former Cashmere Mill Site, Port of Chelan County
Cashmere, Washington

			Location	A2-W22-S-4		A2-F32-S-6		A2-F37-S-6		A2-F42-S-6	
			Sample Date	5/22/2013		5/22/2013		5/22/2013		5/23/2013	
Analyte	Soil CUL (mg/kg)	CUL Source		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs (mg/kg)											
1,2-Dichloroethane (EDC)	11	MTCA B NCAR		0.00028	U	0.00023	U	0.00021	U	0.00028	U
1,2-Dibromoethane (EDB)	0.5	MTCA B NCAR		0.00026	U	0.00021	U	0.00020	U	0.00026	U
Methyl tert-butyl ether (MTBE)	0.1	MTCA A		0.00034	U	0.00028	U	0.00026	U	0.00033	U
NWTPH-Dx (mg/kg)											
Diesel	2,000	MTCA A		**420**		**180**		**30**		**12**	
Motor Oil Range	2,000	MTCA A		**2,200**		330		200		110	
Total Diesel-Range Hydrocarbons	2,000	MTCA A		**2,620**		**510**		**230**		**122**	
NWTPH-Gx (mg/kg)											
Gasoline	30	MTCA A		4.1	U	2.2	U	2.0	U	3.3	U
BTEX (mg/kg)											
Benzene	0.03	MTCA A		0.011	U	0.0060	U	0.0054	U	0.0092	U
Ethylbenzene	6	MTCA A		0.012	U	0.0064	U	0.0058	U	0.0099	U
m,p-Xylene	9	MTCA A		0.030	U	0.015	U	0.014	U	0.024	U
o-Xylene	16,000	MTCA B NCAR		0.015	U	0.0081	U	0.0073	U	0.012	U
Total Xylenes	9	MTCA A		ND		ND		ND		ND	
Toluene	7	MTCA A		0.018	U	0.0092	U	0.0084	U	**0.048**	
VPH (mg/kg)											
n-Pentane	NA	NA		1.4	U	1.2	U	1.1	U	1.7	U
n-Hexane	NA	NA		1.4	U	1.2	U	1.1	U	1.7	U
n-Octane	NA	NA		1.4	U	1.2	U	1.1	U	1.7	U
n-Decane	NA	NA		1.4	U	1.2	U	1.1	U	1.7	U
n-Dodecane	NA	NA		1.4	U	1.2	U	1.1	U	1.7	U
C8-C10 Aromatics	NA	NA		14	U	12	U	11	U	17	U
C10-C12 Aromatics	NA	NA		14	U	12	U	11	U	17	U
C12-C13 Aromatics	NA	NA		14	U	12	U	11	U	17	U
C5-C6 Aliphatics	NA	NA		14	U	12	U	11	U	17	U

Table
Soil Analytical Results
Former Cashmere Mill Site, Port of Chelan County
Cashmere, Washington

			Location	A2-W22-S-4		A2-F32-S-6		A2-F37-S-6		A2-F42-S-6	
			Sample Date	5/22/2013		5/22/2013		5/22/2013		5/23/2013	
Analyte	Soil CUL (mg/kg)	CUL Source		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
C6-C8 Aliphatics	NA	NA		14	U	12	U	11	U	17	U
C8-C10 Aliphatics	NA	NA		14	U	12	U	11	U	17	U
C10-C12 Aliphatics	NA	NA		14	U	12	U	11	U	17	U
EPH (mg/kg)											
C8-C10 Aliphatics	NA	NA		2.5	U	2.3	U	2.2	U	2.7	U
C10-C12 Aliphatics	NA	NA		2.5	U	2.3	U	2.2	U	2.7	U
C12-C16 Aliphatics	NA	NA		**4.5**		2.3	U	2.2	U	2.7	U
C16-C21 Aliphatics	NA	NA		**64**		**19**		**4.8**		**4.1**	
C21-C34 Aliphatics	NA	NA		**1,000**		**230**		**120**		**140**	
C8-C10 Aromatics	NA	NA		2.5	U	2.3	U	2.2	U	2.7	U
C10-C12 Aromatics	NA	NA		2.5	U	2.3	U	2.2	U	2.7	U
C12-C16 Aromatics	NA	NA		2.5	U	2.3	U	2.2	U	2.7	U
C16-C21 Aromatics	NA	NA		**18**		**5.3**		**2.6**		2.7	U
C21-C34 Aromatics	NA	NA		**120**		**46**		**22**		**41**	
PAHs (mg/kg)											
1-Methylnaphthalene	35	MTCA B CAR		0.0075	U	0.0041	U	0.0040	U	**0.0086**	
2-Methylnaphthalene	320	MTCA B NCAR		0.0066		0.0037	U	0.0035	U	**0.011**	
Acenaphthene	4,800	MTCA B NCAR		0.0058	U	0.0032	U	0.0031	U	**0.0072**	
Acenaphthylene	1	MTCA B NCAR		0.0055	U	0.0030	U	0.0029	U	**0.011**	
Anthracene	24,000	MTCA B NCAR		0.0064	U	0.0035	U	0.0034	U	**0.013**	
Benzo(a)anthracene	1.4	MTCA B CAR		0.0070	U	**0.021**		0.0037	U	**0.0088**	
Benzo(b)fluoranthene	1.4	MTCA B CAR		0.0076	U	**0.023**		0.0041	U	**0.010**	
Benzo(k)fluoranthene	140	MTCA B CAR		0.0083	U	**0.014**		0.0044	U	0.0020	U
Benzo(a)pyrene	0.1	MTCA A		0.013	U	**0.023**		0.0071	U	**0.0082**	
Benzo(ghi)perylene	NV	NV		0.0090	U	**0.015**		0.0048	U	**0.0088**	
Chrysene	140	MTCA B CAR		0.0082		**0.028**		0.0044	U	**0.013**	
Dibenzo(a,h)anthracene	0.14	MTCA B CAR		0.010	U	0.0057	U	0.0055	U	0.0023	U

Table
Soil Analytical Results
Former Cashmere Mill Site, Port of Chelan County
Cashmere, Washington

			Location	A2-W22-S-4		A2-F32-S-6		A2-F37-S-6		A2-F42-S-6	
			Sample Date	5/22/2013		5/22/2013		5/22/2013		5/23/2013	
Analyte	Soil CUL (mg/kg)	CUL Source		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Dibenzofuran	80	MTCA B NCAR		0.0066	U	0.0036	U	0.0035	U	**0.013**	
Fluoranthene	3,200	MTCA B NCAR		0.0077	U	**0.039**		**0.016**		**0.030**	
Fluorene	3,200	MTCA B NCAR		0.0056	U	0.0031	U	0.0030	U	**0.017**	
Indeno(1,2,3-cd)pyrene	1.4	MTCA B CAR		0.015	U	0.0083	U	0.0081	U	**0.0058**	
Naphthalene	5	MTCA A		0.011		0.0063	U	0.0061	U	**0.053**	
Phenanthrene	NV	NV		0.0086	U	0.0048	U	0.0046	U	**0.045**	
Pyrene	2,400	MTCA B NCAR		0.0097	U	**0.043**		**0.016**		**0.029**	
Total Benzofluoranthenes	1.4	MTCA B CAR		0.0081	U	**0.050**		0.0043	U	**0.020**	
cPAH TEQ	0.1	MTCA A		ND		**0.031**		ND		**0.012**	
Calculated MTCA B CULs											
Soil Direct Contact	--	--		13,963		1,057		3,256		1,796	
Protection of Groundwater Quality (Leaching Pathway)	--	--		100% NAPL		100% NAPL		5,994		2,605	

Table
Soil Analytical Results
Former Cashmere Mill Site, Port of Chelan County
Cashmere, Washington

NOTES:

Calculated total concentrations were calculated using one-half the detection limit for non-detects.

Where all components were non-detect, the calculated total is "ND."

Detections at or above the method reporting limit (MRL) are in **bold.**

Detections at the method detection limit (MDL) are highlighted in green.

Detections that exceed MTCA A soil cleanup levels are highlighted in gray.

EPH and VPH results are reported to the MRL. All other results are reported to the MDL. For calculation purposes, analytes detected between the MDL and MRL are reported as detections at the MDL.

BTEX = benzene, toluene, ethylbenzene, xylenes.

cPAH TEQ = carcinogenic polycyclic aromatic hydrocarbon toxic equivalency quotient.

- calculated from laboratory-provided cPAH data.

CUL = cleanup level.

mg/kg = milligrams per kilogram (parts per million).

MTCA = Model Toxics Control Act.

MTCA A = MTCA Method A screening level value.

MTCA B CAR = MTCA Method B screening level value for carcinogenic compounds.

MTCA B NCAR = MTCA Method B screening level value for noncarcinogenic compounds.

NA = not analyzed.

NAPL = nonaqueous-phase liquid.

ND = not detected.

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon—Diesel and Heavy Oil Range Organics Method.

NWTPH-Gx = Northwest Total Petroleum Hydrocarbon—Gasoline Range Organics Method.

PAH = polycyclic aromatic hydrocarbon.

U = Analyte was not detected at or above MRL (for EPH/VPH results) or MDL (all other results).

FIGURE

Figure
Sample Locations

Port of Chelan County
Cashmere, WA

Legend

- Approximate Sample Location
- Road Extent
- Highway Centerline
- Approximate Excavation Extent
- Approximate UST Location
- Approximate Location of Former Mill Pond
- Site Boundary

0 25 50
Feet

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online; historical site features obtained from RH2 Engineering, Inc.

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Path: X:\0779.02 Port of Chelan County\Projects\Fig_Sample Locations.mxd
Print Date: 6/6/2013
Approved By: H. Hirsch
Produced By: apadilla
Project: 0779.01.02-01

ATTACHMENT

USER INPUTS AND SUMMARY OF RESULTS

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

1. Enter Site Information

Date: 05/22/13
Site Name: Former Cashmere Mill Site
Sample Name: A2-W22-S-4

2. Enter Soil Concentration Measured

Chemical of Concern or Equivalent Carbon Group	Measured Soil Conc dry basis mg/kg	Composition Ratio %
Petroleum EC Fraction		
AL_EC >5-6	0	0.00%
AL_EC >6-8	0	0.00%
AL_EC >8-10	0	0.00%
AL_EC >10-12	0	0.00%
AL_EC >12-16	4.5	0.37%
AL_EC >16-21	64	5.29%
AL_EC >21-34	1000	82.71%
AR_EC >8-10	1.25	0.10%
AR_EC >10-12	1.25	0.10%
AR_EC >12-16	0	0.00%
AR_EC >16-21	18	1.49%
AR_EC >21-34	119.97	9.92%
Benzene	0.0055	0.00%
Toluene	0.009	0.00%
Ethylbenzene	0.006	0.00%
Total Xylenes	0.015	0.00%
Naphthalene	0.011	0.00%
1-Methyl Naphthalene	0.00375	0.00%
2-Methyl Naphthalene	0.0066	0.00%
n-Hexane	0	0.00%
MTBE	0	0.00%
Ethylene Dibromide (EDB)	0	0.00%
1,2 Dichloroethane (EDC)	0	0.00%
Benzo(a)anthracene	0.0035	0.00%
Benzo(b)fluoranthene	0.0038	0.00%
Benzo(k)fluoranthene	0.00415	0.00%
Benzo(a)pyrene	0.0065	0.00%
Chrysene	0.0082	0.00%
Dibenz(a,h)anthracene	0.005	0.00%
Indeno(1,2,3-cd)pyrene	0.0075	0.00%
Sum	1209.0655	100.00%

Notes for Data Entry | Set Default Hydrogeology

Clear All Soil Concentration Data Entry Cells

Restore All Soil Concentration Data cleared previously

REMARK:
EPH/VPH results were reported to the MRL; no MDL was calculated by the laboratory for this method.

A concentration of "0" was entered for constituents that were non-detect in all four samples and have not been detected previously at the site. This includes some petroleum fractions, n-hexane, MTBE, EDB, and EDC.

For constituents that were non-detect at the MDL in the target sample, but have been detected previously at the site, one-half the MDL was used. For the petroleum fractions, one-half the lowest MRL was used.

For constituents that were non-detect at the MRL, but detected at the MDL, the MDL was used.

Used default hydrogeologic data and the MTCA Method A groundwater TPH standard cleanup level (not an adjusted value) as the target concentration.

To avoid double-counting hazardous substances that are also accounted for in one of the TPH equivalent carbon (EC) fractions, the hazardous substance concentration was subtracted from the EC fraction concentration (per Table 3-3 in the MTCATPH 11.1 User Guide). The only EC fraction concentration that was not "0" that had double-accounted constituents is the AR_EC>21-34 fraction. The carcinogenic PAH concentrations (total of 0.035 mg/kg) were subtracted from the initial EC fraction of 120 mg/kg, resulting in a corrected value of 119.97 mg/kg.

3. Enter Site-Specific Hydrogeological Data

Total soil porosity:	0.43	Unitless
Volumetric water content:	0.3	Unitless
Volumetric air content:	0.13	Unitless
Soil bulk density measured:	1.5	kg/L
Fraction Organic Carbon:	0.001	Unitless
Dilution Factor:	20	Unitless

4. Target TPH Ground Water Concentation (if adjusted)

If you adjusted the target TPH ground water concentration, enter adjusted value here: ug/L

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 5/22/2013
Site Name: Former Cashmere Mill Site
Sample Name: A2-W22-S-4
Measured Soil TPH Concentration, mg/kg: **1,209.066**

1. Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective Soil TPH Conc, mg/kg	With Measured Soil Conc		Does Measured Soil Conc Pass or Fail?
			RISK @	HI @	
Protection of Soil Direct Contact: Human Health	Method B	13,963	8.69E-08	7.81E-02	Pass
	Method C	186,732	2.15E-08	6.48E-03	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	100% NAPL	8.01E-07	5.23E-02	Pass
	NA	NA	NA	NA	NA

Warning! Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (Refer to WAC 173-340-7490 through ~7494).

Warning! Check Residual Saturation (WAC340-747(10)).

2. Results for Protection of Soil Direct Contact Pathway: Human Health

	Method B: Unrestricted Land Use	Method C: Industrial Land Use
Protective Soil Concentration, TPH mg/kg	**13,962.99**	**186,731.61**
Most Stringent Criterion	**Risk of cPAHs mixture= 1E-6**	**HI =1**

Soil Criteria	Protective Soil Concentration @Method B				Protective Soil Concentration @Method C			
	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @
HI =1	*NO*	1.55E+04	1.11E-06	1.00E+00	YES	1.87E+05	3.33E-06	1.00E+00
Total Risk=1E-5	*NO*	1.39E+05	1.00E-05	8.99E+00	*NO*	5.61E+05	1.00E-05	3.01E+00
Risk of Benzene= 1E-6	*NO*	3.99E+06	2.87E-04	2.58E+02	NA			
Risk of cPAHs mixture= 1E-6	YES	1.40E+04	1.00E-06	9.02E-01				
EDB	NA	NA	NA	NA				
EDC	NA	NA	NA	NA				

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1. Protection of Potable Ground Water Quality (Method B): Human Health Protection

Most Stringent Criterion	**NA**
Protective Ground Water Concentration, ug/L	**NA**
Protective Soil Concentration, mg/kg	**Soil-to-Ground Water is not a critical pathway!**

Ground Water Criteria	Protective Potable Ground Water Concentration @Method B				Protective Soil Conc, mg/kg
	Most Stringent?	TPH Conc, ug/L	RISK @	HI @	
HI=1	YES	1.74E+01	2.23E-06	9.40E-02	100% NAPL
Total Risk = 1E-5	YES	1.74E+01	2.23E-06	9.40E-02	100% NAPL
Total Risk = 1E-6	YES	1.42E+01	1.00E-06	5.89E-02	1.74E+03
Risk of cPAHs mixture= 1E-5	YES	1.74E+01	2.23E-06	9.40E-02	100% NAPL
Benzene MCL = 5 ug/L	YES	1.74E+01	2.23E-06	9.40E-02	100% NAPL
MTBE = 20 ug/L	NA	NA	NA	NA	NA

Note: 100% NAPL is 71000 mg/kg TPH.

3.2 Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

Ground Water Criteria	Protective Ground Water Concentration			Protective Soil Conc, mg/kg
	TPH Conc, ug/L	Risk @	HI @	
NA	NA	NA	NA	**NA**

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

1. Enter Site Information

Date: 05/22/13
Site Name: Former Cashmere Mill Site
Sample Name: A2-F32-S-6

2. Enter Soil Concentration Measured

Chemical of Concern or Equivalent Carbon Group	Measured Soil Conc dry basis mg/kg	Composition Ratio %
Petroleum EC Fraction		
AL_EC >5-6	0	0.00%
AL_EC >6-8	0	0.00%
AL_EC >8-10	0	0.00%
AL_EC >10-12	0	0.00%
AL_EC >12-16	1.15	0.38%
AL_EC >16-21	19	6.25%
AL_EC >21-34	230	75.71%
AR_EC >8-10	1.15	0.38%
AR_EC >10-12	1.15	0.38%
AR_EC >12-16	0	0.00%
AR_EC >16-21	5.3	1.74%
AR_EC >21-34	45.88	15.10%
Benzene	0.003	0.00%
Toluene	0.0046	0.00%
Ethylbenzene	0.0032	0.00%
Total Xylenes	0.0075	0.00%
Naphthalene	0.0032	0.00%
1-Methyl Naphthalene	0.0021	0.00%
2-Methyl Naphthalene	0.0019	0.00%
n-Hexane	0	0.00%
MTBE	0	0.00%
Ethylene Dibromide (EDB)	0	0.00%
1,2 Dichloroethane (EDC)	0	0.00%
Benzo(a)anthracene	0.021	0.01%
Benzo(b)fluoranthene	0.023	0.01%
Benzo(k)fluoranthene	0.014	0.00%
Benzo(a)pyrene	0.023	0.01%
Chrysene	0.028	0.01%
Dibenz(a,h)anthracene	0.0029	0.00%
Indeno(1,2,3-cd)pyrene	0.0042	0.00%
Sum	303.7716	100.00%

Notes for Data Entry | Set Default Hydrogeology
Clear All Soil Concentration Data Entry Cells
Restore All Soil Concentration Data cleared previously

REMARK:
EPH/VPH results were reported to the MRL; no MDL was calculated by the laboratory for this method.

A concentration of "0" was entered for constituents that were non-detect in all four samples and have not been detected previously at the site. This includes some petroleum fractions, n-hexane, MTBE, EDB, and EDC.

For constituents that were non-detect in the target sample, but have been detected previously at the site, one-half the MDL was used. For the petroleum fractions, one-half the lowest MRL was used.

Used default hydrogeologic data and the MTCA Method A groundwater TPH standard cleanup level (not an adjusted value) as the target concentration.

To avoid double-counting hazardous substances that are also accounted for in one of the TPH equivalent carbon (EC) fractions, the hazardous substance concentration was subtracted from the EC fraction concentration (per Table 3-3 in the MTCATPH 11.1 User Guide). The only EC fraction concentration that was not "0" that had double-accounted constituents is the AR_EC>21-34 fraction. The carcinogenic PAH concentrations (total of 0.12 mg/kg) were subtracted from the initial EC fraction of 46 mg/kg, resulting in a corrected value of 45.88 mg/kg.

3. Enter Site-Specific Hydrogeological Data

Total soil porosity:	0.43	Unitless
Volumetric water content:	0.3	Unitless
Volumetric air content:	0.13	Unitless
Soil bulk density measured:	1.5	kg/L
Fraction Organic Carbon:	0.001	Unitless
Dilution Factor:	20	Unitless

4. Target TPH Ground Water Concentation (if adjusted)

If you adjusted the target TPH ground water concentration, enter adjusted value here: ug/L

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 5/22/2013
Site Name: Former Cashmere Mill Site
Sample Name: A2-F32-S-6
Measured Soil TPH Concentration, mg/kg: **303.772**

1. Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective Soil TPH Conc, mg/kg	With Measured Soil Conc		Does Measured Soil Conc Pass or Fail?
			RISK @	HI @	
Protection of Soil Direct Contact: Human Health	Method B	1,057	2.88E-07	2.77E-02	Pass
	Method C	42,562	7.14E-08	2.28E-03	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	100% NAPL	5.89E-07	8.84E-02	Pass
	NA	NA	NA	NA	NA

Warning! Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (Refer to WAC 173-340-7490 through ~7494).

2. Results for Protection of Soil Direct Contact Pathway: Human Health

	Method B: Unrestricted Land Use	Method C: Industrial Land Use
Protective Soil Concentration, TPH mg/kg	**1,057.15**	**42,562.43**
Most Stringent Criterion	**Risk of cPAHs mixture= 1E-6**	**Total Risk=1E-5**

Soil Criteria	Protective Soil Concentration @Method B				Protective Soil Concentration @Method C			
	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @
HI =1	*NO*	1.10E+04	1.04E-05	1.00E+00	*NO*	1.33E+05	3.13E-05	1.00E+00
Total Risk=1E-5	*NO*	1.06E+04	1.00E-05	9.64E-01	YES	4.26E+04	1.00E-05	3.19E-01
Risk of Benzene= 1E-6	*NO*	1.84E+06	1.74E-03	1.68E+02	NA			
Risk of cPAHs mixture= 1E-6	YES	1.06E+03	1.00E-06	9.64E-02				
EDB	NA	NA	NA	NA				
EDC	NA	NA	NA	NA				

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1. Protection of Potable Ground Water Quality (Method B): Human Health Protection

Most Stringent Criterion	**NA**
Protective Ground Water Concentration, ug/L	**NA**
Protective Soil Concentration, mg/kg	**Soil-to-Ground Water is not a critical pathway!**

Ground Water Criteria	Protective Potable Ground Water Concentration @Method B				Protective Soil Conc, mg/kg
	Most Stringent?	TPH Conc, ug/L	RISK @	HI @	
HI=1	YES	5.44E+01	4.62E-06	2.42E-01	100% NAPL
Total Risk = 1E-5	YES	5.44E+01	4.62E-06	2.42E-01	100% NAPL
Total Risk = 1E-6	YES	3.48E+01	1.00E-06	1.16E-01	5.72E+02
Risk of cPAHs mixture= 1E-5	YES	5.44E+01	4.62E-06	2.42E-01	100% NAPL
Benzene MCL = 5 ug/L	YES	5.44E+01	4.62E-06	2.42E-01	100% NAPL
MTBE = 20 ug/L	NA	NA	NA	NA	NA

Note: 100% NAPL is 73000 mg/kg TPH.

3.2 Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

Ground Water Criteria	Protective Ground Water Concentration			Protective Soil Conc, mg/kg
	TPH Conc, ug/L	Risk @	HI @	
NA	NA	NA	NA	**NA**

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

1. Enter Site Information

Date: 05/22/13
Site Name: Former Cashmere Mill Site
Sample Name: A2-F37-S-6

2. Enter Soil Concentration Measured

Chemical of Concern or Equivalent Carbon Group	Measured Soil Conc dry basis mg/kg	Composition Ratio %
Petroleum EC Fraction		
AL_EC >5-6	0	0.00%
AL_EC >6-8	0	0.00%
AL_EC >8-10	0	0.00%
AL_EC >10-12	0	0.00%
AL_EC >12-16	1.1	0.72%
AL_EC >16-21	4.8	3.14%
AL_EC >21-34	120	78.57%
AR_EC >8-10	1.1	0.72%
AR_EC >10-12	1.1	0.72%
AR_EC >12-16	0	0.00%
AR_EC >16-21	2.6	1.70%
AR_EC >21-34	21.98	14.39%
Benzene	0.0027	0.00%
Toluene	0.0042	0.00%
Ethylbenzene	0.0029	0.00%
Total Xylenes	0.007	0.00%
Naphthalene	0.00305	0.00%
1-Methyl Naphthalene	0.002	0.00%
2-Methyl Naphthalene	0.00175	0.00%
n-Hexane	0	0.00%
MTBE	0	0.00%
Ethylene Dibromide (EDB)	0	0.00%
1,2 Dichloroethane (EDC)	0	0.00%
Benzo(a)anthracene	0.00185	0.00%
Benzo(b)fluoranthene	0.00205	0.00%
Benzo(k)fluoranthene	0.0022	0.00%
Benzo(a)pyrene	0.00355	0.00%
Chrysene	0.0022	0.00%
Dibenz(a,h)anthracene	0.00275	0.00%
Indeno(1,2,3-cd)pyrene	0.00405	0.00%
Sum	152.72225	100.00%

Notes for Data Entry | Set Default Hydrogeology
Clear All Soil Concentration Data Entry Cells
Restore All Soil Concentration Data cleared previously

REMARK:
EPH/VPH results were reported to the MRL; no MDL was calculated by the laboratory for this method.

A concentration of "0" was entered for constituents that were non-detect in all four samples and have not been detected previously at the site. This includes some petroleum fractions, n-hexane, MTBE, EDB, and EDC.

For constituents that were non-detect in the target sample, but have been detected previously at the site, one-half the MDL was used. For the petroleum fractions, one-half the lowest MRL was used.

Used default hydrogeologic data and the MTCA Method A groundwater TPH standard cleanup level (not an adjusted value) as the target concentration.

To avoid double-counting hazardous substances that are also accounted for in one of the TPH equivalent carbon (EC) fractions, the hazardous substance concentration was subtracted from the EC fraction concentration (per Table 3-3 in the MTCATPH 11.1 User Guide). The only EC fraction concentration that was not "0" that had double-accounted constituents is the AR_EC>21-34 fraction. The carcinogenic PAH concentrations (total of 0.019 mg/kg) were subtracted from the initial EC fraction of 22 mg/kg, resulting in a corrected value of 21.98 mg/kg.

3. Enter Site-Specific Hydrogeological Data

Total soil porosity:	0.43	Unitless
Volumetric water content:	0.3	Unitless
Volumetric air content:	0.13	Unitless
Soil bulk density measured:	1.5	kg/L
Fraction Organic Carbon:	0.001	Unitless
Dilution Factor:	20	Unitless

4. Target TPH Ground Water Concentation (if adjusted)

If you adjusted the target TPH ground water concentration, enter adjusted value here: ug/L

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 5/22/2013
Site Name: Former Cashmere Mill Site
Sample Name: A2-F37-S-6
Measured Soil TPH Concentration, mg/kg: **152.722**

1. Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective Soil TPH Conc, mg/kg	With Measured Soil Conc		Does Measured Soil Conc Pass or Fail?
			RISK @	HI @	
Protection of Soil Direct Contact: Human Health	Method B	3,256	4.70E-08	1.41E-02	Pass
	Method C	130,927	1.17E-08	1.15E-03	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	5,994	5.64E-07	1.13E-01	Pass
	NA	NA	NA	NA	NA

2. Results for Protection of Soil Direct Contact Pathway: Human Health

	Method B: Unrestricted Land Use	Method C: Industrial Land Use
Protective Soil Concentration, TPH mg/kg	**3,256.47**	**130,927.22**
Most Stringent Criterion	**Risk of cPAHs mixture= 1E-6**	**Total Risk=1E-5**

Soil Criteria	Protective Soil Concentration @Method B				Protective Soil Concentration @Method C			
	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @
HI =1	*NO*	1.08E+04	3.33E-06	1.00E+00	*NO*	1.33E+05	1.02E-05	1.00E+00
Total Risk=1E-5	*NO*	3.25E+04	1.00E-05	3.01E+00	YES	1.31E+05	1.00E-05	9.85E-01
Risk of Benzene= 1E-6	*NO*	1.03E+06	3.16E-04	9.51E+01	NA			
Risk of cPAHs mixture= 1E-6	YES	3.26E+03	1.00E-06	3.02E-01				
EDB	NA	NA	NA	NA				
EDC	NA	NA	NA	NA				

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1. Protection of Potable Ground Water Quality (Method B): Human Health Protection

Most Stringent Criterion	**Benzene MCL = 5 ug/L**
Protective Ground Water Concentration, ug/L	**96.46**
Protective Soil Concentration, mg/kg	**5993.76**

Ground Water Criteria	Protective Potable Ground Water Concentration @Method B				Protective Soil Conc, mg/kg
	Most Stringent?	TPH Conc, ug/L	RISK @	HI @	
HI=1	*NO*	1.02E+02	8.29E-06	4.46E-01	100% NAPL
Total Risk = 1E-5	*NO*	1.02E+02	8.29E-06	4.46E-01	100% NAPL
Total Risk = 1E-6	YES	4.92E+01	1.00E-06	1.61E-01	2.86E+02
Risk of cPAHs mixture= 1E-5	*NO*	1.02E+02	8.29E-06	4.46E-01	100% NAPL
Benzene MCL = 5 ug/L	YES	9.65E+01	6.29E-06	3.88E-01	5.99E+03
MTBE = 20 ug/L	NA	NA	NA	NA	NA

Note: 100% NAPL is 73000 mg/kg TPH.

3.2 Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

Ground Water Criteria	Protective Ground Water Concentration			Protective Soil Conc, mg/kg
	TPH Conc, ug/L	Risk @	HI @	
NA	NA	NA	NA	**NA**

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

1. Enter Site Information

Date: 05/22/13
Site Name: Former Cashmere Mill Site
Sample Name: A2-F42-S-6

2. Enter Soil Concentration Measured

Chemical of Concern or Equivalent Carbon Group	Measured Soil Conc dry basis mg/kg	Composition Ratio %
Petroleum EC Fraction		
AL_EC >5-6	0	0.00%
AL_EC >6-8	0	0.00%
AL_EC >8-10	0	0.00%
AL_EC >10-12	0	0.00%
AL_EC >12-16	1.35	0.71%
AL_EC >16-21	4.1	2.15%
AL_EC >21-34	140	73.44%
AR_EC >8-10	1.35	0.71%
AR_EC >10-12	1.35	0.71%
AR_EC >12-16	0	0.00%
AR_EC >16-21	1.35	0.71%
AR_EC >21-34	40.95	21.48%
Benzene	0.0046	0.00%
Toluene	0.048	0.03%
Ethylbenzene	0.00495	0.00%
Total Xylenes	0.012	0.01%
Naphthalene	0.053	0.03%
1-Methyl Naphthalene	0.0086	0.00%
2-Methyl Naphthalene	0.011	0.01%
n-Hexane	0	0.00%
MTBE	0	0.00%
Ethylene Dibromide (EDB)	0	0.00%
1,2 Dichloroethane (EDC)	0	0.00%
Benzo(a)anthracene	0.0088	0.00%
Benzo(b)fluoranthene	0.01	0.01%
Benzo(k)fluoranthene	0.001	0.00%
Benzo(a)pyrene	0.0082	0.00%
Chrysene	0.013	0.01%
Dibenz(a,h)anthracene	0.00115	0.00%
Indeno(1,2,3-cd)pyrene	0.0058	0.00%
Sum	190.6401	100.00%

Notes for Data Entry | Set Default Hydrogeology

Clear All Soil Concentration Data Entry Cells

Restore All Soil Concentration Data cleared previously

REMARK:
EPH/VPH results were reported to the MRL; no MDL was calculated by the laboratory for this method.

A concentration of "0" was entered for constituents that were non-detect in all four samples and have not been detected previously at the site. This includes some petroleum fractions, n-hexane, MTBE, EDB, and EDC.

For constituents that were non-detect in the target sample, but have been detected previously at the site, one-half the MDL was used. For the petroleum fractions, one-half the lowest MRL was used.

Used default hydrogeologic data and the MTCA Method A groundwater TPH standard cleanup level (not an adjusted value) as the target concentration.

To avoid double-counting hazardous substances that are also accounted for in one of the TPH equivalent carbon (EC) fractions, the hazardous substance concentration was subtracted from the EC fraction concentration (per Table 3-3 in the MTCATPH 11.1 User Guide). The only EC fraction concentration that was not "0" that had double-accounted constituents is the AR_EC>21-34 fraction. The carcinogenic PAH concentrations (total of 0.048 mg/kg) were subtracted from the initial EC fraction of 41 mg/kg, resulting in a corrected value of 40.95 mg/kg.

3. Enter Site-Specific Hydrogeological Data

Total soil porosity:	0.43	Unitless
Volumetric water content:	0.3	Unitless
Volumetric air content:	0.13	Unitless
Soil bulk density measured:	1.5	kg/L
Fraction Organic Carbon:	0.001	Unitless
Dilution Factor:	20	Unitless

4. Target TPH Ground Water Concentation (if adjusted)

If you adjusted the target TPH ground water concentration, enter adjusted value here: ug/L

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 5/22/2013
Site Name: Former Cashmere Mill Site
Sample Name: A2-F42-S-6
Measured Soil TPH Concentration, mg/kg: **190.640**

1. Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective Soil TPH Conc, mg/kg	With Measured Soil Conc		Does Measured Soil Conc Pass or Fail?
			RISK @	HI @	
Protection of Soil Direct Contact: Human Health	Method B	1,796	1.06E-07	2.25E-02	Pass
	Method C	72,235	2.64E-08	1.84E-03	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	2,605	9.44E-07	1.45E-01	Pass
	NA	NA	NA	NA	NA

2. Results for Protection of Soil Direct Contact Pathway: Human Health

	Method B: Unrestricted Land Use	Method C: Industrial Land Use
Protective Soil Concentration, TPH mg/kg	**1,795.91**	**72,235.41**
Most Stringent Criterion	**Risk of cPAHs mixture= 1E-6**	**Total Risk=1E-5**

Soil Criteria	Protective Soil Concentration @Method B				Protective Soil Concentration @Method C			
	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @
HI =1	*NO*	8.46E+03	4.72E-06	1.00E+00	*NO*	1.04E+05	1.43E-05	1.00E+00
Total Risk=1E-5	*NO*	1.79E+04	1.00E-05	2.12E+00	YES	7.22E+04	1.00E-05	6.97E-01
Risk of Benzene= 1E-6	*NO*	7.53E+05	4.20E-04	8.90E+01	NA			
Risk of cPAHs mixture= 1E-6	YES	1.80E+03	1.00E-06	2.12E-01				
EDB	NA	NA	NA	NA				
EDC	NA	NA	NA	NA				

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1. Protection of Potable Ground Water Quality (Method B): Human Health Protection

Most Stringent Criterion	**Benzene MCL = 5 ug/L**
Protective Ground Water Concentration, ug/L	**106.17**
Protective Soil Concentration, mg/kg	**2604.80**

Ground Water Criteria	Protective Potable Ground Water Concentration @Method B				Protective Soil Conc, mg/kg
	Most Stringent?	TPH Conc, ug/L	RISK @	HI @	
HI=1	*NO*	1.23E+02	1.10E-05	5.47E-01	100% NAPL
Total Risk = 1E-5	*NO*	1.20E+02	1.00E-05	5.18E-01	1.55E+04
Total Risk = 1E-6	YES	4.57E+01	1.00E-06	1.51E-01	2.03E+02
Risk of cPAHs mixture= 1E-5	*NO*	1.23E+02	1.10E-05	5.47E-01	100% NAPL
Benzene MCL = 5 ug/L	YES	1.06E+02	6.29E-06	4.05E-01	2.60E+03
MTBE = 20 ug/L	NA	NA	NA	NA	NA

Note: 100% NAPL is 75000 mg/kg TPH.

3.2 Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

Ground Water Criteria	Protective Ground Water Concentration			Protective Soil Conc, mg/kg
	TPH Conc, ug/L	Risk @	HI @	
NA	NA	NA	NA	**NA**

APPENDIX J

PCS DISPOSAL RECEIPTS

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680970
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 0
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 14:21:53	Inbound	CMORRIS		Gross	99520 lb
Out	06/17/2013 14:37:16	Outbound	CMORRIS		Tare	39020 lb
					Net	60500 lb
					Tons	30.25

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	30.25	Tons	25.00	27.23	$756.25	CHELAN
2	CDHD FEE-Chelan Douglas	100	30.25	Tons	1.00		$30.25	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	30.25	Tons	3.25		$98.31	CHELAN

Total Tax $27.23
Total Ticket $912.04

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680953
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 0
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 12:34:27	Inbound	cmorris		Gross	101700 lb
Out	06/17/2013 12:48:22	Outbound	cmorris		Tare	39100 lb
					Net	62600 lb
					Tons	31.30

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	31.30	Tons	25.00	28.17	$782.50	CHELAN
2	CDHD FEE-Chelan Douglas	100	31.30	Tons	1.00		$31.30	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	31.30	Tons	3.25		$101.73	CHELAN

Total Tax $28.17
Total Ticket $943.70

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680884
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 92
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 08:49:13	Inbound	cmorris		Gross	101740 lb
Out	06/17/2013 09:09:13	Outbound	cmorris		Tare	39280 lb
					Net	62460 lb
					Tons	31.23

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	31.23	Tons	25.00	28.11	$780.75	CHELAN
2	CDHD FEE-Chelan Douglas	100	31.23	Tons	1.00		$31.23	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	31.23	Tons	3.25		$101.50	CHELAN

Total Tax $28.11
Total Ticket $941.59

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680925
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 92
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 10:44:31	Inbound	cmorris		Gross	93320 lb
Out	06/17/2013 11:01:02	Outbound	cmorris		Tare	39200 lb
					Net	54120 lb
					Tons	27.06

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	27.06	Tons	25.00	24.35	$676.50	CHELAN
2	CDHD FEE-Chelan Douglas	100	27.06	Tons	1.00		$27.06	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	27.06	Tons	3.25		$87.95	CHELAN

Total Tax $24.35
Total Ticket $815.86

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680885
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 2
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 08:50:57	Inbound	cmorris		Gross	106640 lb
Out	06/17/2013 09:12:21	Outbound	cmorris		Tare	41140 lb
					Net	65500 lb
					Tons	32.75

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	32.75	Tons	25.00	29.48	$818.75	CHELAN
2	CDHD FEE-Chelan Douglas	100	32.75	Tons	1.00		$32.75	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	32.75	Tons	3.25		$106.44	CHELAN

Total Tax $29.48
Total Ticket $987.42

Driver's Signature
203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680928
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 0
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 10:53:33	Inbound	cmorris		Gross	101420 lb
Out	06/17/2013 11:13:59	Outbound	cmorris		Tare	41040 lb
					Net	60380 lb
					Tons	30.19

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	30.19	Tons	25.00	27.17	$754.75	CHELAN
2	CDHD FEE-Chelan Douglas	100	30.19	Tons	1.00		$30.19	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	30.19	Tons	3.25		$98.12	CHELAN

Total Tax $27.17
Total Ticket $910.23

Driver's Signature
203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680954
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 01
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 12:43:13	Inbound	cmorris		Gross	105300 lb
Out	06/17/2013 13:01:22	Outbound	cmorris		Tare	40940 lb
					Net	64360 lb
					Tons	32.18

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	32.18	Tons	25.00	28.96	$804.50	CHELAN
2	CDHD FEE-Chelan Douglas	100	32.18	Tons	1.00		$32.18	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	32.18	Tons	3.25		$104.59	CHELAN

Total Tax $28.96
Total Ticket $970.23

Driver's Signature
203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680971
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 01
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 14:28:57	Inbound	CMORRIS		Gross	103380 lb
Out	06/17/2013 14:46:21	Outbound	CMORRIS		Tare	40880 lb
					Net	62500 lb
					Tons	31.25

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	31.25	Tons	25.00	28.13	$781.25	CHELAN
2	CDHD FEE-Chelan Douglas	100	31.25	Tons	1.00		$31.25	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	31.25	Tons	3.25		$101.56	CHELAN

Total Tax $28.13
Total Ticket $942.19

Driver's Signature
203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680969

Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier ERS
Vehicle# 1
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 14:14:14	Inbound	CMORRIS		Gross	108020 lb
Out	06/17/2013 14:26:37	Outbound	CMORRIS		Tare	41720 lb
					Net	66300 lb
					Tons	33.15

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	33.15	Tons	25.00	29.84	$828.75	CHELAN
2	CDHD FEE-Chelan Douglas	100	33.15	Tons	1.00		$33.15	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	33.15	Tons	3.25		$107.74	CHELAN

Total Tax $29.84
Total Ticket $999.48

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680951

Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier ERS
Vehicle# 1
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 12:24:23	Inbound	cmorris		Gross	108400 lb
Out	06/17/2013 12:37:40	Outbound	cmorris		Tare	41820 lb
					Net	66580 lb
					Tons	33.29

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	33.29	Tons	25.00	29.96	$832.25	CHELAN
2	CDHD FEE-Chelan Douglas	100	33.29	Tons	1.00		$33.29	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	33.29	Tons	3.25		$108.19	CHELAN

Total Tax $29.96
Total Ticket $1003.69

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680924

Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier ERS
Vehicle# 1
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 10:39:34	Inbound	cmorris		Gross	105100 lb
Out	06/17/2013 10:56:48	Outbound	cmorris		Tare	41900 lb
					Net	63200 lb
					Tons	31.60

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	31.60	Tons	25.00	28.44	$790.00	CHELAN
2	CDHD FEE-Chelan Douglas	100	31.60	Tons	1.00		$31.60	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	31.60	Tons	3.25		$102.70	CHELAN

Total Tax $28.44
Total Ticket $952.74

Driver's Signature Ellie

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 680882

Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/17/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier ERS
Vehicle# 1
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/17/2013 08:46:10	Inbound	cmorris		Gross	110440 lb
Out	06/17/2013 09:04:58	Outbound	cmorris		Tare	42000 lb
					Net	68440 lb
					Tons	34.22

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	34.22	Tons	25.00	30.80	$855.50	CHELAN
2	CDHD FEE-Chelan Douglas	100	34.22	Tons	1.00		$34.22	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	34.22	Tons	3.25		$111.22	CHELAN

Total Tax $30.80
Total Ticket $1031.74

Driver's Signature Ellie

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 681016

Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/18/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 2
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/18/2013 08:20:43	Inbound	CMORRIS		Gross	105820 lb
Out	06/18/2013 09:19:14	Outbound	CMORRIS		Tare	41260 lb
					Net	64560 lb
					Tons	32.28

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	32.28	Tons	25.00	29.05	$807.00	CHELAN
2	CDHD FEE-Chelan Douglas	100	32.28	Tons	1.00		$32.28	
3	ENVFEE$3.25-Env Fee $3.2	100	32.28	Tons	3.25		$104.91	

Total Tax $29.05
Total Ticket $973.24

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 681051

Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/18/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 0
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/18/2013 10:52:40	Inbound	CMORRIS		Gross	100660 lb
Out	06/18/2013 11:08:59	Outbound	CMORRIS		Tare	41180 lb
					Net	59480 lb
					Tons	29.74

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	29.74	Tons	25.00	26.77	$743.50	CHELAN
2	CDHD FEE-Chelan Douglas	100	29.74	Tons	1.00		$29.74	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	29.74	Tons	3.25		$96.66	CHELAN

Total Tax $26.77
Total Ticket $896.67

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802 Ph: (509) 884-2802

Original
Ticket# 681049

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/18/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier ERS
Vehicle# 1
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/18/2013 10:43:34	Inbound	CMORRIS		Gross	105920 lb
Out	06/18/2013 10:57:10	Outbound	CMORRIS		Tare	41900 lb
					Net	64020 lb
					Tons	32.01

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	32.01	Tons	25.00	28.81	$800.25	CHELAN
2	CDHD FEE-Chelan Douglas	100	32.01	Tons	1.00		$32.01	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	32.01	Tons	3.25		$104.03	CHELAN

Total Tax $28.81
Total Ticket $965.10

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802 Ph: (509) 884-2802

Original
Ticket# 681014

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/18/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier ERS
Vehicle# 1
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/18/2013 08:18:43	Inbound	CMORRIS		Gross	102940 lb
Out	06/18/2013 09:15:52	Outbound	CMORRIS		Tare	41940 lb
					Net	61000 lb
					Tons	30.50

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	30.50	Tons	25.00	27.45	$762.50	CHELAN
2	CDHD FEE-Chelan Douglas	100	30.50	Tons	1.00		$30.50	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	30.50	Tons	3.25		$99.13	CHELAN

Total Tax $27.45
Total Ticket $919.58

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 681013
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/18/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 0
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/18/2013 08:17:48	Inbound	CMORRIS		Gross	97300 lb
Out	06/18/2013 09:14:27	Outbound	CMORRIS		Tare	39540 lb
					Net	57760 lb
					Tons	28.88

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	28.88	Tons	25.00	25.99	$722.00	CHELAN
2	CDHD FEE-Chelan Douglas	100	28.88	Tons	1.00		$28.88	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	28.88	Tons	3.25		$93.86	CHELAN

Total Tax $25.99
Total Ticket $870.73

Driver's Signature
203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 681052
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/18/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# green
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/18/2013 10:54:56	Inbound	CMORRIS		Gross	98560 lb
Out	06/18/2013 11:12:12	Outbound	CMORRIS		Tare	39480 lb
					Net	59080 lb
					Tons	29.54

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	29.54	Tons	25.00	26.59	$738.50	CHELAN
2	CDHD FEE-Chelan Douglas	100	29.54	Tons	1.00		$29.54	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	29.54	Tons	3.25		$96.01	CHELAN

Total Tax $26.59
Total Ticket $890.64

Driver's Signature
203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 681079
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/18/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 2
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/18/2013 13:14:48	Inbound	KIRK		Gross	102260 lb
Out	06/18/2013 13:33:12	Outbound	KIRK		Tare	41080 lb
					Net	61180 lb
					Tons	30.59

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	30.59	Tons	25.00	27.53	$764.75	CHELAN
2	CDHD FEE-Chelan Douglas	100	30.59	Tons	1.00		$30.59	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	30.59	Tons	3.25		$99.42	CHELAN

Total Tax $27.53
Total Ticket $922.29

Driver's Signature

203WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 681078
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/18/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier miller trucking
Vehicle# 92
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/18/2013 13:13:24	Inbound	KIRK		Gross	91880 lb
Out	06/18/2013 13:30:30	Outbound	KIRK		Tare	39440 lb
					Net	52440 lb
					Tons	26.22

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	26.22	Tons	25.00	23.60	$655.50	CHELAN
2	CDHD FEE-Chelan Douglas	100	26.22	Tons	1.00		$26.22	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	26.22	Tons	3.25		$85.22	CHELAN

Total Tax $23.60
Total Ticket $790.54

Driver's Signature

205WM

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 681077
Ph: (509) 884-2802

Customer Name SCARSELLA BROS INC SCARSELLA
Ticket Date 06/18/2013
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# 208020

Carrier ERS
Vehicle# 0
Container
Driver
Check#
Billing# 0508389
Grid

Volume

	Time	Scale	Operator	Inbound		
In	06/18/2013 13:12:09	Inbound	KIRK		Gross	111120 lb
Out	06/18/2013 13:25:12	Outbound	KIRK		Tare	41800 lb
					Net	69320 lb
					Tons	34.66

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-Tons-C	100	34.66	Tons	25.00	31.19	$866.50	CHELAN
2	CDHD FEE-Chelan Douglas	100	34.66	Tons	1.00		$34.66	CHELAN
3	ENVFEE$3.25-Env Fee $3.2	100	34.66	Tons	3.25		$112.65	CHELAN

Total Tax $31.19
Total Ticket $1045.00

Driver's Signature

203WM

APPENDIX K

SUBSTANTIAL COMPLETION LETTER

MAUL FOSTER ALONG
1329 North State Street, Suite 301 | Bellingham, WA 98225 | 360 594 6262 | www.maulfoster.com

July 2, 2013
Project No. 0779.02.01

Commission of the Port of Chelan County
238 Olds Station Road, Suite A
Wenatchee, WA 98801

Re: Recommendation for Notice of Substantial Completion to Scarsella Brothers, Inc.
Phase I, Former Cashmere Mill Site Removal Action

Dear Honorable Commission Members:

Maul Foster & Alongi, Inc. (MFA) has served the Port of Chelan County (Port), through a personal services agreement effective March 8, 2013, in a field oversight role throughout completion of Phase I of the former Cashmere Mill Site Removal Action. MFA, working in concert with Port, RH2 Engineering and Department of Ecology staff, oversaw and directed removal action activities performed by Scarsella Brothers, Inc. (Scarsella) of Kent, Washington under separate contract with the Port.

Scarsella was awarded, through a competitive, public bid process, Schedule A (also subsequently referred to as Phase I) of the former Cashmere Mill Site Removal Action. MFA, based on its oversight of Scarsella's activities relative to the Schedule A construction documents, **recommends the Port provide to Scarsella Notice of Substantial Completion**, as defined in the General Conditions of the construction documents, Section 02, Paragraph BB "When the contract work has progressed to the extent that the Owner has full use and benefit of the facilities, both from the operational and safety standpoint, and only minor incidental work, replacement of the temporary substitute facilities, or correction or repair remains to physically complete the total contract, the Engineer may determine the contract work is substantially complete."

It has been MFA's pleasure serving the Port in completion of the Phase I work. Please do not hesitate to contact me at 360.594.6260 should you have any questions or concerns.

Sincerely,

Maul Foster & Alongi, Inc.

Justin L. Clary, PE
Principal Engineer

cc: Laura Jaecks, Port of Chelan County
Mary Monahan, Department of Ecology
Randy Asplund, RH2 Engineering