Data Gap Assessment Report

Former Cashmere Mill Site
Cashmere, Washington

for
Washington State Department of Ecology

May 7, 2014

GeoEngineers
Earth Science + Technology

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May 7, 2014

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EXECUTIVE SUMMARY

This report presents results of environmental assessment activities conducted between September and December 2013 at the Former Cashmere Mill site (site) in Cashmere, Washington (Figure 1). The Port of Chelan County owns the site and plans to remediate the site for future sale. The Washington State Department of Ecology (Ecology) has been working with the Port to develop strategies to assess and remediate the site in order to facilitate future development. The assessment activities described in this report were conducted to better characterize soil, groundwater, and surface water conditions and address data gaps.

The approximately 32.5-acre site is located in the general vicinity of Mill Road and Sunset Highway, about 100 feet south of the Wenatchee River and along the north bank of Brender Creek. The site operated as a lumber mill from the 1940s through the 1970s. Activities during mill operations reportedly included manufacturing lumber for fruit boxes. Low lying areas of the site, including a former mill pond, were filled over several decades with wood waste material from milling processes and import material from various sources. An accidental fire in 1990 caused damage to some mill buildings and a subsequent fire in 2000 destroyed many of the remaining mill buildings.

Several previous investigations and interim action cleanup activities have been conducted at the site, which are described in this report and summarized in the reports titled "Site Investigation Report, Former Cashmere Mill Site, Cashmere, Washington" by Maul, Foster, & Alongi, Inc. (MFA), dated March 20, 2013, and "Phase 1 Interim Action Report, Former Cashmere Mill Site" by MFA, dated May 6, 2014. Additional interim action activities were conducted in the spring and summer of 2013, which included removal of wood waste and petroleum contaminated soil from the area north of Mill Road (which is referred to as Phase 1). However, portions of the site previously had not been characterized, particularly the area south of Mill Road (which is referred to as Phase 2). See Figure 2 for locations of previous explorations.

Environmental assessment activities completed as part of this data gap assessment included soil, groundwater, and surface water sampling; specifically, site exploration activities included: (1) drilling 120 direct-push borings (N-DP-1 through S-DP-101) in September 2013; (2) drilling, installing, and developing nine groundwater monitoring wells (MW-1 through MW-9) in October and December 2013; (3) excavating 44 test pits in November and December 2013; (4) conducting groundwater monitoring events in October and December 2013; (5) collecting surface water samples from Brender Creek in November 2013; (6) conducting a wetlands survey in December 2013; and (7) Submitting 187 soil samples, 24 groundwater samples, and three surface water sampling for laboratory analysis of site contaminants of potential concern (COPCs). Soil, groundwater, and surface water samples were analyzed for one or more of the following: petroleum hydrocarbons, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and natural attenuation parameters.

Subsurface soil conditions encountered at the locations of the explorations included variable thicknesses of fill, including recently imported sand and historic wood waste (variable amounts of sawdust, bark, wood chips and charred wood fragments) mixed with variable amounts of soil (silt, sand, gravel, cobbles and boulders), and apparent natural alluvial deposits of sand and gravel with variable amounts of silt and cobbles. Wood waste materials were encountered in most of the

explorations completed within Phase 2. Groundwater depths, as measured in groundwater monitoring wells, ranged from about 2.5 to 7.3 feet below the top of well casing and groundwater elevations ranged from Elevation 781.95 feet to Elevation 791.08 feet during the October and December groundwater monitoring events. In general, groundwater flowed toward the northeast with an estimated average hydraulic gradient of about 8 x 10^{-3} feet per foot (about 40 feet per mile).

Total petroleum hydrocarbons (TPH), primarily consisting of diesel- and oil-range petroleum hydrocarbons, were encountered at concentrations greater than a site-specific Model Toxics Control Act (MTCA) Method B cleanup level of 3,400 milligrams per kilogram (mg/kg) at several isolated areas at the site. Mercury also was detected at concentrations greater than the MTCA Method A cleanup level in soil samples from several areas at the site. Carcinogenic polycyclic aromatic hydrocarbons (cPAH) were detected at a concentration greater than the MTCA Method A cleanup level (based on the toxicity equivalency factors presented in WAC 173-340-900, Table 708-2) in one soil sample that also contained mercury at a concentration greater than the MTCA Method A cleanup level. The mercury detections generally were encountered where building debris (including charred debris) was located. The estimated volume of contaminated soil, based on the data gap assessment is approximately 1,600 cubic yards. The approximate locations, and estimated areal extent, depth and volume of identified contaminated soil is described in the report and presented in Figures 3 through 5 of the report.

During the October and December groundwater sampling events, arsenic concentrations exceeded MTCA Method A cleanup levels in samples collected from several wells. Additionally, results of field measurements and analytical data for natural attenuation parameters indicate a reducing environment exists within groundwater below the site, likely the result of decomposing wood waste material. Reducing conditions tend to increase the solubility and mobility of arsenic in groundwater. Considering soil samples contained background concentrations of arsenic, and based on the natural attenuation parameters and groundwater quality parameters, it is anticipated that arsenic detections in groundwater should be reduced if the wood waste is removed.

Groundwater samples collected from downgradient (east-northeast) monitoring wells (B-1 and/or MW-3) contained TPH concentrations greater than MTCA Method A cleanup criteria during both the October and December 2013 sampling events. Both wells are located in Phase 1 within Parcel 650. The TPH concentrations likely represent conditions downgradient of remnant petroleum-contaminated soil located in Parcel 550, and possibly Parcel 650.

None of the other soil or groundwater samples, nor the surface water samples, contained contaminants of potential concern at concentrations greater than cleanup levels. Figures 2 through 5 present locations of recent and previous explorations and samples. Figures 6 and 7 present data from the October than December 2013 groundwater monitoring events, respectively.

In summary, the results of this assessment have better defined the contaminants of potential concern, including concentrations, locations, and estimated volumes, in soil and groundwater beneath the site. Although numerous explorations were completed at the site, it is possible that unknown areas of contaminated soil and groundwater might be encountered during site excavation and development activities, particularly associated with the building demolition debris encountered in Parcel 070.

1.0 INTRODUCTION

1.1. General

This report presents results of environmental data gap assessment activities conducted between September 2013 and December 2013 at the Former Cashmere Mill site (site) in Cashmere, Washington. The purpose of the assessment activities was to further evaluate subsurface soil and groundwater conditions at the site in preparation of site development. The approximate location of the site is presented in the Vicinity Map, Figure 1. The approximately 32.5-acre site is located in the general vicinity of Mill Road and Sunset Highway, about 100 feet south of the Wenatchee River, and currently is owned by the Port of Chelan County. The site and areas of interest are shown in the Site Plan (Overview), Figure 2.

Several previous investigations and interim action activities have been conducted at the site, which are summarized in a report titled "Site Investigation Report, Former Cashmere Mill Site, Cashmere, Washington" by Maul, Foster, & Alongi, Inc. (MFA), dated March 20, 2013. Additional interim action activities were conducted in the spring and summer of 2013, which included removal of wood waste and petroleum contaminated soil from the area north of Mill Road (referred to as Phase 1), and summarized in MFA's April 2014 report. However, portions of the site previously have not been characterized, particularly the area south of Mill Road (referred to as Phase 2). In general, the activities described in this report were conducted to fill data gaps and reduce the risk of uncertainty regarding the types and amounts of contaminated materials before planned excavation and removal of soil and wood waste in the Phase 2 area.

Our services were completed in general accordance with our Work Plan dated September 4, 2013, and contract C1100145 between GeoEngineers and the Washington State Department of Ecology (Ecology). While we have performed the services described in this report for Ecology, our services also have been completed to assist the Port of Chelan County (Port) and their selected consultant (RH2 Engineering), to develop an understanding of the scope of activities that will be completed during remedial excavation work within the Phase 2 area, which are scheduled to occur during the spring and summer of 2014.

1.2. Report Format

This report describes the field investigation and chemical analytical results from soil and groundwater sampling conducted as part of the data gap assessment. Site background information is presented in "Section 2." A description of the scope of services completed for this assessment is presented in "Section 3." "Section 4" presents a brief description of geologic and hydrogeologic conditions at the site. "Section 5" presents a summary of field activities. A description of subsurface soil and groundwater conditions is presented in "Section 6." "Section 7" contains a summary of analytical testing results for soil, groundwater and surface water. "Section 8" presents results of Model Toxics Control Act (MTCA) Method B calculations for determining site-specific cleanup levels for total petroleum hydrocarbons (TPH), and a description of the terrestrial ecological evaluation completed for the site. "Section 9" presents a summary of findings, and "Section 10" presents our conclusions.

Logs of borings, monitoring wells and test pits are presented in Appendix A. Detailed descriptions of field procedures are presented in Appendix B. Analytical laboratory reports are presented in Appendix C. Output of MTCA Method B calculations for TPH are presented in Appendix D. A supplemental wetlands delineation report for the site is presented in Appendix E. The report produced by MFA summarizing Phase 1 interim action activities conducted in 2013 is presented in Appendix F. Exploration and Sample Analyses Summary, Table 1 presents a summary of the subsurface explorations completed as part of this data gap assessment. Summary of Chemical Analytical Results – Petroleum Hydrocarbons in Soil, Table 2; Summary of Chemical Analytical Results – VOCs, SVOCs in Soil, Table 3; Summary of Chemical Analytical Results – Metals in Soil, Table 4; Summary of Chemical Analytical Results – GRPH, DRPH, ORPH, VOCs, SVOCs and Metals in Groundwater, Table 5; and Summary of Chemical Analytical Results – Metals and Parameters in Surface Water, Table 6 present summary analytical data of soil, groundwater and surface water testing. Site Plan (North), Figure 3; Previous Remediation Area Sample Locations (Expanded View), Figure 3A; Site Plan (Middle), Figure 4; and Site Plan (South), Figure 5 present site plans showing locations of subsurface explorations and other site features. Groundwater Elevations and Inferred Contours, October 28, 2013, Figure 6 and Groundwater Elevations and Inferred Contours, December 3, 2013, Figure 7 present results of groundwater sampling, including groundwater elevations, interpreted groundwater elevation contours and flow direction.

2.0 BACKGROUND

2.1. Property Description

The site consists of nine individual parcels. Five of the parcels (Parcel 005,010, 500, 550, 600 and 650) are located north of Mill Road, and comprise Phase 1. Four of the parcels (Parcel 070, 150, 200 and 250) are located south of Mill Road, and comprise Phase 2. The site currently is vacant. Previous buildings and structures have been removed.

Phase 1 is generally bounded by Mill Road to the south and east, existing commercial/industrial property to the west, and railroad tracks and the Wenatchee River to the north. Sunset Highway separates the northern most parcels (Parcels 500 and 600) from the other Phase 1 parcels. Recent interim action excavation and backfilling activities have occurred within Parcels 005, 010 and 550, and the ground surface within these parcels is covered with recently imported sand fill, and is generally level. Recent excavation and backfilling has not occurred within Parcels 500, 600 and 650, although both parcels are also covered with gravel and are relatively level.

Phase 2 is generally bounded by Mill Road to the north, Brender Creek to the west and south, and residential property and Brender Creek to the east. Topographically, Phase 2 generally slopes gently down from the southwest towards the northeast, with an overall elevation difference of about 5 to 10 feet. An approximate 5-foot-tall earthen embankment separates the site from Brender Creek near the southern site boundary. Several stockpiles of petroleum-contaminated soil, excavated from Phase 1, currently occupy portions of Parcels 150 and 200. The ground surface within Phase 2 is generally bare, with the exception of the northwest portion of the site within Parcels 070 and 250, which are vegetated with trees and bushes.

2.2. Historical Operations and Existing Data

Detailed descriptions for previous site activities, including: historical operations, previous geotechnical and environmental investigations, and previous site remediation activities are presented in the MFA report dated March 20, 2013. The site is located within a former meander of the Wenatchee River. When the railroad was constructed through the town of Cashmere around 1900, the meander was cut off from the River by the newly constructed railroad embankment. Brender Creek now flows through the former meander channel.

The site operated as a lumber mill from the 1940s through the 1970s. Activities during mill operations reportedly included manufacturing lumber for fruit boxes. No wood treating activities are known to have occurred at the site. A former mill pond existed in the southeast portion of Phase 1, and was filled in sometime in the 1950s. Most of the Phase 2 Area was previously used to store logs. Low lying areas of the site were reportedly filled over several decades with imported fill from various sources, as well as extensive wood waste. (Note: the term "wood waste" as described in this report generally refers to wood material, mixed with varying amounts of silt, sand gravel, cobble and boulders, generated during mill operations that was not commercially valuable and was utilized as fill material at the site; it does not indicate the wood designates as "waste" under Washington State regulations.) An accidental fire in 1990 caused damage to some mill buildings. A fire in 2000 destroyed many of the remaining mill buildings.

Previous exploration and sampling activities that have occurred at the site include:

- RH2 Engineering (RH2) completed a feasibility assessment in 2007 for the Port of Chelan County before the Port purchased the property. Fourteen test pits (TP-1-2007 through TP-14-2007) were excavated at the site as part of this 2007 feasibility assessment. The test pits were excavated to assess the extent and nature of the wood waste. Evidence of petroleum contamination was not observed on the test pit logs. No soil or groundwater testing was performed.
- In May 2009, RH2 completed explorations along Sunset Highway as part of a geotechnical evaluation in support of reconstructing the road. One of the test pits (TP-2-052009) was located within Phase 1. Petroleum hydrocarbon impacted soil was observed in the test pit. Soil samples were not collected for analytical testing. The area surrounding TP-2-052009 is referred to as "Area 1" in figures and documents produced by MFA. The general location of "Area 1" is shown on Figure 2.
- RH2 completed additional environmental explorations in September 2009 within "Area 1," including excavating eight test pits (S-1-092009 through S-8-092009). Soil samples collected and analyzed from test pits S-4-092009 and S-5-092009 contained gasoline-range petroleum hydrocarbons (GRPH) at concentrations greater than the MTCA Method A cleanup level. Based on information provided by RH2, approximately 104 tons of PCS from "Area 1" were subsequently excavated and disposed off-site at the Greater Wenatchee Regional Landfill during reconstruction of Sunset Highway.
- RH2 excavated four additional test pits (TP-2-102009, TP-5-102009, S-3-102009 and S-5-102009) near possible petroleum-impacted soil north of Mill Road that was identified during demolition activities completed by the Port earlier in 2009. These test pits were located within an area referred to as "Area 2" in figures and reports prepared by MFA. Results of

laboratory analytical testing indicated that GRPH and benzene, toluene, ethylbenzene and xylene (BTEX) compounds were less than MTCA Method A cleanup levels in the samples tested. The general location of "Area 2" is shown on Figure 2.

- RH2 excavated nine test pits (TP-A through TP-I) in November 2009. Information regarding analytical testing was not available.
- GeoEngineers completed a preliminary geotechnical engineering evaluation for the site in 2010, which included drilling nine borings (B-1, B-1A, B-2, B-2A and B-3 through B-7). As part of these services, one soil sample from boring B-1 and one soil sample from boring B-6 were submitted to an analytical laboratory for analyses of diesel-range petroleum hydrocarbons (DRPH) and oil-range petroleum hydrocarbons (ORPH). Results indicated that the soil sample contained DRPH and ORPH at concentrations less than the MTCA Method A cleanup levels. Additionally, groundwater monitoring wells were installed in borings B-1 and B-2. The area surrounding borings B-1 and B-6 was identified as "Area 3" in figures and reports produced by MFA. The general location of "Area 3" is shown on Figure 2.
- RH2 completed a limited groundwater evaluation in 2011, which included measuring depth to groundwater within 12 test pits (TP-GW-1 through TP-GW-12). Petroleum impacted soil was observed in test pit TP-GW-1. The area surrounding this test pit is identified as "Area 4" in figures and reports produced by MFA. The general location of "Area 4" is shown on Figure 2.
- The Port completed a limited wood waste removal pilot project within Phase 2 in 2011. Petroleum-impacted soil was identified in the wood waste excavation area, which was identified as "Area 5" in figures and reports produced by MFA. Soil samples collected from this area were submitted for analyses of DRPH and ORPH. Results indicated that the samples contained DRPH and ORPH at concentrations less than applicable MTCA Method A cleanup levels. The general location of "Area 5" is shown on Figure 2.
- RH2 completed 27 additional test pit explorations (TP-1-2012 through TP-27-2012) in 2012 in support of an evaluation of the feasibility of construction dewatering. Select samples were analyzed for petroleum hydrocarbons and volatile organic compounds (VOCs), including BTEX compounds. GRPH, VOCs and BTEX compounds were detected in several samples at concentrations less than applicable MTCA Method A cleanup levels. RH2 also constructed a dewatering test well (DW-01) within "Area 5." The approximate location of DW-01 is shown on Figure 5.
- During the spring and summer of 2013, the Port conducted remedial excavation activities within Phase 1. The remedial excavation areas included: (1) the "PCS Area 2 Excavation," which consisted of excavating petroleum contaminated soil (PCS) from the previously identified "Area 2"; (2) the "Storm Line PCS Area Excavation", which consisted of excavating PCS from an area north of "Area 2" surrounding an existing storm drain line; (3) the "Debris Excavation," which consisted of excavating apparent non-contaminated debris and soil from an area northeast of "Area 2"; and (4) the "Wood Waste Excavation," which consisted of excavating apparent non-contaminated wood waste from an area north of "Area 2," east of the "Debris Excavation," and west of the "Storm Line PCS Excavation." The approximate locations of these Phase 1 remedial excavation areas are shown in Figure 3. MFA collected numerous sidewall and excavation bottom confirmation samples during the excavation activities within the "Area 2" Excavation and the "Storm Line PCS Area Excavation." Several of the confirmation

samples from excavation sidewalls and the bottoms of excavation contained petroleum hydrocarbons at concentrations greater than applicable MTCA Method A cleanup levels. Of note, five confirmation samples collected from the bottom of the "Area 2" excavation contained oil-range petroleum hydrocarbons at concentrations between 4,100 mg/kg and 22,000 mg/kg. At least two sidewall confirmation samples collected from the south portions of the "Area 2" remedial excavation contained ORPH at concentrations of 4,200 mg/kg. One of the sidewall confirmation samples with ORPH concentrations greater than cleanup levels was collected adjacent to a culvert which conveys No Name Creek across the site. According to MFA, the contractor was unable to excavate further without potentially compromising the culvert. Another confirmation sidewall sample containing ORPH at concentrations greater than cleanup levels was collected adjacent to Mill Road. According to MFA, the contractor was unable to excavate further to the south without disturbing the roadway. Three confirmation samples collected from the bottom of the excavation within the "Storm Line PCS Area Excavation" contained petroleum hydrocarbons at concentrations greater than applicable MTCA Method A cleanup levels. Phase 1 remedial activities are described in Appendix F.

- GeoEngineers completed a dewatering assessment at the site in July 2013. As part of that assessment, GeoEngineers installed a dewatering test well (TW-1) and seven observation wells (OW-1 through OW-7) within Phase 2 in June 2013.
- In July 2013, MFA completed supplemental soil and groundwater sampling, including advancing 9 direct-push borings (GP-1 through GP-9) within the previously identified "Area 4" and three direct-push borings (GP-10 through GP-12) within the previously identified "Area 3." MFA also excavated an exploratory trench within "Area 4" and submitted three soil samples (WL-1 through WL-3) for analyses of select contaminants of potential concern (COPCs). Results indicated that a soil sample from GP-6 contained DRPH and ORPH at concentrations greater than applicable MTCA Method A cleanup levels, and the soil sample from WL-1 contained GRPH at concentrations greater than the MTCA Method A cleanup level.

The approximate locations of previous explorations described above are shown on Figures 2 through 5. The approximate locations of MFA's confirmation samples from the "PCS Area 2 Excavation" and the "Storm Line PCS Excavation" are shown on Figure 3A.

2.3. Site Contaminants of Potential Concern (COPCs)

Based on previous work, COPCs for site soil and groundwater include contaminants previously detected at levels exceeding MTCA Method A cleanup levels and contaminants associated with historic storage and distribution of petroleum products, as well as metals, particularly with respect to potential changes in geochemistry of soil and groundwater within wood waste areas. COPCs for the site include the following constituents:

- Gasoline-range petroleum hydrocarbons (GRPH), diesel-range petroleum hydrocarbons (DRPH) and oil-range petroleum hydrocarbons (ORPH);
- Volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds;
- Semi-volatile organic compounds (SVOCs); and
- Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver).

3.0 SCOPE OF SERVICES

The purpose of the data gap assessment was to delineate the nature and extent of soil and groundwater contamination beneath the site, particularly portions of the site where limited, or no, previous environmental characterization activities had been completed. The data gap assessment was conducted in several steps. Step 1 consisted of drilling direct-push borings at the site, collecting soil samples from the borings, and submitting select soil samples to an analytical laboratory for analyses of select COPCs. Step 2 consisted of installing eight groundwater monitoring wells, collecting groundwater samples, and submitting groundwater samples from two rounds of groundwater sampling to an analytical laboratory for analyses of COPCs.

Based on the results of these services, additional services were conducted to further assess the site including: (1) collecting surface water samples from Brender Creek, and submitting them to an analytical laboratory for analyses of select COPCs; (2) completing two supplemental rounds of test pit explorations and submitting soil samples to an analytical laboratory for analyses of select COPCs to refine estimates of the extent of contaminated soil; and (3) installing an additional monitoring well within the northwest portion of Phase 2 to evaluate potential groundwater effects of soil contamination encountered in that area of the site. In addition, Ecology determined that the existing wetlands delineation report for the site (completed by others) was out of date, and no longer valid. Ecology authorized GeoEngineers to complete a supplemental wetlands delineation in order to satisfy Ecology criteria.

3.1. Direct-Push Explorations

Soil and groundwater conditions at the site were evaluated using direct-push drilling techniques at locations shown on Figures 2 through 5. The information obtained during the direct-push soil assessment also was used to identify locations for permanent groundwater monitoring wells, and guide supplemental exploration activities. Specific tasks conducted by GeoEngineers during the direct-push boring assessment are listed below:

- Coordinated utility locating services in advance of drilling activities.
- Conducted subsurface explorations using direct-push drilling techniques.
- Collected soil samples continuously from the direct-push explorations.
- Field-screened soil samples using water sheen and headspace vapor measurements to assess possible presence of petroleum-related contaminants and documented petroleum odors emanating from direct-push samples.
- Submitted soil samples to TestAmerica Laboratories (TestAmerica) in Portland, Oregon. Soil samples were analyzed for GRPH, DRPH and ORPH by Northwest Methods NWTPH-Gx and NWTPH-Dx (using silica gel cleanup) methods. Select samples also were analyzed for VOCs or BTEX compounds using Environmental Protection Agency (EPA) 8260 Methods, SVOCs using EPA Method 8270, and metals using EPA 6000/7000 Series Methods.
- Recorded direct-push boring locations in the field using a hand-held global positioning system (GPS) device (I-Pad with commercial GIS Pro software). The horizontal accuracy of the software is listed as 15 feet, although, based on experience, the horizontal accuracy is generally closer than 15 feet.

3.2. Monitoring Well Installation and Groundwater Sampling

Groundwater monitoring wells were installed within exploratory borings during the second step of the data gap assessment. The monitoring wells were installed at locations identified during the direct-push investigation at locations agreed upon by Ecology. Specific tasks conducted during monitoring well installation are listed below:

- Drilled, installed and developed monitoring wells. Logs of monitoring wells are presented in Appendix A.
- Submitted select soil samples from the well borings to TestAmerica in Spokane, Washington for analysis of GRPH, DRPH and ORPH using NWTPH-Gx and NWTPH-Dx methods, and Resource Conservation and Recovery Act (RCRA) 8 metals using EPA 6000/7000 Series Methods.
- Collected groundwater samples from site monitoring wells during two monitoring events (October and December 2013). Groundwater samples also were collected from existing dewatering observation well OW-1 during the December 2013 sampling event. Attempts were made to locate and collect groundwater samples from existing site well B-2, but we were unable to locate the well. Groundwater samples were submitted to TestAmerica in Spokane, Washington for analysis of GRPH, DRPH and ORPH using NWTPH-Gx and NWTPH-Dx methods, VOCs using EPA 8260 Methods, SVOCs using EPA Method 8270, and total and dissolved RCRA 8 metals using EPA 6000/7000 Series Methods. Monitoring wells were purged and sampled using low-flow sampling procedures. Samples also were analyzed for water quality and natural attenuation parameters in the laboratory including: nitrates, soluble manganese (Mn^{+2}), sulfates (SO_4), methane (CH_4) and alkalinity. Water quality parameters (temperature, pH, dissolved oxygen, conductivity and turbidity) were measured in the field during purging and sampling. Soluble ferrous iron (Fe^{+2}) also was analyzed in the field. During the December 2013 sampling event, samples were also analyzed for total and dissolved copper and iron, total manganese, and phosphorus. Two groundwater samples collected during the December event also were submitted to SVL Analytical Laboratory in Kellogg, Idaho for analysis of arsenic speciation. Analytical data is summarized in Tables 2 through 6. Analytical laboratory reports are presented in Appendix C.
- Subcontracted a licensed surveyor to record elevations and locations of monitoring wells.

3.3. Test Pit Explorations

Following the direct-push explorations and installation and initial sampling of the groundwater monitoring wells, supplemental test pit explorations were excavated near selected direct-push explorations identified as containing one or more COPCs at concentrations greater than applicable cleanup levels. Specific tasks conducted during the test pit explorations are listed below:

- Excavated test pits using a small track-mounted excavator and rubber-tired backhoe.
- Submitted soil samples to TestAmerica for analyses of COPCs previously measured in nearby direct-push borings at concentrations greater than MTCA Method A cleanup levels.
- Recorded test pit locations in the field using a hand-held GPS device.

3.4. Surface Water Sampling

Surface water samples were collected from Brender Creek to assess disposal options for water extracted during dewatering activities. Specific tasks are listed below:

- Collected three surface water samples from Brender Creek.
- Submitted water samples to TestAmerica for analyses of total and dissolved RCRA 8 metals and total and dissolved copper and iron using EPA 6000/7000 Series Methods. Water quality parameters including pH, total alkalinity and specific conductivity also were analyzed by the laboratory.

4.0 GEOLOGIC AND HYDROGEOLOGIC SETTING

4.1. General

This summary of geologic and hydrogeologic setting was developed by review of readily-available information from the literature, our experience near the study area, and reconnaissance at and near the site.

4.2. Geologic Setting

The former Cashmere Mill site is located in the Wenatchee River valley in the town of Cashmere. Surficial geology consists of alluvial deposits of silt, sand, gravel and cobbles, deposited by the Wenatchee River. Based on results of site explorations, alluvial deposits extend to depths of at least 40 feet below the site. We understand a former meander of the river is located along the south and east portions of the site (currently occupied by Brender Creek), which was cut off from the river in the early 1900s for the purpose of site development.

4.3. Hydrogeologic Setting

A detailed description of the hydrogeologic setting for the site is presented in the Dewatering Assessment report by GeoEngineers, dated July 31, 2013. The groundwater table within the shallow unconfined aquifer at the site is at a similar elevation to the nearby Wenatchee River, and likely is hydraulically connected with the river. In such systems, groundwater contained within an aquifer, generally flows down-valley, roughly parallel to the river, but at a much slower velocity. Shallow groundwater at the site generally flows northeast, as described later in this report.

5.0 FIELD ACTIVITIES

5.1. General

The following field activities were completed by GeoEngineers' field personnel and subcontractors as part of the data gap assessment to explore subsurface soil and groundwater conditions at the site:

- One-hundred and twenty direct-push borings (N-DP-1 through S-DP-101) were advanced between September 9 and September 14, 2013. Additional drilling attempts also were made at multiple locations.

- Eight groundwater monitoring wells (MW-1 through MW-8) were drilled, installed and developed between October 8 and October 25, 2013. A ninth groundwater monitoring well (MW-9) was drilled, installed and developed on December 16, 2013. Three well borings were drilled using a hollow-stem auger drill rig, and six well borings were drilled using an air-rotary drill rig. The wells were installed to depths of about 15 to 20 feet below site grade. One additional air rotary boring (AR-1) was advanced near the location of previously identified PCS within the Phase 2 Area.
- Groundwater monitoring events were completed on October 28, 2013 and December 3 and 4, 2013 for site wells MW-1 through MW-8, as well as previous site monitoring well B-1. Monitoring well MW-9 was sampled on December 20, 2013.
- Twenty-nine supplemental test pits were excavated between November 12 and 13, 2013, to provide additional information about the extent of soil contamination identified from laboratory analytical testing of soil samples collected from the direct-push borings.
- Three surface water samples were collected from Brender Creek on November 13, 2013.
- Fifteen additional test pits were excavated between December 19 and 20, 2013 to provide additional information about the extent of soil contamination.
- A wetlands survey was conducted on December 19, 2013.
- Locations and elevations for new monitoring wells MW-1 through MW-8, and existing site wells B-1 and OW-1 through OW-7 were surveyed by a licensed surveyor. Locations of other site explorations were surveyed using hand-held GPS devices.

5.2. Explorations

Cascade Drilling (Cascade) and GeoEngineers mobilized to the site from September 9 through September 14, 2013 to advance 120 direct-push borings. Continuous soil samples were collected using 5-foot acrylic slip-sleeve samplers. Cascade remobilized to the site on October 8 through October 10, 2013 to drill three hollow-stem auger borings and install and develop monitoring wells MW-2, MW-3 and MW-6. Because of difficult drilling conditions, Cascade was unable to complete drilling and well installations. Environmental West mobilized to the site on October 24 and 25, 2013 to drill five air-rotary borings and install and develop monitoring wells MW-1, MW-4, MW-5 and MW-7. Environmental West remobilized to the site on December 16, 2013 to drill one air rotary boring and install and develop monitoring well MW-9. Sandry Construction mobilized to the site on November 12 and 13, 2013 to excavate test pits using a mini excavator. Sandry Construction remobilized to the site on December 19 and 20, 2013 to excavate test pits using a rubber-tired backhoe.

Exploration locations are shown in Figures 2 through 5. Table 1 presents summary information about direct-push borings, monitoring well borings, and test pits. Note that the numbering system for direct-push borings is not sequential. Direct-push borings and their numbering system were established in the office before mobilizing to the site. Some of the planned borings were deleted from the exploration program during field work based on boring results. However, in order to provide consistency between boring and sample naming among multiple field crews, the original boring numbers were used. Table 1 indicates which direct-push borings were deleted from the exploration program.

5.2.1. Phase 1 Area

5.2.1.1. DIRECT-PUSH BORINGS

Fifty direct-push borings (N-DP-1 through N-DP-54) were advanced to depths ranging from about 4 feet to 20 feet below site grade within the Phase 1 area. Soil samples collected from the direct-push borings were field screened to assess the possible presence of petroleum hydrocarbons.

- Petroleum odors were observed in soil samples collected from three borings: N-DP-3A (at approximate 10-foot depth), N-DP-9 (at approximate 5-foot depth), and N-DP-27 (at approximate 7-foot depth). Headspace vapors, measured with a photoionization detector (PID), ranged from less than 1 to about 150 parts per million (ppm).
- Headspace vapor readings from most samples collected were generally low, less than about 5 ppm. Headspace vapor measurements exceeding 10 ppm were recorded on soil samples collected from five borings: N-DP-2 (approximate 3- and 11-foot depths), N-DP-7 (approximate 1-foot depth), N-DP-8A (approximate 1- to 9-foot depths), N-DP-16 (approximate 12½-foot depth), and N-DP-43 (approximate 1- to 5-foot depths).
- Slight sheens were observed in soil samples from 12 borings: N-DP-1, N-DP-2, N-DP-3, N-DP-3A, N-DP-3B, N-DP-8, N-DP-8A, N-DP-9, N-DP-11, N-DP-13, N-DP-24, and N-DP-39. Moderate sheens also were observed in soil samples collected from four borings: N-DP-1 (approximate 5- to 8-foot depths), N-DP-8 (approximate 5½-foot depth), N-DP-9 (approximate 5- and 13-foot depths) and N-DP-39 (approximate 2-foot depth).

The purpose of most direct-push borings advanced throughout the Phase 1 area was to characterize areas of the site which had not previously been explored. However, several direct-push borings were placed in three general areas to further confirm conditions where prior excavations occurred:

- Direct-push borings N-DP-24, N-DP-27 and N-DP-38 were drilled to depths of about 10 feet to 15 feet below site grade near previously identified “Area 1” to assess the possible presence of remaining contamination in this area. As indicated above, a slight petroleum odor was observed in boring N-DP-27, and slight sheens were observed on soil samples collected from N-DP-24. Field screening evidence of petroleum contamination was not observed from soil samples collected from boring N-DP-38.
- Direct-push borings N-DP-16, N-DP-23 and N-DP-25 were drilled to depths of about 14½ feet to 15 feet below site grade within the “Storm Line PCS Area” excavation near the locations of confirmation samples collected by MFA during remedial excavation activities in 2013 that contained petroleum hydrocarbons at concentrations greater than applicable MTCA Method A cleanup levels. Results of field screening did not indicate the presence of petroleum hydrocarbons at these direct-push boring locations.
- Direct-push borings N-DP-9, N-DP-19, N-DP-21 and N-DP-21A also were drilled to depths of about 10½ feet to 15 feet below site grade near the “Area 2” remedial excavation, at locations near where confirmation samples collected by MFA during the 2013 remedial excavation activities contained petroleum hydrocarbons at concentrations greater than applicable MTCA Method A cleanup levels. Field screening did not indicate the presence of petroleum hydrocarbons in soil samples collected from borings N-DP-19, N-DP-21 and N-DP-21A. As

noted above petroleum odors and moderate sheen were observed in soil samples collected from N-DP-9.

5.2.1.2. GROUNDWATER MONITORING WELLS

Four monitoring wells were drilled and installed within the Phase 1 area:

- Monitoring well MW-1 is located within Parcel 500, downgradient of "Area 1."
- Well MW-2 is located near the property line between Parcel 005 and Parcel 010, within the "Wood Waste Excavation" area from the 2013 remedial excavation. Monitoring well MW-2 also is located cross/downgradient of the 2013 "Storm Line PCS Area" remedial excavation.
- Monitoring well MW-3 is located within Parcel 650, generally cross/downgradient of the "Area 2 PCS" excavation. Well MW-3 also is located downgradient of previously identified PCS within Parcel 650.
- Monitoring well MW-4 is located within an area near the upgradient portions of the "Area 2 PCS" excavation, near the north side of Mill Road.

Field screening of soil samples collected from monitoring wells MW-1 through MW-4 did not indicate the presence of petroleum contamination.

5.2.1.3. TEST PITS

Five test pits (NDP8-TP1 through NDP8-TP5) were excavated near N-DP-8 following receipt of laboratory analytical testing results indicating the presence of ORPH at concentrations exceeding MTCA Method A cleanup levels within direct-push boring N-DP-8. The test pits were excavated to depths of about 6 feet to 7 feet below site grade (the approximate depth of the soil sample from boring N-DP-8 containing ORPH at a concentration greater than cleanup levels). These depths also coincided with the approximate groundwater elevation at the time of exploration. Soil samples were collected from near the bottoms of the test pits.

A strong petroleum odor was observed in test pit NDP8-TP3 at a depth of about 6 feet. Headspace vapor measurements of the soil samples ranged from less than 1 ppm (NDP8-TP2) to 150 ppm (NDP8-TP1). A moderate sheen also was observed from the soil sample collected from NDP8-TP1.

Table 1 includes approximate exploration depths and results of PDF readings and water sheen tests.

5.2.2. Phase 2 Area

5.2.2.1. DIRECT-PUSH BORINGS

Seventy direct-push borings (S-DP-1 through S-DP-101) were advanced to depths ranging from about 4 feet to 20 feet below site grade within the Phase 2 area. Soil samples collected from the direct-push borings were field screened to assess the possible presence of petroleum hydrocarbons.

- Petroleum odors were observed in soil samples collected within five borings: S-DP-2 (at approximate 1-foot depth), S-DP-7 (at approximate 1-foot depth), S-DP-14 (at approximate 2-foot depth), S-DP-20 (at approximate 2-foot depth), and S-DP-20A (at approximate 2½-foot depth).

- Headspace vapors, measured with a PID, ranged from less than 1 to about 20.6 ppm. Headspace vapor readings from most of the samples collected were generally low, less than about 5 ppm. Headspace vapor measurements exceeding 10 ppm were recorded on soil samples collected from three borings: S-DP-2 (approximate 2-foot depth), S-DP-78 (approximate 1-foot depth) and S-DP-97 (approximate 2-foot and 11-foot depths).
- Slight sheens were observed in soil samples collected from 18 direct-push borings (S-DP-1B, S-DP-2, S-DP-10, S-DP-14, S-DP-22, S-DP-28, S-DP-39, S-DP-63, S-DP-75A, S-DP-76, S-DP-81, S-DP-86, S-DP-88, S-DP-94, S-DP-95, S-DP-98, S-DP-100 and S-DP-101). Moderate sheen was observed in the soil samples collected from two borings: S-DP-7 (approximate 1-foot depth) and S-DP-98 (approximate 4-foot depths).

The purpose of most direct-push borings advanced throughout the Phase 2 area was to characterize areas of the Phase 2 which had not previously been explored. However, several direct-push borings were placed in "Area 4" and "Area 5" to further assess conditions:

- Twenty-three direct-push borings (S-DP-1, S-DP-1A, S-DP-2, S-DP-4, S-DP-4A, S-DP-5, S-DP-5A, S-DP-7 through S-DP-11, S-DP-13 through S-DP-16, S-SP-18, S-DP-20, S-SP-20A, S-DP-27, S-DP-29, S-DP-30 and S-DP-32) were advanced to depths in the range of about 4 feet to 12½ feet below site grade within and near "Area 4" to further evaluate previously identified PCS. As indicated above, petroleum odors were observed in borings S-DP-2, S-DP-7, S-DP-14 and S-DP-20A. Also as indicated above, headspace vapors measuring about 19.1 ppm were recorded from a soil sample collected from boring S-DP-2. A slight sheen also was observed in soil samples collected from boring S-DP-2 (approximate 1- foot to 3-foot depth), and a moderate sheen was observed in the soil sample collected boring S-DP-7. Field screening evidence of petroleum contamination was not observed from soil samples collected from the other direct-push borings advanced within and near "Area 4." One air-rotary boring (AR-1) also was advanced to a depth of about 4 feet below site grade within "Area 4," near the location of previous MFA exploration GP-6. Field screening of soil samples collected from AR-1 did not indicate the presence of petroleum contamination.
- Direct-push borings S-DP-52 and S-DP-37 were advanced within the "Pilot Wood Waste" excavation area, also referred to as "Area 5." Field screening of soil samples collected from these borings did not indicate the presence of petroleum contamination.

5.2.2.2. GROUNDWATER MONITORING WELLS

Five monitoring wells were drilled and installed within the Phase 2 area:

- Monitoring well MW-5 is located within Parcel 200, situated downgradient of "Area 4."
- Monitoring well MW-6 also is located in Parcel 200, situated just upgradient of "Area 4."
- Monitoring well MW-7 is located within Parcel 150, situated cross/downgradient of PCS identified based on laboratory analytical test results from the direct-push boring activities.
- Monitoring well MW-8 is located within Parcel 070, and is intended to be an upgradient well.
- Monitoring well MW-9 also is located within Parcel 070, and is situated downgradient of mercury-contaminated soil identified during the data gap assessment activities.

Field screening of soil samples collected from monitoring wells MW-5 through MW-9 did not indicate the presence of petroleum contamination.

5.2.2.3. TEST PITS

Following receipt of laboratory analytical testing results indicating the presence of COPCs at concentrations exceeding MTCA Method A cleanup levels within direct-push borings S-DP-14, S-DP-75A, S-DP-81, S-DP-88 and S-DP-101, test pits were excavated surrounding these boring locations to further assess soil conditions:

- Two test pits (SDP14-TP1 and SDP14-TP2) were excavated to depths of about 2 feet to 2½ feet below site grade, near direct-push boring S-DP-14. Soil samples were collected from near the bottoms of the excavations (the approximate depth of the soil sample from direct-push boring S-DP-14 with measured concentration of ORPH greater than the MTCA Method A cleanup level). A slight sheen was observed in the soil sample from boring SDP14-TP1. Field screening of the soil sample from SDP14-TP2 did not indicate the presence of petroleum contamination.
- Nine test pits (SDP75A-TP1, SDP75A-TP1a, SDP75A-TP1b, SDP75A-TP2, SDP75A-TP2a, SDP75A-TP3, SDP75A-TP3a, SDP75A-TP4, and SDP75A-TP5) were excavated to depths in the range of about 2 feet to 3 feet below site grade near direct-push boring S-DP-75A. Soil samples were collected from near the bottoms of the excavations (the approximate depth of the soil sample from direct-push boring S-DP-75A with a measured concentration of ORPH at a concentration greater than the MTCA Method A cleanup level). Headspace readings of soil samples collected from the test pits ranged from 17.5 ppm to 170 ppm. A slight sheen was observed from the soil samples from test pits SDP75A-TP1a and SDP75A-TP5. Moderate sheens were observed from the soil samples collected from test pits SDP75A-TP1, SDP75A-TP2, SDP75A-TP2a, and SDP75A-TP3.
- Four test pits (SDP81-TP1 through SDP81-TP4) were excavated to depths on the order of about 3 feet below site grade near direct-push boring S-DP-81. Soil samples were collected from each test pit at a depth of about 2 feet below site grade. A headspace vapor reading of 43 ppm was measured on the soil sample collected from test pit SDP81-TP3. Headspace vapor readings of soil samples collected from the other test pits were less than 10 ppm. A slight sheen was observed from the soil samples collected from test pits SDP81-TP1 and SDP81-TP2.
- Four test pits (SDP88-TP1 through SDP88-TP4) were excavated to depths in the range of about 4 to 5 feet below site grade near direct-push boring S-DP-88. Soil samples were collected from the test pits at depths in the range of about 3 feet to 4 feet below site grade. A headspace vapor reading of 13 ppm was measured from the soil sample collected from test pit SDP88-TP4. Headspace vapor readings from soil samples collected from the other test pits were less than 10 ppm. Field screening of the soil samples also indicated that no sheens were observed.
- Five test pits (SDP101-TP1 through SDP101-TP5) were excavated to depths in the range of about 3 feet to 4 feet below site grade near direct-push boring S-DP-101. Soil samples were collected at depths of about 2½ feet to 3 feet below site grade. Headspace vapors readings ranged from 3 ppm to 63 ppm. Slight sheens were observed from the soil samples collected

from test pits SDP101-TP2 and SDP101-TP4. Sheen was not observed from the soil samples from the other test pits.

Following receipt of laboratory analytical test results of soil samples from the test pits, and results of follow-up analytical testing of soil samples from the direct-push borings, additional test pits were excavated to further assess soil conditions within the northwest portion of the Phase 2 area, predominantly to assess the presence of mercury contamination of soil within this area of the site:

- Four test pits (SDP87-TP1 through SDP87-TP4) were excavated to depths in the range of about 3 feet to 4 feet below site grade near direct-push boring S-DP-87. A slight petroleum odor was observed from the soil samples collected from test pit SDP87-TP2. Headspace vapor readings ranged from 3.1 ppm to 26.6 ppm. A slight sheen also was observed from soil samples collected from all four test pits.
- Eleven additional test pits (TP-B1 through TP-B11) were excavated across the northwest portion of Phase 2. A slight petroleum odor was observed from soil samples collected from test pits TP-B1, TP-B9, TP-B10 and TP-B11. Headspace vapors greater than 10 ppm were observed in soil samples collected from test pits TP-B3, TP-B9, TP-B10 and TP-B11, ranging from 11.5 ppm to 184 ppm. Slight sheens also were observed from soil samples collected from all eleven test pits.

Table 1 includes approximate exploration depths and results of PID readings and water sheen tests.

5.3. Groundwater Sampling

Groundwater sampling was conducted on October 28, 2013, and December 3 and 4, 2013 from monitoring wells MW-1 through MW-8. Monitoring well MW-9 was sampled on December 20, 2013. Depth to groundwater was measured in each well and water quality parameters were recorded while purging the wells using low-flow sampling techniques. Measured water quality parameters included: pH, specific conductivity, turbidity, dissolved oxygen (DO), temperature, oxidation-reduction potential (ORP), and soluble ferrous iron. Headspace vapors measured within the well and water quality parameters were recorded during purging activities and are presented in Appendix B. Development and purge water was drummed and stored on-site pending chemical analytical results. Low flow sampling techniques were used to collect the groundwater samples.

5.4. Surface Water Sampling

Three surface water samples (downstream, midstream and upstream) were collected from Brender Creek on November 13, 2013, to assess metals concentrations and select surface water quality parameters, as a basis for evaluating the feasibility of discharging groundwater pumped during Phase 2 dewatering activities into Brender Creek. The approximate location of the downstream sample is shown on Figure 3. The approximate locations of the midstream and upstream samples are shown on Figure 5.

5.5. Wetlands Survey

On December 19th, GeoEngineers scientists visited the Port of Chelan County Cashmere Mill Site to perform a wetland delineation and supplement the data about the property conditions beyond

the information contained in the 2008 wetland delineation report on file. Prior to the field investigation, GeoEngineers contacted Ecology Wetlands Specialist Andrea Jedel to confirm the delineation plan and discuss the conditions surrounding the completion of a mid-winter delineation in Cashmere. Results of the site visit revealed that the 2008 delineation was reasonably accurate but lacked sufficient information about the site-specific soils surrounding the wetland boundary. GeoEngineers obtained a more complete soils record to better describe and support the delineation. Results and observations made in the field revealed that beaver activity in the Brender Creek corridor has been substantial since the 2008 delineation with several large trees gnawed and toppled into the stream corridor. A copy of GeoEngineers' Wetlands report is presented in Appendix E.

6.0 SUBSURFACE CONDITIONS

6.1. Soil Conditions

Variable subsurface conditions were encountered to the depths explored in site explorations. For the purposes of this report, soil underlying the site was characterized in two general units: (1) sand; and (2) silt and clay.

6.2. Phase 1 Area

The upper several feet of soil within most of "Area 1" (specifically Parcels 005, 010 and 550) were excavated during remedial excavation activities conducted in 2013, and replaced with imported sand. We encountered variable thickness of brown fine to coarse sand at the locations of our explorations throughout Phase 1 (except for several explorations located within Parcel 500 and Parcel 650). Where encountered, the recently placed sand fill ranged in thickness from less than 1 foot, to about 7½ feet. Below the recent sand fill, where present, we encountered historic wood waste fill at the locations of explorations N-DP-1 through N-DP-19 (generally in the east portion of Phase 1). The wood waste fill contained variable amounts of silt, sand, gravel, cobbles and wood material. The wood waste fill extended to estimated depths in the range of about 5 feet to 14 feet below current site grade. Below the recently placed fill, and wood waste fill, where present, we encountered apparent natural alluvial deposits of sand and gravel, with variable amounts of silt and cobbles. The natural alluvial deposit extended to the depths explored, where encountered. While not specifically identified in our explorations, fill and natural alluvial deposits also could contain boulders. Note that due to drilling and sampling methods, the estimated depths and locations of recently placed fill, wood waste and natural alluvial deposits should be considered a rough approximation of subsurface unit extents.

6.3. Phase 2 Area

We encountered fill (including wood waste) at the locations of most of the explorations completed within the Phase 2 Area. The fill extended to estimated depths in the range of about 1 foot to about 15 feet below current site grade. The percentage of wood waste within the fill was variable. At some locations, wood waste was mixed with granular soil. At other locations, wood waste (sawdust, bark, wood chips) was present as discrete layers. We also encountered apparent debris including charred wood fragments at the locations of direct-push borings S-DP-88 and S-DP-101, and brick at the location of test pit TP-B4 (all in Parcel 070). The debris fill was located at depths

in the range of about 3 to 5 feet below current site grade at the locations of S-DP-88 and S-DP-101, and from the ground surface to a depth of about 2 feet at the location of test pit TP-B4. Below the fill, where identified, we encountered natural alluvial deposits of sand and gravel with variable amounts of silt and cobbles, which extended to the depths explored.

6.4. Groundwater Conditions

6.4.1. General

Depths to groundwater encountered during exploration activities are presented on the explorations logs and on Table 1; depths ranged from less than 1 foot to about 9 feet.

Groundwater depths also were measured from the top of the well casing on October 28, 2013, and December 3, 2013 at site monitoring wells MW-1 through MW-8, B-1, OW-1, OW-4 and OW-7. Groundwater depths ranged from about 2.5 feet to 7.4 feet below the top of the well casing. In general, groundwater was shallowest in the north portion of Phase 2 and deepest near Sunset Highway in the north portion of Phase 1. Groundwater elevations were calculated by comparing measured groundwater depths to wellhead elevations and are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Fluid depths and elevations measured during the groundwater monitoring events are presented in Table 6. Groundwater elevation data, and interpreted groundwater elevation distribution and flow direction for each monitoring event, are graphically presented in Figure 6 and Figure 7. Field methods are described in Appendix B.

6.4.2. Groundwater Elevations

Depth to groundwater measurements during the October 2013 monitoring event, referenced to the top rim of the PVC well casing, ranged from 2.55 feet in MW-6 to 7.36 feet in MW-3. Groundwater elevations ranged from 781.95 feet in MW-1 to 791.08 feet in MW-8.

Depth to groundwater during the December 2013 monitoring event ranged from 2.47 feet in MW-6 to 7.23 feet in MW-3. Groundwater elevations ranged from 782.37 feet in MW-1 to 791.08 feet in MW-8.

Groundwater elevations generally increased during the December 2013 monitoring event relative to the October 2013 event, with a trend of decreasing change in elevation from downgradient to upgradient wells. The largest elevation increase (0.42 feet) was measured at downgradient well MW-1. No change in groundwater elevations was measured at upgradient wells MW-8 and OW-1. (Note: groundwater elevation slightly decreased in well B-1 between October and December 2013. Following the October 2013 sampling event, well B-1 was re-developed to improve hydraulic connection to the shallow aquifer.)

6.4.3. Hydraulic Gradient and Groundwater Flow Direction

Interpreted groundwater flow direction during both groundwater monitoring events generally was toward the northwest; away from upland recharge areas and Brender Creek, and towards the Wenatchee River. The estimated average hydraulic gradient for both groundwater monitoring events was about 8×10^{-3} feet per foot (about 40 feet per mile).

7.0 SOIL, GROUNDWATER AND SURFACE WATER CHEMICAL ANALYTICAL RESULTS

7.1. General

7.1.1. Soil Samples

Select soil samples collected from the borings and test pits were submitted to TestAmerica for laboratory analyses. The following analyses were completed on soil samples:

- Fifty-six soil samples from the Phase 1 area and 101 soil samples from the Phase 2 area were analyzed for GRPH, DRPH and ORPH.
- Six soil samples from the Phase 1 area and 13 soil samples from the Phase 2 area were analyzed for VOCs and/or SVOCs.
- Three additional soil samples from the Phase 1 area and nine additional soil samples from the Phase 2 area were analyzed for BTEX compounds.
- Six soil samples from the Phase 1 area and 11 soil samples from the Phase 2 area were analyzed for RCRA 8 metals.
- Forty-two additional soil samples from the Phase 2 area (Parcels 070 and 150) were analyzed for mercury.
- Two soil samples from the Phase 2 area (Parcel 070) were analyzed for Toxicity Characteristic Leaching Procedure (TCLP) for mercury.
- One soil sample from the Phase 1 area and four soil samples from the Phase 2 area were analyzed for EPH and VPH.

A summary of petroleum hydrocarbon results is presented in Table 2. A summary of VOC, SVOC, VPH and EPH results is presented in Table 3. A summary of metals analyses is presented in Table 4.

7.1.2. Groundwater Samples

During the October 2013 groundwater monitoring event, groundwater samples were collected from wells MW-1 through MW-8 and B-1. A duplicate groundwater sample also was collected from well MW-5. Groundwater samples were submitted to TestAmerica for analyses of COPCs including GRPH, DRPH, ORPH, VOCs, SVOCs, and RCRA 8 metals.

During the December 2013 groundwater monitoring event, groundwater samples were collected from wells MW-1 through MW-8, B-1 and OW-1. Additional groundwater samples also were collected from wells MW-2 and MW-7 at deeper intervals. The intent of collecting and analyzing deeper groundwater samples was to evaluate arsenic concentrations in groundwater relative to depth. Groundwater samples also were submitted for analyses of water quality parameters including nitrates, sulfates, methane, and total alkalinity. Two groundwater samples (collected from wells MW-2 and MW-7) also were submitted to SVL Analytical Laboratory in Kellogg, Idaho for arsenic speciation. A summary of groundwater analytical results is presented in Table 5.

On December 20, 2013 a groundwater sample was collected from well MW-9. The sample was submitted to TestAmerica for analyses of GRPH, DRPH, ORPH, total RCRA 8 metals and BTEX compounds. Results are summarized in Table 5.

7.1.3. Surface Water Samples

Three surface water samples were collected from Brender Creek on November 13, 2013, at the approximate locations shown on Figures 3 and 5. The samples were submitted to Test America for analyses of total and dissolved metals (RCRA 8 metals, copper, and iron) and water quality parameters pH, total alkalinity and specific conductivity. A summary of surface water analytical results is presented in Table 6. The surface water samples were collected following receipt of groundwater analytical results from the October 2013 groundwater monitoring event as a basis for evaluating the feasibility of discharging groundwater extracted during dewatering activities into Brender Creek.

7.2. Soil Analytical Results

7.2.1. Phase 1 Area

ORPH was detected at concentrations of 11,000 milligrams per kilogram (mg/kg) and 10,500 mg/kg in samples N-DP-8(5.5-6.5) and NDP-TP3(6), respectively; which exceed the MTCA Method A cleanup level for unrestricted land use (2,000 mg/kg). Both samples were collected from the southeast portion of Parcel 550. These concentrations also exceed the calculated MTCA Method B cleanup level for TPH for the site (3,400 mg/kg), as described in "Section 8" (see Appendix D). Petroleum hydrocarbons in other soil samples were either not detected, or were detected at concentrations less than applicable Method A or Method B cleanup levels. Note that the result for sample N-DP-8(5.5-6.5) was qualified as estimated because surrogate recovery was outside of specified limits for that sample. Refer to the applicable Data Validation Report in Appendix B for additional details.

Mercury was detected in sample N-DP-27(7-8) at a concentration of 2.1 mg/kg, greater than the MTCA Method A cleanup level of 2 mg/kg. This sample was collected from Parcel 010 along the south side of Sunset Highway. Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) also were detected in this sample at a concentration (0.102 mg/kg based on toxicity equivalency factors as presented in WAC 173-340-900, Table 708-2) greater than the MTCA Method A cleanup level of 0.1 mg/kg. The concentrations of cPAHS are qualified as estimated because the positive results were greater than the method detection limit, but less than the method reporting limit.

Methylene chloride was detected at concentrations greater than the MTCA Method A cleanup level for unrestricted land use in samples N-DP-43(0.5-1.5), N-DP-27(7-8), and D-DP-8A(2-3). However, methylene chloride also was detected in the laboratory method blank associated with samples N-DP-27(7-8) and N-DP-8A(2-3). These results are likely false positives, associated with laboratory contamination.

Other VOCs, SVOCs, and metals were either not detected, or were detected at concentrations less than applicable cleanup levels. Note that for several analytes with established MTCA Method A cleanup levels, the laboratory published reporting limits or detection limits, where applicable, exceed the cleanup level. These results have been highlighted in the tables, where applicable.

7.2.2. Phase 2 Area

TPH was detected in five samples collected in the Phase 2 area at concentrations greater than the calculated MTCA Method B TPH cleanup level. These samples were collected from three areas: the northeast portion of the Phase 2 area (Parcel 070), north-central near the boundary of Parcel 150 and 250, and the northeast portion of the Phase 2 area (Parcel 200).

- DRPH and ORPH were detected at concentrations of 520 mg/kg and 3,800 mg/kg, respectively in sample S-DP-101(3-3.5) collected from Parcel 070. The calculated TPH concentration for this sample is 4,320 mg/kg.
- GRPH, DRPH and ORPH were detected in sample S-DP-75A(2-3) at concentrations of 8.6 mg/kg, 1,900 mg/kg and 8,800 mg/kg, respectively. The calculated TPH concentration for this sample is 10,709 mg/kg. DRPH and ORPH were detected in sample SDP75A-TP2(3) at concentrations of 1,020 mg/kg and 5,640 mg/kg, respectively. The calculated TPH concentration for this sample is 6,660 mg/kg. GRPH, DRPH and ORPH were detected in soil sample SDP75A-TP5(3) at concentrations of 11.6 mg/kg, 794 mg/kg and 4,370 mg/kg, respectively. The calculated TPH concentration for this sample is 5,175.6 mg/kg.
- GPRH, DRPH and ORPH were detected at concentrations of 81 mg/kg, 770 mg/kg and 2,800 mg/kg, respectively in sample S-DP-7(1-2) collected from Parcel 250. The calculated TPH concentration for this sample is 3,651 mg/kg.
- Petroleum hydrocarbons in other samples were either not detected, or were detected at concentrations less than applicable cleanup levels in other samples.

Mercury was detected in several samples collected from the northwest portion of the Phase 2 area, specifically in the north half of Parcel 070 and the northwest portion of Parcel 250. Mercury was detected in four soil samples at concentrations greater than the MTCA Method A cleanup level: S-DP-87(5-6) (13 mg/kg), S-DP-88(4-5) (7.2 mg/kg), S-DP-101(3-3.5) (4.8 mg/kg) and TP-B4(1-2) (2.38 mg/kg). The mercury test result for S-DP-87(5-6) was qualified as estimated because the follow-up analyses were completed outside of hold time. TCLP analyses for mercury were completed on samples S-DP-87(5-6) and TP-B4(1-2). Results were non-detect from both samples. TCLP results were qualified as estimated for sample S-DP-87(5-6) because the analysis was completed post hold time. However, TCLP analysis for this sample was completed on the same day as the metals analysis. Other metals were either not detected, or were detected at concentrations less than applicable MTCA Method A cleanup levels.

Numerous VOCs and SVOCs were detected in Phase 2 Area soil samples. However, analytes with established MTCA Method A cleanup levels were either not detected, or were detected at concentrations less than applicable Method A cleanup levels.

7.3. Groundwater Analytical Results

7.3.1. October 2013 Monitoring Event

7.3.1.1. CONTAMINANT ANALYSES

DRPH and ORPH were detected in the groundwater sample from B-1 at concentrations of 2,170 micrograms per liter (µg/L) and 5,390 µg/L, respectively, which exceeded the MTCA Method A cleanup levels of 500 µg/L for both DRPH and ORPH. This well is located in the

northeast portion of the site within Parcel 650. However, during the October 2013 event, well B-1 had not been sampled for a considerable time, and water pumped from the well was highly turbid. Attempts to purge the well during sampling did not improve turbidity. Therefore, analytical results from well B-1 might not be representative of aquifer conditions. Because of the highly turbid nature of the groundwater sample, other analyses were not performed on the groundwater sample. GRPH was not detected in the samples from well B-1. GRPH, DRPH and ORPH were not detected in the groundwater samples from other wells. Silica gel cleanup was used for NWTPH-Dx analyses for the October 2013 groundwater monitoring event.

Total arsenic was detected at concentrations greater than the MTCA Method A cleanup level of 5 µg/L in groundwater samples from six of the eight wells: MW-1 (17 µg/L), MW-2 (6.0 µg/L), MW-3 (6.7 µg/L), MW-5 (16 µg/L), MW-7 (83 µg/L) and MW-8 (13 µg/L). Dissolved arsenic concentrations exceeded the cleanup level in samples from three wells: MW-1 (14 µg/L), MW-5 (13 µg/L), and MW-7 (79 µg/L). Total and dissolved arsenic were detected in the other groundwater samples but at concentrations less than the MTCA Method A cleanup level. Other metals were either not detected, or were detected at concentrations less than the applicable Method A cleanup level. Sample B-1 was not analyzed for metals.

Benzene was detected in the groundwater sample from MW-3 at a concentration of 0.300 µg/L, less than the MTCA Method A cleanup level of 5 µg/L. Naphthalene was detected in the groundwater sample from B-1 at a concentration of 4.69 µg/L, less than the MTCA Method A cleanup level (160 µg//L). Other VOCs and SVOCs were not detected. With the exception of EDB and methylene chloride, reporting limits were less than applicable MTCA Method A cleanup levels.

7.3.1.2. WATER QUALITY PARAMETERS – MEASUREMENTS AND ANALYSES

Well headspace readings were obtained from monitoring wells using a PID immediately after removing the well caps during groundwater sampling. A headspace reading of 10.2 ppm was measured in monitoring well MW-1. Headspace readings of less than 1 ppm were measured in the other site monitoring wells.

Temperature, pH, turbidity, DO, specific conductivity, ORP, and soluble ferrous iron (Fe^{+2}) concentrations were measured in the field during groundwater sampling. Temperatures increased about 5.6°C between upgradient well MW-8 and downgradient well MW-2. pH levels ranged from 6.10 in well B-1 to 7.12 at well MW-6. DO concentrations ranged from 0.0 mg/L at MW-8 to 0.98 mg/L at MW-7. ORP values ranged from -16 millivolts (mV) at MW-7, to -125 mV at MW-6. Soluble ferrous iron concentrations were zero at all of the wells.

Nitrates were detected in the sample from well MW-6 at a concentration of 200 µg/L (the method reporting limit). Nitrates were not detected in groundwater samples from the other site monitoring wells. Sulfates were detected in groundwater samples at concentrations ranging from 580 µg/L in the groundwater sample from MW-3 to 27,600 µg/L in the groundwater sample from MW-2. Methane concentrations ranged from 53.1 µg/L in the groundwater sample from MW-1, to 5,730 µg/L in the groundwater sample from MW-3. Total alkalinity ranged from 230 mg/L in the groundwater sample from well MW-8, to 470 mg/L in the groundwater sample from well MW-3.

7.3.2. December 2013 Monitoring Event

7.3.2.1. CONTAMINANT ANALYSES (DECEMBER 3 AND 4, 2013)

Petroleum hydrocarbons were detected in two samples (MW-3 and B-1) at concentrations greater than cleanup criteria; both are located in the downgradient (northeast) portion of the site within Parcel 650. DRPH and ORPH were detected at concentrations (1,450 µg/L and 875 µg/L, respectively) in the groundwater sample from MW-3. DRPH and ORPH also were detected at concentrations (1,910 µg/L and 1,370 µg/L, respectively) in the groundwater sample from well B-1. GRPH was not detected in the samples from wells B-1 and MW-3. Following the October 2013 sampling event, GeoEngineers field staff made multiple attempts to redevelop well B-1 by surging and bailing. While the turbidity of the groundwater sample from B-1 was significantly reduced compared to the October 2013 sample, the turbidity of the groundwater sample from B-1 was higher than target low-flow sampling procedures, and therefore might not be representative of aquifer conditions. GRPH, DRPH and ORPH were not detected in the groundwater samples from the other site wells. Petroleum hydrocarbons were not analyzed in the sample collected from well OW-1 on the deeper samples collected from wells MW-4 and MW-7. Silica gel cleanup was not used on groundwater samples for NWTPH-Dx analyses for the December groundwater monitoring event.

Total arsenic was detected at concentrations greater than the MTCA Method A cleanup level in samples from wells MW-2 (6.1 µg/L), MW-3 (7.2 µg/L), MW-7 (17 µg/L) and MW-8 (12 µg/L). Dissolved arsenic was detected in the sample collected from well MW-7 (7.2 µg/L) at a concentration greater than the cleanup level. Total and dissolved arsenic were detected in the other groundwater samples collected from wells MW-1 through MW-8 at concentrations less than the MTCA Method A cleanup level. (Note that MTCA Method A cleanup levels are based on total arsenic concentrations.) Arsenic was not detected in the sample collected from well OW-1. Other RCRA 8 metals were either not detected, or detected at concentrations less than applicable MTCA Method A cleanup levels. The groundwater sample from well B-1 was not analyzed for metals.

Three groundwater samples were collected from deeper portions of the shallow aquifer and analyzed for arsenic, as a basis for evaluating the variation of arsenic concentration in groundwater with depth. A groundwater sample was collected from well MW-2 at an approximate depth of about 16 feet below site grade. The total arsenic concentration of the deeper groundwater sample from well MW-2 was 6.1 µg/L. A groundwater sample was collected from well MW-7 at a depth of about 11 feet below site grade. The total arsenic concentration of the deeper groundwater sample from well MW-7 was 8.7 µg/L. As mentioned above, arsenic was not detected in the sample from observation well OW-1 which is screened from a depth of about 10½ feet to about 20 feet below site grade.

Additional groundwater samples also were collected from wells MW-2 and MW-7 and submitted to SVL Analytical Laboratory in Kellogg, Idaho for arsenic speciation analysis. Speciation analyses on the groundwater sample indicate that arsenic (III) is the dominant species. Arsenic (V) was not detected in the groundwater samples.

Benzene was detected in the groundwater sample from MW-3 at a concentration of 0.27 µg/L, less than the MTCA Method A cleanup level of 5 µg/L. However, the presence of benzene means that the MTCA Method A cleanup level for GRPH is 800 µg/L. Naphthalene was detected in the

groundwater sample from well B-1 at a concentration of 6.23 µg/L, less than the MTCA Method A cleanup level. Other VOCs and SVOCs were not detected. The groundwater sample from well B-1 was not analyzed for SVOCs.

7.3.2.2. WATER QUALITY PARAMETERS – MEASUREMENTS AND ANALYTES (DECEMBER 3 AND 4, 2013)

A headspace reading of 115 ppm was measured at well MW-6, and a headspace reading of 17.6 ppm was measured at well B-1. Headspace readings were zero at the other site monitoring wells. Temperatures increased about 3.2°C between upgradient well MW-8 and downgradient well MW-3. pH levels ranged from 5.88 at well B-1, to 6.94 at well MW-2. DO concentrations ranged from 0.0 mg/L at well MW-7 to 0.07 mg/L at well B-1. ORP ranged from 5 mV at OW-1 to -110 mV at MW-8. Soluble ferrous iron was measured in the field at concentrations ranging from 0.0 mg/L at OW-1 to 1.7 mg/L at MW-8.

Nitrates were detected in the groundwater samples from wells MW-1, MW-2, MW-3 and MW-6 at concentrations in the range of 200 µg/L to 310 µg/L. Sulfates were detected in groundwater samples at concentrations ranging from 1,360 µg/L in the groundwater sample from MW-3 to 19,500 µg/L in the groundwater sample from MW-2. Methane concentrations ranged from 78.8 µg/L in the groundwater sample from MW-1 to 5,740 µg/L in the groundwater sample from MW-3. Total alkalinity ranged from 250 mg/L in the groundwater sample from MW-8 to 405 mg/L in the groundwater sample from MW-3. Total iron concentrations ranged from 800 µg/L (MW-1) to 69,000 µg/L (MW-3). Dissolved iron concentrations were detected in the samples from wells MW-3 (38,000 µg/L) and MW-8 (3,700 µg/L). Dissolved iron was not detected in groundwater samples from other wells. Total manganese concentrations ranged from 350 µg/L (MW-2) to 2,800 µg/L (MW-3). Dissolved manganese concentrations ranged from 340 µg/L (MW-2) to 2,800 µg/L (MW-3). Phosphorus concentrations ranged from non-detect (MW-1 and MW-6) to 2,590 µg/L (MW-3). Copper was not detected in any of the groundwater samples.

7.3.2.3. CONTAMINANT ANALYSES AND WATER QUALITY PARAMETERS (DECEMBER 20, 2013)

The sample collected from MW-9 contained detected total arsenic and barium at concentrations less than cleanup levels. Petroleum hydrocarbons, BTEX compounds and the remaining RCRA 8 metals were not detected. Water quality measurements were within the range of readings in other wells.

7.4. Surface Water

Three surface water samples (Upstream, Midstream and Downstream) were collected from Brender Creek on November 13, 2013. Total and dissolved arsenic, cadmium, chromium, copper, lead, mercury, selenium and silver were not detected in the three samples; dissolved iron also was not detected. Total iron was detected in the Midstream and Upstream samples at concentrations of 75.9 µg/L and 107 µg/L, respectively. Total and dissolved barium was detected in the three samples. Total alkalinity ranged from 204 milligrams per liter (mg/L) in the Upstream sample, to 253 mg/L in the Midstream and Downstream samples; pH ranged from 7.39 to 7.54, and specific conductivity ranged from 429 microsiemens per centimeter (µS/cm) to 551 µS/cm.

8.0 MTCA METHOD B CALCULATIONS

8.1. General

A standard Method B soil cleanup level for TPH was calculated in accordance with Washington Administrative Code (WAC) 173-340-740. Method B cleanup levels must meet the following criteria:

- Applicable State and Federal Laws. Method B cleanup levels must comply with cleanup levels established under applicable state and federal laws. MTCA regulations govern cleanup levels for TPH in the state of Washington.
- Environmental Protection. Method B cleanup levels must not result in significant adverse effects on the protection of terrestrial ecological receptors, established using the procedures specified in WAC 173-340-7490 through 173-340-4794, unless it is demonstrated through those sections that the site does not pose a substantial threat of significant adverse effects to terrestrial ecological receptors.
- Human Health Protection. Cleanup levels must be protective of human health through:
  - Groundwater protection. Cleanup levels must not result in groundwater contamination at concentrations which exceed applicable groundwater cleanup levels, and;
  - Potential direct contact (ingestion and dermal absorption) with contaminated soil.

8.2. Environmental Protection Evaluation (Terrestrial Ecological Evaluation)

The site does not meet the criteria for exclusion of a terrestrial ecology evaluation as outlined in WAC 173-7491(1). Additionally, the site is located adjacent to a wetland. Therefore, a site-specific terrestrial ecological evaluation is required for this site.

8.2.1. Problem Formulation

8.2.1.1. CONTAMINANTS OF ECOLOGICAL CONCERN

Mercury has been detected at concentrations greater than 5.5 mg/kg and petroleum hydrocarbons have been detected at concentrations greater than 6,000 mg/kg in soil samples at depths less than 6 feet. Therefore, based on review of Table 794-3 in the MTCA regulations, contaminants are present at the site at concentrations which could pose a potential threat to wildlife.

8.2.1.2. TERRESTRIAL ECOLOGICAL RECEPTORS OF CONCERN

Because the site historically has been used for commercial/industrial purposes, and future plans include using the site for commercial purposes, only potential exposure pathways to wildlife were considered. Potential ecological receptors could include ground-feeding birds, ground-feeding small mammal predators and herbivorous small mammals. However, if future site use changes, then the terrestrial ecological evaluation should be reassessed

8.2.1.3. EXPOSURE PATHWAYS

There are currently no barriers in place within Phase 2 that would prevent wildlife from coming in contact with contaminated soil. Mercury and TPH have been detected in soil samples collected at depths shallower than 6 feet, at concentrations greater than those listed in Table 794-3 of the MTCA regulations for industrial or commercial sites. Therefore, a potential complete pathway exists for wildlife at this site.

8.2.2. Evaluation Method

Current plans for the site include excavating approximately 117,000 cubic yards of soil and wood waste from the site (including an estimated approximately 1,600 cubic yards of identified contaminated soil), thereby removing the areas of identified contamination, along with a significant volume of soil and wood waste that does not contain COPCs at concentrations greater than applicable cleanup levels. Therefore, table values presented in Table 749-3 in the MTCA regulations was selected as an appropriate evaluation method to establish cleanup levels for site COPCs instead of revising toxicity reference values for indicator species, conducting bioassays, field studies or other possible evaluation methods listed in the MTCA regulations.

8.2.3. Ecologically Protective Soil Concentrations

Soil concentrations of site COPCs which are protective of ecological receptors as presented in Table 749-3 of MTCA are summarized in the table below.

CLEANUP LEVELS PROTECTIVE OF TERRESTRIAL ECOLOGICAL RECEPTORS (EXCERPTED FROM MTCA TABLE 749-3)

Contaminant	Soil Concentration (mg/kg)		
	Plants	Soil Biota	Wildlife
Mercury (inorganic)	0.3	0.1	5.5
Gasoline-Range Organics		100	5,000[1]
Diesel-Range Organics		200	6,000[1]

Notes: [1] Concentration cannot exceed residual concentration.

Provided the site will be used for commercial or industrial purposes, based on review of Table 794-3, a mercury concentration less than 5.5 mg/kg, and GRPH and DRPH concentrations less than 5,000 mg/kg and 6,000 mg/kg, respectively, should be protective of wildlife. However, if future land use will be other than industrial, then one of the following options should be used to assess cleanup levels for petroleum hydrocarbons for protection of other potential terrestrial ecological receptors: (1) the MTCA Method A cleanup level for GRPH(100 mg/kg for GRPH without benzene and 30 mg/kg for GRPH with benzene), and a cleanup level of 200 mg/kg for DRPH may be used for this site; (2) alternative evaluation methods, such as soil bioassays or site-specific field studies may be completed to further assess the potential impacts to ecological receptors; or (3) institutional controls (with applied restrictive covenants) may be used (such as capping) to ensure that soil which remains at the site that contains contaminants at concentrations greater than those listed in the table above do not pose a significant threat to potential terrestrial ecological receptors.

8.3. Human Health Protection Evaluation

8.3.1. Groundwater Protection

8.3.1.1. LEACHING PATHWAY

The MTCATPH11.1 worksheet, available from Ecology, was used to calculate site-specific MTCA Method B cleanup levels for protection of groundwater. MTCATPH11.1 uses three- and four-phase partitioning models in accordance with MTCA Section 173-340-747. Soil samples SDP75A-TP5(3) and SDP75A-TP2a(2) were used to calculate site-specific Method B cleanup levels for TPH. Results

of the analyses indicate that the soil-to-groundwater pathway is not a critical factor (see appendix D). Thus, a soil concentration protective for the direct-contact pathway also is protective for the leaching pathway.

8.3.1.2. RESIDUAL SATURATION

An empirical assessment was conducted to evaluate if the soil concentration calculated from MTCATPH11.1 also met criteria for residual saturation. Historical soil and groundwater data was reviewed, and is summarized below:

- Nonaqueous phase liquid (NAPL) has not been observed or measured in any of the site monitoring wells. Specifically:
    - Wells MW-4, MW-5 and MW-6 are located near the identified PCS within Parcel 200 of Phase 2. Well MW-6 is located at the upgradient end of the identified PCS area. Well MW-5 is located approximately 60 feet cross/downgradient of the PCS area, and well MW-4 is located approximately 150 feet downgradient of the PCS area. TPH, VOCs or SVOCs have not been detected in groundwater samples from these three wells. TPH concentrations in soil samples collected within this area have been measured at a concentration of about 3,600 mg/kg.
    - Well MW-7 is located about 50 feet downgradient from the PCS identified area within Parcels 150 and 250 in Phase 2. TPH, VOCs and SVOCs have not been identified in groundwater samples from this well. TPH concentrations in soil samples collected within this area have been measured between about 5,200 mg/kg and about 10,700 mg/kg.
    - Petroleum hydrocarbons have only been detected in groundwater samples from wells B-1 and MW-3. These wells are located within, and downgradient of, petroleum-contaminated soil (PCS) with measured TPH concentrations in soil in excess of 12,000 mg/kg.
- Releases of petroleum hydrocarbons likely have not occurred at the site for many years.

Therefore, it can be demonstrated through empirical evidence that at soil concentrations calculated using Method B procedures (presented below) for the direct contact pathway, NAPL has not accumulated on or in groundwater, and is unlikely to accumulate in the future. Thus, the Method B cleanup level should be below residual saturation for the site.

8.3.2. Soil Direct Contact

The MTCATPH11.1 worksheet was used to calculate site-specific MTCA Method B soil cleanup levels based on direct contact. Default input parameters for soil properties were used in the analyses. Soil samples SDP75A-TP5(3) and SDP75A-TPA(2) were used to calculate site-specific Method B cleanup levels for TPH. For non-detect results from EPA Method 8260, EPA Method 8270, NWTPH-EPH and NWTPH-VPH analyses, a value of one half of the method reporting limit was used as the input concentration; with the exception of n-hexane, MTBE, EDB and EDC. A value of zero was used for these four analytes because they have not been detected in soil or groundwater samples collected from the site.

EPH and VPH fractionation analyses also were completed for samples NDP8-TP5(6.5), S-DP-75A(2-3) and S-DP-101(3.5). However, these samples were not used to calculate site-specific Method B cleanup levels for the following reasons:

- VOC and SVOC analyses were not completed on samples S-DP-75A(2-3) and S-DP-101(3-3.5);
- EPH and VPH concentrations were so low for these samples that they were not representative of site petroleum hydrocarbons.

Results of Method B calculations for protection of human health from direct contact are presented in the following table. Output files from MTCATPH11.1 are presented in Appendix D.

RESULTS OF METHOD B CALCUALATIONS FOR SOIL DIRECT CONTACT PATHWAY

Sample	MTCA Method B Cleanup Level for TPH (direct contact pathway)
SDP75A-TP5(3)	5,917 mg/kg
SDP75A-TP2A(2)	3,408 mg/kg

8.4. Recommended TPH Cleanup Level

Based on the results of our analyses, we recommend a MTCA Method B TPH soil cleanup level of 3,400 mg/kg be used for this site. In our opinion, this value represents an appropriately conservative cleanup level which is protective of human health and the environment. However, as noted in "Section 7.2.4," alternative cleanup levels which are protective of potential terrestrial ecological receptors might be required if future site use will be something other than commercial or industrial.

9.0 SUMMARY

Soil, groundwater, and surface water assessment activities for this data gap assessment were conducted from September 2013 through December 2013. Field activities consisted of: (1) soil sampling from borings using direct-push, hollow-stem auger, and air rotary drill rigs and from test pits using an excavator/backhoe; (2) advancement of 10 borings and installation of nine new monitoring wells with soil and groundwater sampling; and (3) surface water sampling. The following is a summary of field and laboratory results completed for the data gap assessment:

- TPH was detected at concentrations greater than the Method B cleanup level of 3,400 mg/kg in soil samples from seven explorations at the site. Two explorations were located within Phase 1 (N-DP-8 and NDP8-TP3), located within Parcel 550, east of the "PCS Area 2 Excavation." Five explorations were located in three distinct areas within Phase 2 (S-DP-7, S-DP-75A, SDP75A-TP-2, SDP75A-TP5 and S-DP-101).
- Mercury was detected at concentrations greater than the MTCA Method A cleanup level in soil samples from five explorations at the site. One exploration was located within Phase 1 (N-DP-27), within the previously identified "Area 1." Four explorations were located within Parcel 070 of Phase 2 (S-DP-87, S-DP-88, S-DP-101 and TP-B4).

- cPAHs were detected at a concentration greater than the MTCA Method A cleanup level in a soil sample from one exploration (N-DP-27) location within the Phase 1. This exploration is located within the previously identified "Area 1."
- Petroleum hydrocarbons were not detected in soil samples analyzed from direct-push borings N-DP-16, N-DP-23 and N-DP-25, located near previous confirmation soil samples from the 2013 remedial excavation activities within the "Storm Line PCS Area Excavation" that contained ORPH at concentrations greater than MTCA Method A or Method B cleanup levels for TPH.
- Petroleum hydrocarbons were detected at concentrations less than MTCA Method A or B cleanup levels for petroleum hydrocarbons in soil samples analyzed from direct-push borings N-DP-9 and N-DP-19, and were not detected in the soil samples analyzed from direct-push boring N-DP-20 and monitoring well MW-4. These borings were located near the southern portions of the "Phase 2 PCS Excavation Area."
- Petroleum hydrocarbons were detected at concentrations below MTCA Method A or Method B cleanup levels in the soil sample analyzed from direct-push boring S-DP-37, and petroleum hydrocarbons were not detected in the soil sample analyzed from direct-push boring S-DP-52. These borings were located within the previously identified "Pilot Wood Waste Excavation"/ "Area 5."
- Some analytes, most with non-detect results, had laboratory-reported method detection limits (MDLs) at concentrations greater than their MTCA Method A cleanup levels. Specifically, EDB, benzene, methylene chloride, PCE, TCE and cPAH for some soil samples were listed with MDLs that exceeded their MTCA Method A cleanup levels.
- During the October 2013 groundwater monitoring event, total arsenic was detected in groundwater samples at concentrations greater than the MTCA Method A cleanup level at six monitoring wells (MW-1, MW-2, MW-3, MW-5, MW-7 and MW-8). DRPH and ORPH also were detected at concentrations greater than the MTCA Method A cleanup levels in well B-1.
- During the December 2013 groundwater monitoring event, groundwater with total arsenic concentrations greater than the MTCA Method A cleanup level was detected in four monitoring wells (MW-2, MW-3, MW-7 and MW-8). DRPH and ORPH also were detected at concentrations greater than MTCA Method A cleanup levels in wells MW-3 and B-1.
- COPCs were not detected at concentrations greater than applicable MTCA Method A cleanup levels in the groundwater sample collected on December 20, 2013 the from supplemental site monitoring well B-9.
- Groundwater flow in the unconfined aquifer underlying the site was estimated to be towards the northeast on October 28, 2013 and December 3, 2013 (generally flowing from upgradient portions of the site near Brender Creek, towards the Wenatchee River). Groundwater elevations during the October 28, 2013 groundwater monitoring event ranged from Elevation 781.95 in monitoring well MW-1 to Elevation 791.08 in monitoring well MW-8. Groundwater elevations during the December 3, 2013 groundwater monitoring event ranged from Elevation 782.37 in monitoring well MW-1 to Elevation 791.08 in monitoring well MW-8.
- Arsenic concentrations in groundwater generally decreased between the October and December 2013 groundwater monitoring events. The reduction in arsenic concentrations

could be due to stabilization of aquifer conditions surrounding the newly installed monitoring wells.

- Metals were not detected or were detected at concentrations less than cleanup criteria in the three surface water samples.
- Following the wetlands field delineation, GeoEngineers reviewed the critical areas ordinances and found that the wetland buffer for the Brender Creek corridor under existing conditions would be 120 feet wide opposed to the 85-foot buffer initially set in 2008. The increased wildlife activity in the corridor (beaver particularly) led to the increased buffer width.

10.0 CONCLUSIONS

10.1. Soil

A site-specific MTCA Method B cleanup level of 3,400 mg/kg for TPH was calculated for the site. Results of our explorations and analytical testing indicate that soil underlying portions of Phase 1 and Phase 2 are contaminated with COPCs, specifically TPH, mercury and cPAHs. Additionally, because MDLs for some analytes (benzene, EDB, methylene chloride, MTBE and TCE, benzene and CPAHs) exceeded MTCA Method A cleanup levels, these compounds should be included in the testing suite for confirmation samples during phase 2 removal actions. The exploration locations and sample depths where contaminants were detected at concentrations exceeding applicable MTCA cleanup levels are shown on Figures 2 through 5.

Within Phase 1, the locations of identified soil contamination based on the results of the data gap assessment include:

- An area within Parcel 010, located near direct-push boring N-DP-27, located along and south of Sunset Highway within the previously identified "Area 1." Based on analytical testing results, this area is contaminated with mercury and cPAHs at concentrations greater than applicable MTCA Method A cleanup levels for unrestricted land use.
- An area in the southeast portion Parcel 550, located east of the "PCS Area 2 Excavation." This area is contaminated with petroleum hydrocarbons, predominantly DRPH and ORPH, at concentrations greater than the site-specific MTCA Method B cleanup level for TPH.

Explorations generally were conducted, and soil samples were collected in areas where previous confirmation samples (collected during Phase 1 removal excavation activities in 2013) contained petroleum hydrocarbons at concentrations greater than MTCA Method A cleanup levels. Results of these samples and laboratory testing did not indicate the presence of PCS at concentrations greater than applicable cleanup levels. Based on review of analytical results provided by MFA, petroleum hydrocarbon concentrations in two previous confirmation soil samples (SL-F2 and A2-F21, collected from the bottom of the "Storm Line PCS Area" remedial excavation and "PCS Area 2" excavation, respectively) were greater than MTCA Method A cleanup levels, but less than the site-specific MTCA Method B cleanup level for TPH. However, the remaining previous confirmation soil samples that contained petroleum hydrocarbons at concentrations greater than MTCA Method A cleanup levels, also contained petroleum hydrocarbons at concentrations greater than the site-specific MTCA Method B cleanup level for TPH. Therefore, there is still the potential that soil remains at the previous confirmation sample locations that is contaminated with

petroleum hydrocarbons at concentrations greater than the site-specific MTCA Method B cleanup level. The Phase 1 confirmation soil samples with TPH concentrations greater than the site-specific MTCA Method B cleanup level are summarized below:

- Storm Line PCS Area Excavation
  - Floor samples: SL-F3(13,000 mg/kg), SL-F4(4,700 mg/kg), SL-F6(4,300 mg/kg)
  - Sidewall samples: SL-W4(20,300 mg/kg)
- PCS Area 2 Excavation
  - Floor samples: A2-F16(8,500 mg/kg), A2-F29(6,400 mg/kg), A2-F41(29,500 mg/kg), A2-F52(22,500 mg.kg), A2-F54(4,840 mg/kg),
  - Sidewall samples: A2-W37(4,710 mg/kg), A2-W38(4,770 mg/kg), A2-W39(6,110 mg/kg).

Based on information provided by MFA, floor samples were collected for informational purposes and did not influence extents of the excavations. Because floor soil samples were collected at depths below the static groundwater level, TPH concentrations measured in these samples could be biased high because of the possible presence of dissolved-phase TPH in pore water.

Recent exploration N-DP-23 was advanced near sidewall sample SL-W4 near the Storm Line PCS Area excavation. Results of analytical testing of a soil sample and field screening results did not indicate the presence of TPH at concentrations greater than the MTCA Method B cleanup level. Therefore, remaining contamination near SL-W4 could be of limited extent.

The area surrounding sidewall sample A2-W37 is planned for excavation as part of Phase 2 activities.

Based on information provided by MFA, sidewall sample A2-W-38 was collected at the edge of Mill Road, and excavation could not extend further without impacting the road.

Based on information provided by MFA, excavation was extended beyond the location of sidewall sample A2-W39. Sidewall sample A2-W24 and A2-W46 were collected near the location of A2-W39, and results indicated that petroleum hydrocarbons were below cleanup levels. However, the sidewall location at A2-W39 was not resampled after further excavation. Direct-push boring N-DP-21A was advanced within an unexcavated area near A2-W39. Field screening of soil samples collected from the boring did not indicate the presence of PCS.

Within Phase 2, the locations of identified soil contamination based on the results of the data gap assessment include:

- Four areas surrounding explorations within Parcel 070 where analytical results indicated soil was contaminated with mercury at concentrations greater than MTCA Method A cleanup levels for unrestricted land use. The soil sample from S-DP-101 also contained petroleum hydrocarbons (predominantly DRPH and ORPH) at concentration greater than the site-specific MTCA Method B cleanup level for TPH.
- An area straddling Parcel 250 and Parcel 150, where analytical results indicated soil was contaminated with petroleum hydrocarbons (predominantly DRPH and ORPH) at concentrations greater than the site-specific MTCA Method B cleanup level for TPH.

- The previously identified "Area 4," located within Parcel 200. This area is contaminated with petroleum hydrocarbons, predominantly ORPH, at concentrations greater than the site-specific MTCA Method B cleanup level for TPH.

Based on the results of the field explorations and analytical laboratory testing, we estimated the approximate extents and volume of contaminated soil within Phase 1 and Phase 2. The estimated areal extents, depths and volumes of contaminated soil also are presented in Figures 3 through 5. The approximate areal limits and depths of identified soil contamination were estimated based on the results of the explorations, field screening (where applicable) and laboratory analytical testing results. The contaminated soil depths used to estimate the volumes shown on Figures 3 through 5 generally extend approximately 1 to 2 feet below the sample depth containing tested COPCs at concentrations greater than applicable cleanup levels, or to the bottom of the observed soil unit containing contaminated soil at concentrations greater then applicable cleanup levels, with a maximum depth of about 2 feet below groundwater. The following table presents a summary of the identified contaminated soil areas.

CONTAMINATED SOIL AREAS SUMMARY TABLE

Area	Parcel	Identified Contaminants	Estimated Area (ft^2)	Estimated Depth (ft)	Estimated Volume (yd^3)	Reference Explorations
Phase 1[1]						
	550	TPH	1,670	8	500	N-DP-8, NDP8-TP3
	010	Mercury and cPAHs	<100	8	20	N-DP-27
Phase 1 Subtotal					**520**	
Phase 2						
	070	Mercury	315	6	70	S-DP-101
	070	Mercury	315	4	50	TP-B4
	070	Mercury	315	6	70	D-DP-88
	070	Mercury	315	6	70	S-DP-87
	250/150	TPH	1,000	5	180	S-DP-75A, SDP75A-TP5, SDP75A-TP2
	200	TPH	3,500	5	650	S-DP-7, GP-6, WL-1
Phase 2 Subtotal					**1,090**	
Total Estimated Volume					**1,610**	

Notes: [1] Volume estimates for Phase 1 do not include PCS remaining within the Phase 1 remedial excavation areas.

The estimated extent and volume of contaminated soil is based on widely spaced explorations and relatively limited analytical laboratory testing. The actual locations, extent and volume of contaminated soil could vary from those presented herein. Contractors conducting site excavation activities should be prepared to encounter soil containing COPCs at concentrations greater than applicable cleanup levels within other areas of the site.

Additionally, PCS remains within the Phase 1 remedial excavation areas. Based on information provided by MFA, the location of the confirmation samples containing PCS at concentrations greater than the calculated site-specific Method B cleanup level are generally located near the southern edge of the "PCS Area 2 Excavation" and the southern portions of the "Storm Line PCS Area Excavation." MFA also indicated that confirmation samples collected from the bottom of the excavations were located about 1 foot below groundwater at the time of excavation.

10.2. Groundwater

Groundwater containing arsenic at concentrations greater than the MTCA Method A cleanup level was detected in samples from several site monitoring wells. Arsenic can exist at several valence states. Arsenic most commonly exists as either arsenic (III) (+3) or arsenic (V) (+5). Under oxidizing conditions, arsenic (V) is the dominant species, usually present as arsenate ($HAsO_4^{-2}$ or $H_2AsO_4^-$). Under reducing conditions at a pH less than 9.2, arsenic (III) is the dominant species, usually present as arsenious acid (H_3AsO_3), and its conjugate base arsenite ($HASO_3^-$). Arsenic (III) is more soluble and mobile than arsenic (V). Therefore, arsenic is somewhat unique among metals in that it can be relatively mobile under reducing conditions. Results of field and laboratory groundwater quality testing indicate that reducing conditions are present at the site. Reducing conditions are typically characterized by the following groundwater conditions (relative to typical background or oxidative conditions).

- Low DO concentrations. Groundwater measurements indicate that DO concentrations are less than 1 mg/L, generally near zero.
- Negative ORP. ORP measurements (field probe measurements) were negative from all site monitoring wells.
- Decreased nitrate concentrations. Nitrate concentrations generally were lower (non-detect) within Phase 2 monitoring wells.
- Decreased concentrations of sulfates. Sulfate concentrations generally were lowest in groundwater samples from MW-3 and MW-8.
- Increased concentrations of methane. Methane was detected in groundwater samples from wells MW-1 through MW-8. Methane concentrations were highest in groundwater samples from wells MW-3 and MW-8.

Following removal of organic matter (predominantly wood waste, and to a lesser extent TPH) from the site, groundwater conditions should revert to oxidative conditions, which in turn should result in precipitation of arsenic out of groundwater, and a resulting reduction in the concentrations of arsenic in groundwater. Partial removal of wood waste material should reduce the concentration of arsenic in groundwater. However, the reduction of arsenic in groundwater with regard to concentrations and areal extent cannot be evaluated at this time.

10.3. Surface Water

Arsenic was not detected in surface water samples collected from Brender Creek. Potential implications regarding metals concentrations in surface water include impacts to the creek if water generated from the site during dewatering activities is discharged to the creek. Based on discussions with Ecology, Ecology's preferred option for disposal of water generated during dewatering activities is to re-infiltrate the water on-site within the Phase 1 area. Considerations that will have to be addressed by the contractor during design and operation of the contractor's dewatering system include: (1) sequencing dewatering and excavation activities ; and (2) sizing an infiltration area to accommodate the volume and flow rate of water that will be removed from the Phase 2 area during dewatering.

10.4. Wetlands Delineation

The proposed site clean-up should not have direct impacts to wetlands of the stream habitat. Removal of wood waste from within the buffer might result in some direct impact to the wetland buffer. There is a push-up berm surrounding the wetland perimeter that is more pronounced in the eastern and southern portions of the site and less prominent in the western portion of the site. Where the berm is less prominent, vegetation within the buffer is more complex compared to the lack of vegetation across much of the wetland buffer. Completing excavation and backfilling activities within the buffer should be feasible provided a simple buffer mitigation plan is developed and followed during such activities. After excavation activities are completed within the buffer area, clean fill should be placed in the excavation area and disturbed areas should be sloped away from the wetland and stabilized to control erosion. A mitigation plan is being prepared as a section of the wetland report.

11.0 LIMITATIONS

We have prepared this report for the exclusive use of the Washington State Department of Ecology and their authorized agents for the Former Cashmere Mill Site located in Cashmere, Washington.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to the Appendix G titled "Report Limitations and Guidelines for Use" for additional information pertaining to use of this report.

12.0 REFERENCES

GeoEngineers, Inc. "Preliminary Geotechnical Engineering Services, Redevelopment of Cashmere Mill Site, Mill Road and Sunset Highway, Cashmere, Washington." GEI File No. 18593-001-00, 2010.

GeoEngineers, Inc., "Dewatering Assessment, Cashmere Mill Site Remedial Excavation (Phase 2), Cashmere, Washington." GEI File No. 18593-001-01, 2013.

Maul Foster Alongi, Inc., Report to Port of Chelan County, "Site Characterization Report, Former Cashmere Mill Site, Cashmere, Washington," March 20, 2013.

Maul Foster Alongi, Inc., "Phase 1 Interim Action Report, Former Cashmere Mill Site," May 6, 2014.

Whitlock, I.A, and Kelly, T.M, "Relationship Between Subsurface Landflll Gas and Arsenic Mobilization into Groundwater," Groundwater Monitoring and Remediation Vol 30, No. 2, Spring 2010, pg 86-96.

TABLES

GeoEngineers

Table 1

Exploration and Sample Analyses Summary

Former Cashmere Mill Site

Cashmere, Washington

Exploration Number	Parcel Number	Date Completed	Exploration Total Depth (feet bgs)	Field Screen (Sheen)[1]	Field Screen (PID in ppm)[2]	Estimated depth to bottom of existing wood waste (ft)	Groundwater depth (in ft. encountered during drilling)
N-DP-1	650	9/9/2013	15	MS (5)	4.4	7.5	10
N-DP-2	650	9/9/2013	15	SS	14.5 (2.5)	12	9
N-DP-3	650	9/9/2013	20	SS	7	15	9.5
N-DP-3A	650	9/14/2013	11	SS	<1	>11	6
N-DP-3B	650	9/14/2013	15	SS	1.8	11	11.5
N-DP-4 (DELETED)							
N-DP-5	650	9/9/2013	9.5	NS	7.1	6	None
N-DP-5A	650	9/9/2013	5	NS	6.4	>5	None
N-DP-5B	650	9/10/2013	14.5	NS	9.8	10.5	8
N-DP-6	010	9/9/2013	15	NS	7.8	10	8
N-DP-7	005	9/10/2013	14	NS	22.2 (<1)	12	9
N-DP-8	550	9/10/2013	10	MS (5.5)	5.5	6.5	None
N-DP-8A	550	9/10/2013	15	SS	171 (9)	10	11
N-DP-9	550	9/10/2013	15	MS (5)	2.4	10	9.5
N-DP-10	005	9/9/2013	15	NS	8.4	14?	9
N-DP-11	500	9/14/2013	15	SS	<1	11	11 to 12
N-DP-12 (DELETED)							
N-DP-13	500	9/14/2013	15	SS	<1	5	12
N-DP-14 (DELETED)							
N-DP-15	010	9/9/2013	15	NS	8.9	5	9.5
N-DP-16	005	9/10/2013	14.5	NS	10.2 (12.5)	5.5	9
N-DP-17 (DELETED)							
N-DP-18 (DELETED)							
N-DP-19	550	9/10/2013	15	NS	9.6	6	5
N-DP-20 (DELETED)							
N-DP-21	550	9/10/2013	10.5	NS	9.2	NE	5
N-DP-21A	550	9/10/2013	10.5	NS	9.2	NE	5
N-DP-22 (DELETED)							
N-DP-23	005	9/10/2013	15	NS	2.5	NE	6.50
N-DP-24	500	9/14/2013	10	SS	<1	NE	None
N-DP-25	010	9/11/2013	15	NS	4	NE	7.5
N-DP-26 (DELETED)							
N-DP-27	010	9/10/2013	15	NS	4.2	NE	9.5
N-DP-28 (DELETED)							
N-DP-29 (DELETED)							
N-DP-30	010	9/10/2013	13	NS	3.6	NE	9
N-DP-31	005	9/10/2013	15	NS	4.2	NE	9.5
N-DP-32	550	9/10/2013	15	NS	2.2	NE	6
N-DP-33	550	9/11/2013	10	NS	2.4	NE	6
N-DP-33A		9/11/2013	10	NS	3.8	NE	7.5
N-DP-34 (DELETED)							
N-DP-35	005	9/11/2013	13	NS	4.9	NE	8.5
N-DP-35A		9/11/2013	10.5	NS	2.3	NE	7

Exploration Number	Parcel Number	Date Completed	Exploration Total Depth (feet bgs)	Field Screen (Sheen)[1]	Field Screen (PID in ppm)[2]	Estimated depth to bottom of existing wood waste (ft)	Groundwater depth (in ft. encountered during drilling)
N-DP-36	010	9/11/2013	15	NS	2.8	NE	8
N-DP-37 (DELETED)							
N-DP-38	500	9/14/2013	10	NS	<1	2	7
N-DP-39	500	9/14/2013	10	MS (3)	1.3	NE	None
N-DP-40 (DELETED)							
N-DP-41 (DELETED)							
N-DP-42	010	9/11/2013	10	NS	3.6	NE	NE
N-DP-42A	010	9/11/2013	12	NS	3.1	NE	11
N-DP-43	010	9/11/2013	10	NS	87 (1)	NE	None
N-DP-43A		9/11/2013	10	NS	2.5	NE	None
N-DP-43B		9/11/2013	10	NS	1.3	NE	None
N-DP-44	010	9/11/2013	10	NS	5.4	NE	None
N-DP-45	005	9/11/2013	10	NS	<1	NE	None
N-DP-46 (DELETED)							
N-DP-47	550	9/11/2013	4	NS	4.2	NE	None
N-DP-48	010	9/11/2013	8	NS	5.8	NE	None
N-DP-49	010	9/11/2013	5	NS	4.5	NE	None
N-DP-50	010	9/11/2013	14	NS	4.2	NE	10.5
N-DP-51	500	9/14/2013	10	NS	<1	NE	6.5
N-DP-52	010	9/11/2013	14	NS	3.1	NE	7.5
N-DP-53	010	9/11/2013	4	NS	5.1	NE	None
N-DP-54	010	9/11/2013	5	NS	4.6	NE	
MW-1	500	9/24/2013	21.5	NS	<1	NE	7
MW-2	010/005	10/10/2013	20.5	NS	<1	NE	6
MW-3	650	10/9/2013	21	NS	<1	13.5	7
MW-4	550	10/24/2013	21.5	NS	<1	5.5	6
NDP8-TP-1	550	11/12/2013	6.5	MS	150	>6.5	7
NDP8-TP2	550	11/12/2013	6	SS	<1	>6?	None
NDP8-TP3	550	11/12/2013	7	SS	134	>7	6.5
NDP8-TP4	550	11/12/2013	5.5	NS	24.2	>5.5	None
NDP8-TP5	550	11/12/2013	6.5	SS	87.6	3.5	None
S-DP-1	200	9/9/2013	7.5	NS	7.3	2.5	None
S-DP-1A	200	9/12/2013	11	NS	1.5	3	1.5
S-DP-1B		9/14/2013	10	SS	1.1	6.5	6.5
S-DP-2	200	9/12/2013	10	SS	19.1 (3)	2	2
S-DP-3 (DELETED)						0	
S-DP-4	200	9/12/2013	11	NS	2.9	NE	1.5
S-DP-4A	200	9/12/2013	10	NS	2.4	1.5	2
S-DP-5	200	9/12/2013	8	NS	<1	1.5	4
S-DP-5A	200	9/12/2013	8	NS	2.6	2	4
S-DP-6 (DELETED)							
S-DP-7	200	9/12/2013	9	MS (1)	<1	2	4
S-DP-8	200	9/12/2013	9	NS	<1	NE	1
S-DP-9	200	9/12/2013	10	NS	<1	5.5	4.5
S-DP-10	200	9/12/2013	10	SS	2	6	5
S-DP-10A (DELETED)							
S-DP-11	200	9/12/2013	8	NS	1.8	4?	6 INCHES
S-DP-12 (DELETED)							

Exploration Number	Parcel Number	Date Completed	Exploration Total Depth (feet bgs)	Field Screen (Sheen)[1]	Field Screen (PID in ppm)[2]	Estimated depth to bottom of existing wood waste (ft)	Groundwater depth (in ft. encountered during drilling)
S-DP-13	200	9/12/2013	12	NS	6.7	2?	1.5
S-DP-14	200	9/12/2013	10	SS	<1	5.5	3.5
S-DP-15	200	9/12/2013	10	NS	2.4	3	4
S-DP-16	200	9/12/2013	10	NS	<1	1	1
S-DP-17 (DELETED)							
S-DP-18		9/12/2013	10	NS	4.9	5	2
S-DP-19 (DELETED)							
S-DP-20	150	9/12/2013	4	NS	<1	>4	None
S-DP-20A		9/12/2013	10	NS	7.6	6.5	None
S-DP-21	200	9/12/2013	15	NS	3.2	5	4
S-DP-22	200	9/13/2013	9	SS	<1	NE	5
S-DP-23	200	9/13/2013	10	NS	<1	1	4.5
S-DP-24	200	9/13/2013	10	NS	<1	2	4.5
S-DP-25	200	9/13/2013	10	NS	<1	6	5
S-DP-26	150	9/12/2013	9	NS	1.7	NE	4
S-DP-27	150	9/12/2013	12.5	NS	4.5	6.5?	5.5
S-DP-28	150	9/12/2013	7	SS	1.8	4.5?	4.5
S-DP-29	150	9/12/2013	10	NS	1.6	2.5?	5
S-DP-30	150	9/12/2013	10	NS	1.5	5	6
S-DP-31 (DELETED)							
S-DP-32	150	9/12/2013	10	NS	1.4	5	4
S-DP-33 (DELETED)							
S-DP-34 (DELETED)							
S-DP-35	150	9/12/2013	9	NS	1	NE	4
S-DP-36 (DELETED)							
S-DP-37	150	9/13/2013	10	NS	1	2.5	4.5
S-DP-38 (DELETED)							
S-DP-39	150	9/12/2013	10	SS	1.6	5	4
S-DP-40	150	9/12/2013	10	NS	1.8	5?	4
S-DP-41 (DELETED)							
S-DP-42	150	9/13/2013	20	NS	2.5	5?	4.5
S-DP-43 (DELETED)							
S-DP-44 (DELETED)							
S-DP-45 (DELETED)							
S-DP-46 (DELETED)							
S-DP-47 (DELETED)							
S-DP-48 (DELETED)							
S-DP-49 (DELETED)							
S-DP-50	150	9/12/2013	10	NS	2.5	5.5?	5
S-DP-51 (DELETED)							
S-DP-52	150	9/14/2013	10	NS	<1	7.5?	4.5
S-DP-53	150	9/13/2013	10	NS	<1	7	8
S-DP-54	150	9/13/2013	15	NS	<1	>15?	9
S-DP-55	150	9/13/2013	9	NS	6	>9	4.5
S-DP-55A	150	9/14/2013	13	NS	<1	10.5	None
S-DP-56 (DELETED)							
S-DP-57 (DELETED)							
S-DP-58 (DELETED)							
S-DP-59 (DELETED)							

Exploration Number	Parcel Number	Date Completed	Exploration Total Depth (feet bgs)	Field Screen (Sheen)[1]	Field Screen (PID in ppm)[2]	Estimated depth to bottom of existing wood waste (ft)	Groundwater depth (in ft. encountered during drilling)
S-DP-60 (DELETED)							
S-DP-61 (DELETED)							
S-DP-62 (DELETED)							
S-DP-63	150	9/13/2013	9	SS	6.8	6?	6.5
S-DP-64 (DELETED)							
S-DP-65	150	9/13/2013	10	NS	4	7.5?	8
S-DP-66 (DELETED)							
S-DP-67 (DELETED)							
S-DP-68	150	9/13/2013	10	NS	1.2	8?	5.5 to 6
S-DP-69 (DELETED)							
S-DP-70	150	9/13/2013	15	NS	2.1	12	12.5
S-DP-71 (DELETED)							
S-DP-72	250	9/13/2013	10	NS	2.2	7	8.5 to 9
S-DP-73	250	9/13/2013	10	NS	<1	>10	None
S-DP-74 (DELETED)							
S-DP-75	250	9/13/2013	6	NS	<1	1	None
S-DP-75A	250	9/14/2013	10	SS	1.1	6	6
S-DP-76	250	9/14/2013	10	SS	<1	6	6
S-DP-77 (DELETED)							
S-DP-78	250	9/13/2013	10	NS	11 (1)	5	5.5
S-DP-79 (DELETED)							
S-DP-80	250	9/13/2013	15	NS	4.8	2	9
S-DP-81	250	9/14/2013	10	SS	1.4	9	7
S-DP-82	250	9/13/2013	10	NS	4.7	9	8.5
S-DP-83	250	9/13/2013	15	NS	1	12?	6
S-DP-84	250	9/14/2013	15	NS	2.8	7	9
S-DP-85	250	9/13/2013	10	NS	5.4	8.5	8
S-DP-86	070	9/13/2013	6.5	SS	2	NE	5
S-DP-87	070	9/14/2013	8	NS	<1	6.5?	1.5
S-DP-88	070	9/13/2013	10	SS	<1	7.5	8.5
S-DP-89 (DELETED)							
S-DP-90 (DELETED)							
S-DP-91 (DELETED)							
S-DP-92 (DELETED)							
S-DP-93	070	9/14/2013	10	NS	<1	6	5.5
S-DP-94	070	9/14/2013	10	SS	<1	7.5	6
S-DP-95	070	9/13/2013	10	SS	14 (3)	>10?	None
S-DP-96	070	9/13/2013	10	NS	1.9	>10?	5
S-DP-97	250	9/13/2013	15	NS	20.6 (2)	9	10
S-DP-98	070	9/13/2013	6	MS (4)	<1	5	None
S-DP-99	070	9/14/2013	10	NS	3.8	9	9
S-DP-100	070	9/14/2013	10	SS	<1	>10	8
S-DP-101	070	9/14/2013	10	SS	<1	7.5	
MW-5	200	10/24/2013	20	NS	<1	5	3
MW-6	200	10/8/2013	14	NS	<1	9.5?	3
MW-7	150	10/25/2013	21.5	NS	<1	NE	3
MW-8	070	10/25/2013	21.5	NS	<1	NE	4
AR-1	200	10/25/2013	4	NS	<1	3	3
SDP14-TP1	200	11/12/2013	2	SS	6	>2	None

Exploration Number	Parcel Number	Date Completed	Exploration Total Depth (feet bgs)	Field Screen (Sheen)[1]	Field Screen (PID in ppm)[2]	Estimated depth to bottom of existing wood waste (ft)	Groundwater depth (in ft. encountered during drilling)
SDP14-TP2	200	11/12/2013	2.5	NS	2.5	NE	None
SDP75A-TP1	250	11/12/2013	2.5	MS	17.5	>2.5?	None
SDP75A-TP1a	250	11/12/2013	3	SS	64.2	>3	None
SDP75A-TP1b	250	11/12/2013	2.5	NS	90.8	NE	None
SDP75A-TP2	250	11/12/2013	3	MS	66	>3	None
SDP75A-TP2a	250	11/12/2013	3	MS	170	2.5	None
SDP75A-TP3	250	11/12/2013	2.5	MS	106	1.5	None
SDP75A-TP3a	250	11/12/2013	3	NS	39	NE	None
SDP75A-TP4	250	11/12/2013	2	NS	137.8	NE	None
SDP75A-TP5	250	11/12/2013	3	SS	89.5	>3	None
SDP81-TP1	250	11/12/2013	3	SS	5	>3	None
SDP81-TP2	250	11/12/2013	3	SS	7.7	>3?	None
SDP81-TP3	250	11/12/2013	3	NS	43	>3	None
SDP81-TP4	250	11/12/2013	3	NS	8.9	>3	None
SDP87-TP1	070	12/19/2013	3	SS	4.7	1?	2.5
SDP87-TP2	070	12/19/2013	3.5	SS	22.6	NE	3
SDP87-TP3	070	12/19/2013	3.5	SS	6.6	2?	3
SDP87-TP4	070	12/19/2013	4	SS	10.8	2?	3
SDP88-TP1	070	11/12/2013	5	NS	6.8	>5	5
SDP88-TP2	070	11/12/2013	4	NS	4.2	>4	4
SDP88-TP3	070	11/12/2013	4	NS	4.3	3.5	4
SDP88-TP4	070	11/12/2013	4	NS	13	>4	None
SDP101-TP-1	070	11/12/2013	3.5	NS	7.1	1	None
SDP101-TP2	070	11/12/2013	3.5	SS	3.3	1	3.5
SDP101-TP3	070	11/12/2013	4	NS	3	1.5	3
SDP101-TP4	070	11/12/2013	4	SS	10	3?	3
SDP101-TP5	070	11/12/2013	3	NS	63	1.5?	3
TP-B1	250	12/20/2013	6.5	SS	<1	5?	5.5
TP-B2	070	12/20/2013	5	SS	7.9	3.5?	4
TP-B3	070	12/19/2013	5.5	SS	24.7	4?	4.5
TP-B4	070	12/20/2013	5	SS	<1	4?	4.5
TP-B5	070	12/20/2013	4	SS	<1	2?	4
TP-B6	070	12/20/2013	4.5	SS	<1	1.5?	4
TP-B7	070	12/20/2013	5	SS	<1	3?	5
TP-B8	070	12/20/2013	5	SS	<1	2?	5
TP-B9	070	12/19/2013	4.5	SS	11.5	1.5?	4
TP-B10	070	12/19/2013	4.5	SS	21	3?	3.5
TP-B11	070	12/19/2013	4.5	SS	184	3?	4

Notes:

[1] Moderate or heavy sheen, depth (feet) shown in parentheses.

[2] PID greater than 10 ppm, depth (feet) shown in parentheses.

NS = No Sheen; SS = Slight Sheen; MS = Moderate Sheen

NE = not encountered

Table 2

Summary of Chemical Analytical Results - Petroleum Hydrocarbons in Soil[1]

Former Cashmere Mill Site
Cashmere, Washington

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			NA	005	005	005	005	005	005	005	005	005	010	010
			S-DP-1B(6-6.5)	N-DP-7(0-1)	N-DP-10 (5-6)	N-DP-16(7-8)	N-DP-23 (1-2)	N-DP-31(8-9)	N-DP-32(3-4)	N-DP-35(2-3)	N-DP-35(7-8)	N-DP-45(8.5-9.5)	MW-2(5)	N-DP-6 (3-4)
			9/14/2013	9/10/2013	9/9/2013	9/10/2013	9/10/2013	9/10/2013	9/10/2013	9/11/2013	9/11/2013	9/11/2013	10/10/2013	9/9/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	5.0 U	5.1 U	4.6 U	5.6 U	4.9 U	5.5 U	5.2 U	4.4 U	4.4 U	5.1 U	4.1 U	6.6 U
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	**35**	13 U	13 U	14 U	13 U	14 U	14 U	13 U	13 U	14 U	13 U	16 U
Heavy oil-range petroleum hydrocarbons		mg/Kg	**220**	26 U	26 U	28 U	27 U	28 U	**35**	26 U	27 U	27 U	27 U	**38**
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	< 260	ND	ND	ND	ND	ND	< 54	ND	ND	ND	ND	< 61

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			010	010	010	010	010	010	010	010	010	010	010	010
			N-DP-15 (6-7)	N-DP-25(6-7)	N-DP-27(7-8)	N-DP-27(12-13)	N-DP-30(8-9)	N-DP-36(7-8)	N-DP-42(1.5-2.5)	N-DP-42(7.5-8.5)	N-DP-43(0.5-1.5)	N-DP-43(8-9)	N-DP-44(9-10)	N-DP-48(5-6)
			9/9/2013	9/11/2013	9/10/2013	9/10/2013	9/10/2013	9/11/2013	9/11/2013	9/11/2013	9/11/2013	9/11/2013	9/11/2013	9/11/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	4.6 U	4.8 U	5.2 U	**23** J	5.5 U	4.9 U	5.3 U	6.2 U	5.9 U	5.5 U	6.0 U	5.4 U
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	13 U	14 U	**19**	14 UJ	13 U	14 U	14 U	15 U	13 U	13 U	13 U	13 U
Heavy oil-range petroleum hydrocarbons		mg/Kg	27 U	29 U	**37**	28 UJ	26 U	29 U	28 U	29 U	26 U	26 U	26 U	27 U
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	ND	ND	< 61	< 65	ND	ND	ND	ND	ND	ND	ND	ND

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			010	010	010	010	010	070	070	070	070	070	070	070
			N-DP-49(2-3)	N-DP-50(6-7)	N-DP-52(6.5-7.5)	N-DP-53(1.5-2.5)	N-DP-54(1.5-2.5)	MW-8(2-3)	MW-9(5)	MW-9(10)	S-DP-86(3.5-4.5)	S-DP-87(5-6)	S-DP-88(4-5)	S-DP-88(7-8)
			9/11/2013	9/11/2013	9/11/2013	9/11/2013	9/11/2013	10/25/2013	12/16/2013	12/16/2013	9/13/2013	9/14/2013	9/13/2013	9/13/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	4.6 U	5.4 U	5.5 U	5.5 U	5.6 U	6.36 U	11.7 U	7.70 U	5.1 U	4.6 U	**37**	9.7 UJ
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	13 U	15 U	15 U	13 U	15 U	**19.4**	15.2 U	12.9 U	14 U	14 U	**33**	**35** J
Heavy oil-range petroleum hydrocarbons		mg/Kg	**35**	29 U	30 U	26 U	30 U	**162**	**39.1**	32.3 U	29 U	28 U	**160**	**150** J
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	< 53	ND	ND	ND	ND	< 188	<66	ND	ND	ND	**230**	< 195

Please refer to footnotes on Page 5

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			070 S-DP-93(5-6) 9/14/2013	070 S-DP-94(5-6) 9/14/2013	070 S-DP-95(3-4) 9/13/2013	070 S-DP-96(7-8) 9/13/2013	070 S-DP-98(1-1.5) 9/13/2013	070 S-DP-99(3-4) 9/14/2013	070 S-DP-100(5-6) 9/13/2013	070 S-DP-101(3-3.5) 9/14/2013	070 S-DP-101(7-7.5) 9/14/2013	070 S-DP87-TP2 (2-3) 12/19/2013	070 S-DP87-TP4 (2-3) 12/19/2013	070 SDP101-TP1(3) 11/12/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	1.4 U	**2.4**	**48**	1.2 UJ	0.92 UJ	4.7 U	8.6 U	10 U	7.0 UJ	6.9 U	5.51 U	–
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	17 U	15 U	**120**	16 U	13 U	14 U	**220**	**520**	17 UJ	12.6 U	10.6 U	18.2 U
Heavy oil-range petroleum hydrocarbons		mg/Kg	**44**	**35**	**170**	31 U	26 U	27 U	**290**	**3,800**	34 UJ	31.4 U	26.6 U	45.4 U
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	< 62	< 52	**338**	ND	ND	ND	< 519	**4,320**	ND	ND	ND	ND

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			070 SDP101-TP2(3.5) 11/12/2013	070 SDP101-TP3(3) 11/12/2013	070 SDP101-TP4(3) 11/12/2013	070 SDP101-TP5(2.5) 11/13/2013	070 TP-B3 (3-4) 12/19/2013	070 TP-B9 (3-4) 12/19/2013	070 TP-B10 (3-4) 12/19/2013	070 TP-B11 (3-4) 12/19/2013	150 S-DP-20A(2.5-3.5) 9/12/2013	150 S-DP-26(1-2) 9/12/2013	150 S-DP-27(3-4) 9/12/2013	150 S-DP-28(3-4) 9/12/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	–	–	–	–	7.19 U	7.36 U	8.54 U	5.12 U	7.4 U	6.6 U	7.8 U	5.0 U
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	15.5 U	18.5 U	17.0 U	18.2 U	**14.6**	12.7 U	11.2 U	10.4 U	16 U	**18**	17 U	**22**
Heavy oil-range petroleum hydrocarbons		mg/Kg	38.7 U	46.1 U	42.5 U	45.5 U	**46.4**	31.9 U	28.1 U	26.1 U	32 U	**130**	34 U	**95**
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	ND	ND	ND	ND	<68	ND	ND	ND	ND	< 155	ND	< 122

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			150 S-DP-29(8-9) 9/12/2013	150 S-DP-30(1-2) 9/12/2013	150 S-DP-32(3-4) 9/12/2013	150 S-DP-35(2-3) 9/12/2013	150 S-DP-37(1-2) 9/13/2013	150 S-DP-39(2-3) 9/12/2013	150 S-DP-40(1-2) 9/12/2013	150 S-DP-42(19-20) 9/13/2013	150 S-DP-42(5-6) 9/13/2013	150 S-DP-50(3-4) 9/12/2013	150 S-DP-52(6.5-7.5) 9/14/2013	150 S-DP-53(7-8) 9/13/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	5.4 U	4.6 U	5.2 U	5.2 U	5.9 U	8.6 U	4.8 U	7.0 U	5.5 U	4.6 U	6.2 U	7.0 U
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	14 U	**380**	14 U	13 U	**130**	19 U	13 U	15 U	15 U	13 U	16 U	16 U
Heavy oil-range petroleum hydrocarbons		mg/Kg	28 U	**440**	29 U	27 U	**450**	37 U	26 U	30 U	30 U	27 U	32 U	32 U
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	ND	< 825	ND	ND	< 586	ND	ND	ND	ND	ND	ND	ND

Please refer to footnotes on Page 5

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			150 S-DP-55(0.5-1.5) 9/13/2013	150 S-DP-55A(10-11) 9/14/2013	150 S-DP-65(4-5) 9/13/2013	150 MW-7(2-3) 10/25/2013	200 AR-1(2-3) 10/25/2013	200 S-DP-4(1-2) 9/12/2013	200 S-DP-5(2.5-3.5) 9/12/2013	200 S-DP-7(1-2) 9/12/2013	200 S-DP-7(6.5-7.5) 9/12/2013	200 S-DP-8(6.5-7.5) 9/12/2013	200 S-DP-9(6.5-7.5) 9/12/2013	200 S-DP-10(1-2) 9/12/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	7.1 U	12 U	**20**	7.09 U	7.16 U	6.5 U	5.6 U	**81**	5.1 U	5.3 U	4.3 U	7.2 U
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	14 U	22 U	**120**	**12.8**	12.2 U	**280**	14 U	**770**	14 U[4] 14 U	13 U	14 U	17 U
Heavy oil-range petroleum hydrocarbons		mg/Kg	**49**	45 U	**170**	**88.7**	30.5 U	**1,300**	29 U	**2,800**	**69**[4] 27 U	27 U	27 U	34 U
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	< 70	ND	**310**	< 109	ND	< 1,587	ND	**3,651**	< 88	ND	ND	ND

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			200 S-DP-11(5-6.5) 9/12/2013	200 S-DP-13(0-1) 9/12/2013	200 S-DP-14(1.5-2.5) 9/12/2013	200 S-DP-14(5-6) 9/12/2013	200 S-DP-15(2-3) 9/12/2013	200 S-DP-16(5-6) 9/12/2013	200 S-DP-18(0-1) 9/12/2013	200 S-DP-2(1.5-2.5) 9/12/2013	200 S-DP-21(11-12) 9/12/2013	200 S-DP-22(6-7) 9/13/2013	200 S-DP-23(2-3) 9/13/2013	200 S-DP-24(2-3) 9/13/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	5.5 U	5.5 U	4.9 U	5.0 U	15 U	4.9 U	**10**	**40**	5.4 U	4.7 U	5.5 U	6.5 U
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	14 U	**17**	510 U	**110**	**110**	14 U	270 U	**80**	14 U	14 U	13 U	15 U
Heavy oil-range petroleum hydrocarbons		mg/Kg	28 U	**85**	**2,700**	**690**	**110**	**87**	**1,700**	**130**	29 U	27 U	26 U	30 U
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	ND	< 108	< 3,214.9	< 805	< 235	< 106	< 1,980	**250**	ND	ND	ND	ND

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			200 S-DP-25(5-6) 9/13/2013	200 S-DP-14-TP1(2) 11/12/2013	200 S-DP-14-TP2(2) 11/12/2013	200 MW-5(2.5-2.9) 10/24/2013	200 MW-6(5) 10/9/2013	250 S-DP-75A(2-3) 9/14/2013	250 S-DP-75A(5-6) 9/14/2013	250 S-DP-76(5-6) 9/14/2013	250 S-DP-78(0-1) 9/13/2013	250 S-DP-80(2-3) 9/13/2013	250 S-DP-81(2-2.5) 9/14/2013	250 S-DP-81(6-7) 9/14/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	6.5 U	–	–	8.00 U	4.5 U	**8.6**	**5.5** J	8.7 U	8.8 U	5.7 U	**130**	30 J
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	16 U	**33.5**	**32.2**	12.3 U	14 U	**1,900**	13 UJ	18 U	**120**	13 U	**1,100**	190 J
Heavy oil-range petroleum hydrocarbons		mg/Kg	32 U	**374**	**222**	30.8 U	**58**	**8,800**	26 UJ	**41**	**380**	26 U	**2,100**	370 J
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	ND	**408**	**254**	ND	< 77	**10,709**	< 45	< 68	< 509	ND	**3,330**	590 J

Please refer to footnotes on Page 5

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			250 S-DP-82(7.5-8.5) 9/13/2013	250 S-DP-83(9-10) 9/13/2013	250 S-DP-84(6.5-7.5) 9/14/2013	250 S-DP-84(10-11) 9/14/2013	250 S-DP-85(7.5-8.5) 9/13/2013	250 S-DP-97(2-3) 9/13/2013	250 S-DP-97(8-9) 9/13/2013	250 SDP75A-TP1(2.5) 11/12/2013	250 SDP75A-TP1A(3) 11/13/2013	250 SDP75A-TP1B(2) 11/13/2013	250 SDP75A-TP2(3) 11/12/2013	250 SDP75A-TP2A(2) 11/13/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	**44**	**8.8**	8.0 U	5.7 U	6.5 U	**41** J	5.2 U	–	–	–	–	7.34 U
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	**240**	15 U	15 U	15 U	15 U	**810**	14 U	**187**	**357**	**208**	**1,020**	**125**
Heavy oil-range petroleum hydrocarbons		mg/Kg	**370**	31 U	29 U	30 U	29 U	**920**	28 U	**1,020**	**1,490**	**1,150**	**5,640**	**890**
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	**654**	< 55	ND	ND	ND	**1,771**	ND	**1,207**	**1,847**	**1,358**	**6,660**	< 1,022

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			250 SDP75A-TP3(2.5) 11/12/2013	250 SDP75A-TP3A(2.5) 11/13/2013	250 SDP75A-TP4(2) 11/12/2013	250 SDP75A-TP5(3) 11/12/2013	250 SDP81-TP1(2) 11/12/2013	250 SDP81-TP2(2) 11/12/2013	250 SDP81-TP3(2) 11/12/2013	250 SDP81-TP4(2) 11/12/2013	250 TP-B1 (4-5) 12/20/2013	500 N-DP-11(5-6) 9/14/2013	500 N-DP-13(6-7) 9/14/2013	500 N-DP-24(7-8) 9/14/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	–	–	–	**11.6**	7.82 U	8.60 U	36.4 U	8.89 U	17.3 U	5.7 U	5.7 U	7.5 U
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	**22.0**	11.7 U	15.3 U	**794**	17.6 U	**31.3**	**139**	**39.7**	104 U	14 UJ	14 U	14 U
Heavy oil-range petroleum hydrocarbons		mg/Kg	**89.4**	29.3 U	38.3 U	**4,370**	**61.6**	**172**	**874**	**275**	261 U	27 UJ	29 U	27 U
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	**111**	ND	ND	**5,176**	< 87	< 212	< 1049	< 324	ND	ND	ND	ND

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			500 N-DP-38(6.5-7) 9/14/2013	500 N-DP-39(2-3) 9/14/2013	500 N-DP-51(2-3) 9/14/2013	500 MW-1(5-5.6) 10/24/2013	550 N-DP-8 (5.5-6.5) 9/10/2013	550 N-DP-8A (2-3) 9/10/2013	550 N-DP-9 (5-6) 9/10/2013	550 N-DP-19 (1-2) 9/10/2013	550 N-DP-21 (1.5-2.5) 9/10/2013	550 N-DP-33(5-6) 9/11/2013	550 N-DP-47(1.5-2.5) 9/11/2013	550 NDP8-TP1(6) 11/12/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	2.6 U	6.0 U	6.0 U	3.43 U	6.1 U	**20**	4.2 U	5.4 U	4.3 U	4.6 U	5.0 U	–
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	14 U	14 U	14 U	10.2 U	**1,400** J	**110**	**140**	**16**	13 U	13 U	**210**	**12.5**
Heavy oil-range petroleum hydrocarbons		mg/Kg	27 U	28 U	29 U	25.6 U	**11,000** J	**680**	**1,300**	**130**	26 U	26 U	**530**	31.3 U
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	ND	ND	ND	ND	**12,400** J	**810**	< 1,444	< 151	ND	ND	< 745	< 44

Please refer to footnotes on Page 5

	Regulatory Levels[2]	Units	Parcel Number, Sample Number (Depth in Feet) and Date Collected											
			550 NDP8-TP2(6) 11/12/2013	550 NDP8-TP3(6) 11/12/2013	550 NDP8-TP4(5.5) 11/12/2013	550 NDP8-TP5(6.5) 11/12/2013	550 MW-4(5-5.7) 10/24/2013	650 N-DP-1 (6-7) 9/9/2013	650 N-DP-2 (2.5-3) 9/9/2013	650 N-DP-3(5-6) 9/9/2013	650 N-DP-3A(5-6) 9/14/2013	650 N-DP-3B(10-11) 9/14/2013	650 N-DP-5 (2-3) 9/9/2013	650 N-DP-5B (5-6) 9/10/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons		mg/Kg	–	–	–	6.13 U	7.13 U	**24**	**69**	**19**	**15**	14 U	4.7 U	5.7 U
Method NWTPH-Dx														
Diesel-range petroleum hydrocarbons		mg/Kg	12.8 U	**1,230**	17.6 U	13.4 U	12.1 U	**38**	**290**	**220**	**48**	420 J	**19**	**380**
Heavy oil-range petroleum hydrocarbons		mg/Kg	32.1 U	**10,500**	**87.6**	**54.1**	30.3 U	**150**	**150**	**160**	**34**	1,200 J	**94**	**1,200**
Total Petroleum Hydrocarbons														
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	ND	**11,730**	< 105	< 74	ND	**212**	**509**	**399**	**97**	< 1,634	<118	< 1,586

	Regulatory Levels[2]	Units	650 MW-3(5) 10/9/2013
Method NWTPH-Gx			
Gasoline-range petroleum hydrocarbons		mg/Kg	4.7 UJ
Method NWTPH-Dx			
Diesel-range petroleum hydrocarbons		mg/Kg	**220**
Heavy oil-range petroleum hydrocarbons		mg/Kg	**140**
Total Petroleum Hydrocarbons			
Calculated total petroleum hydrocarbons[3]	3,400	mg/Kg	< 365

Notes:

[1]Chemical analyses conducted by TestAmerica of Portland, Oregon and Spokane, Washington.

[2]Regulatory level refers to Washington State Model Toxics Control Act (MTCA) Method B cleanup level for TPH.

[3]Total petroleum hydrocarbons calculated as the sum of gasoline-range, diesel-range and heavy oil-range petroleum hydrocarbons.

[4]Sample analyzed for NWTPH-Dx with and without silica gel cleanup. Both results reported.

Bold indicates concentration was detected above reporting limit.

Red outline indicates concentration greater than calculated MTCA TPH regulatory level.

U indicates analyte not detected at a concentration greater than listed reporting limit.

J indicates result is qualified as estimated. Refer to applicable Data Validation Report in Appendix C for details.

ND = Not Detected. Gasoline-range, diesel-range and heavy oil-range petroleum hydrocarbons were not detected and the sum of reporting limits for gasoline-range, diesel-range and oil-range petroleum hydrocarbons is less than MTCA Method B cleanup level for TPH.

< 260. One or more analytes was detected at a concentration greater than the reporting limit. Value equals sum of detection(s) plus reporting limits for non-detected analytes.

"--" = not analyzed

Table 3

Summary of Chemical Analytical Results - VOCs, SVOCs in Soil[1]

Former Cashmere Mill Site
Cashmere, Washington

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled												
			010 N-DP-27(7-8) 9/10/2013	010 N-DP-43(0.5-1.5) 9/11/2013	070 S-DP-88(4-5) 9/13/2013	070 S-DP-88(7-8) 9/13/2013	070 S-DP-95(3-4) 9/13/2013	070 S-DP-101(3-3.5) 9/14/2013	070 SDP87-TP2(2-3) 12/19/2013	070 SDP87-TP4(2-3) 12/19/2013	070 TP-B3 (3-4) 12/19/2013	070 TP-B9 (3-4) 12/19/2013	070 TP-B10 (3-4) 12/19/2013	070 TP-B11 (1-2) 12/19/2013	070 MW-9(10) 12/16/2013
Method EPA 8260B															
1,1,1,2-Tetrachloroethane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,1,1-Trichloroethane	2,000	ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,1,2,2-Tetrachloroethane		ug/Kg	130 U	150 U	180 U	240 UJ	**780** J	–	–	–	–	–	–	–	–
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
1,1,2-Trichloroethane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,1-Dichloroethane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,1-Dichloroethene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,1-Dichloropropene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,2,3-Trichlorobenzene		ug/Kg	650 U	740 U	910 U	1200 UJ	850 UJ	–	–	–	–	–	–	–	–
1,2,3-Trichloropropane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,2,4-Trichlorobenzene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,2,4-Trimethylbenzene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,2-Dibromo-3-Chloropropane		ug/Kg	650 U	740 U	910 U	1200 UJ	850 UJ	–	–	–	–	–	–	–	–
1,2-dibromoethane (EDB)	5	ug/Kg	22 U[7]	25 U[7]	31 U[7]	41 UJ[7]	29 UJ[7]	–	–	–	–	–	–	–	–
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,2-Dichloroethane (EDC)		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,2-Dichloropropane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,3,5-Trimethylbenzene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,3-Dichloropropane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
2,2-Dichloropropane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
2-Butanone (MEK)		ug/Kg	1300 U	1500 U	1800 U	2400 UJ	1700 UJ	–	–	–	–	–	–	–	–
2-Butanone, 4-(Acetyloxy)-		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
2-Chlorotoluene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
2-Hexanone		ug/Kg	1300 U	1500 U	1800 U	2400 UJ	1700 UJ	–	–	–	–	–	–	–	–
4-Chlorotoluene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
4-Methyl-2-Pentanone (Methyl isobutyl ketone)		ug/Kg	650 U	740 U	910 U	1200 UJ	850 UJ	–	–	–	–	–	–	–	–
Acetone		ug/Kg	3200 U	3700 U	4500 U	6100 UJ	4300 UJ	–	–	–	–	–	–	–	–
Benzene	30	ug/Kg	26 U[7]	30 U[7]	36 U[7]	49 UJ[7]	34 UJ[7]	–	6.9 U	5.51 U	7.19 U	7.36 U	8.54 U	5.12 U	7.7 U
Bromobenzene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Bromochloromethane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Bromodichloromethane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Bromoform (Tribromomethane)		ug/Kg	650 U	740 U	910 U	1200 UJ	850 UJ	–	–	–	–	–	–	–	–
Bromomethane		ug/Kg	650 U	740 U	910 U	1200 UJ	850 UJ	–	–	–	–	–	–	–	–
Butane, 2-methoxy-2-methyl-		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
Carbon Disulfide		ug/Kg	1300 U	1500 U	1800 U	2400 UJ	1700 UJ	–	–	–	–	–	–	–	–
Carbon Tetrachloride		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Chlorobenzene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Chloroethane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Chloroform		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Chloromethane		ug/Kg	650 U	740 U	910 U	1200 UJ	850 UJ	–	–	–	–	–	–	–	–
cis-1,2-Dichloroethene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Cis-1,3-Dichloropropene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Cyclohexane, Methyl-		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
Dibromochloromethane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Dibromomethane		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–

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			010 N-DP-27(7-8) 9/10/2013	010 N-DP-43(0.5-1.5) 9/11/2013	070 S-DP-88(4-5) 9/13/2013	070 S-DP-88(7-8) 9/13/2013	070 S-DP-95(3-4) 9/13/2013	070 S-DP-101(3-3.5) 9/14/2013	070 SDP87-TP2(2-3) 12/19/2013	070 SDP87-TP4(2-3) 12/19/2013	070 TP-B3 (3-4) 12/19/2013	070 TP-B9 (3-4) 12/19/2013	070 TP-B10 (3-4) 12/19/2013	070 TP-B11 (1-2) 12/19/2013	070 MW-9(10) 12/16/2013
Dichlorodifluoromethane (CFC-12)		ug/Kg	650 U	740 U	910 U	1200 UJ	850 UJ	–	–	–	–	–	–	–	–
Ethylbenzene	6,000	ug/Kg	130 U	150 U	180 U	240 UJ	**190** J	–	138 U	110 U	144 U	147 U	171 U	102 U	154 U
HCFC-21		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
Hexachlorobutadiene		ug/Kg	**31** JB	**42** JB	**39** JB	970 UJ	680 UJ	–	–	–	–	–	–	–	–
Hexane		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
Isopropylbenzene (Cumene)		ug/Kg	260 U	300 U	360 U	490 UJ	340 UJ	–	–	–	–	–	–	–	–
Methyl t-butyl ether (MTBE)	100	ug/Kg	17 U[7]	19 U[7]	24 U[7]	32 UJ[7]	22 UJ[7]	–	–	–	–	–	–	–	–
Methylene Chloride	20	ug/Kg	18 U[7]	**31** J	25 U[7]	34 UJ[7]	24 UJ[7]	–	–	–	–	–	–	–	–
Naphthalene	5,000[3]	ug/Kg	260 U	300 U	**46** JB	**490** JB	340 UJ	–	–	–	–	–	–	–	–
n-Butylbenzene		ug/Kg	650 U	740 U	910 U	1200 UJ	850 UJ	–	–	–	–	–	–	–	–
n-Propylbenzene		ug/Kg	130 U	150 U	180 U	240 UJ	**92** J	–	–	–	–	–	–	–	–
Phenol, 2-bromo-		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
p-Isopropyltoluene		ug/Kg	260 U	300 U	**690**	**73** J	**40000** J	–	–	–	–	–	–	–	–
Sec-Butylbenzene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Styrene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Tert-Butylbenzene		ug/Kg	130 U	150 U	180 U	240 UJ	**85** J	–	–	–	–	–	–	–	–
Tetrachloroethene (PCE)	50	ug/Kg	35 U[7]	40 U[7]	49 U[7]	66 UJ[7]	46 UJ[7]	–	–	–	–	–	–	–	–
Toluene	7,000	ug/Kg	130 U	150 U	**77** J	240 UJ	**4600** J	–	138 U	110 U	144 U	147 U	171 U	102 U	154 U
Total Xylenes		ug/Kg	–	–	–	–	–	–	2070 U	1650 U	2160 U	2210 U	2560 U	1540 U	2310 U
Trans-1,2-Dichloroethene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Trans-1,3-Dichloropropene		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Trans-1,4-Dichloro-2-butene		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
Trichloroethene (TCE)	30	ug/Kg	27 U[7]	31 U[7]	38 U[7]	51 UJ[7]	36 UJ[7]	–	–	–	–	–	–	–	–
Trichlorofluoromethane (CFC-11)		ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	–	–	–	–	–	–	–
Vinyl Chloride		ug/Kg	650 U	740 U	910 U	1200 UJ	850 UJ	–	–	–	–	–	–	–	–
Xylene, m-,p-	9,000[4]	ug/Kg	260 U	300 U	360 U	490 UJ	340 UJ	–	552 U	441 U	576 U	589 U	683 U	410 U	616 U
Xylene, o-	9,000[4]	ug/Kg	130 U	150 U	180 U	240 UJ	170 UJ	–	276 U	220 U	288 U	294 U	342 U	205 U	308 U
Method EPA 8270C															
1,2,4-Trichlorobenzene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
1-Methylnaphthalene		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
2,2'-Oxybis[1-chloropropane]		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2,4,5-Trichlorophenol		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2,4,6-Trichlorophenol		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2,4-Dichlorophenol		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2,4-Dimethylphenol		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2,4-Dinitrophenol		ug/Kg	1700 U	1700 U	2000 U	2500 UJ	–	–	–	–	–	–	–	–	–
2,4-Dinitrotoluene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2,6-Dinitrotoluene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2-Chloronaphthalene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2-Chlorophenol		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2-Methylnaphthalene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
2-Nitroaniline		ug/Kg	1700 U	1700 U	2000 U	2500 UJ	–	–	–	–	–	–	–	–	–
2-Nitrophenol		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
3 & 4 Methylphenol		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
3,3'-Dichlorobenzidine		ug/Kg	710 U	680 U	820 U	120 J	–	–	–	–	–	–	–	–	–
3-Nitroaniline		ug/Kg	1700 U	1700 U	2000 U	2500 UJ	–	–	–	–	–	–	–	–	–
4,6-Dinitro-2-Methylphenol		ug/Kg	1700 U	1700 U	2000 U	2500 UJ	–	–	–	–	–	–	–	–	–
4-Bromophenyl phenyl ether		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
4-Chloro-3-Methylphenol		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
4-Chloroaniline		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
4-Chlorophenyl-Phenylether		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–

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4-Nitroaniline		ug/Kg	1700 U	1700 U	2000 U	2500 UJ	–	–	–	–	–	–	–	–	–
4-Nitrophenol (p-Nitrophenol)		ug/Kg	1700 U	1700 U	2000 U	2500 UJ	–	–	–	–	–	–	–	–	–
Acenaphthene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Acenaphthylene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Anthracene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Atrazine		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Benzidine		ug/Kg	3600 U	3400 U	4100 U	5100 UJ	–	–	–	–	–	–	–	–	–
Benzo(a)anthracene	100[5]	ug/Kg	**81** J	21 U[7]	25 U[7]	510 UJ	–	–	–	–	–	–	–	–	–
Benzo(a)pyrene	100[5]	ug/Kg	**46** J	21 U[7]	25 U[7]	510 UJ	–	–	–	–	–	–	–	–	–
Benzo(b)fluoranthene	100[5]	ug/Kg	**200** J	27 U[7]	32 U[7]	510 UJ	–	–	–	–	–	–	–	–	–
Benzo(ghi)perylene		ug/Kg	**97** J	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Benzo(k)fluoranthene	100[5]	ug/Kg	43 U[7]	41 U[7]	49 U[7]	510 UJ	–	–	–	–	–	–	–	–	–
Bis(2-Chloroethoxy)Methane		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Bis(2-Chloroethyl)Ether		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Bis(2-Ethylhexyl) Phthalate		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Butyl benzyl phthalate		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Caprolactam		ug/Kg	1700 U	1700 U	2000 U	2500 UJ	–	–	–	–	–	–	–	–	–
Carbazole		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Chrysene	100[5]	ug/Kg	**130** J	28 U	33 U	510 UJ	–	–	–	–	–	–	–	–	–
Cresol		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
Dibenzo(a,h)anthracene	100[5]	ug/Kg	**82** J	20 U	23 U	510 UJ	–	–	–	–	–	–	–	–	–
Dibenzofuran		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Dibutyl phthalate		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Diethyl phthalate		ug/Kg	710 U	680 U	820 U	1000 UJ	–	–	–	–	–	–	–	–	–
Dimethyl phthalate		ug/Kg	**86** J	**35** JB	**950** B	510 UJ	–	–	–	–	–	–	–	–	–
Di-N-Octyl Phthalate		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Ethanone, 1-Phenyl-		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Fluoranthene		ug/Kg	**140** J	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Fluorene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Hexachlorobenzene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Hexachlorobutadiene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Hexachlorocyclopentadiene		ug/Kg	1700 UJ	1700 UJ	2000 U	2500 UJ	–	–	–	–	–	–	–	–	–
Hexachloroethane		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Indeno(1,2,3-cd)pyrene	100[5]	ug/Kg	**140** J	23 U[7]	27 U[7]	510 UJ	–	–	–	–	–	–	–	–	–
Isophorone		ug/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–
m,p-Cresol		ug/Kg	360 U	340 U	410 U	**120** J	–	–	–	–	–	–	–	–	–
Naphthalene	5,000	ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Nitrobenzene		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
N-Nitrosodi-n-propylamine		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
N-Nitrosodiphenylamine (as diphenylamine)		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
o-Cresol (2-methylphenol)		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Pentachlorophenol		ug/Kg	1700 U	1700 U	2000 U	2500 UJ	–	–	–	–	–	–	–	–	–
Phenanthrene		ug/Kg	**63 J**	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Phenol		ug/Kg	360 U	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
Pyrene		ug/Kg	**170 J**	340 U	410 U	510 UJ	–	–	–	–	–	–	–	–	–
calculated cPAHs	100[6]	ug/Kg	101.9 J	<34.48	<40.93	<51.22	–	–	–	–					–
Method NWEPH															
C10-C12 Aliphatics		mg/kg	–	–	–	–	–	47 UJ	–	–					–
C10-C12 Aromatics		mg/kg	–	–	–	–	–	47 UJ	–	–					–
C12-C16 Aliphatics		mg/kg	–	–	–	–	–	47 UJ	–	–					–
C12-C16 Aromatics		mg/kg	–	–	–	–	–	47 UJ	–	–					–
C16-C21 Aliphatics		mg/kg	–	–	–	–	–	47 UJ	–	–					–
C16-C21 Aromatics		mg/kg	–	–	–	–	–	47 UJ	–	–					–
C21-C34 Aliphatics		mg/kg	–	–	–	–	–	28 UJ	–	–					–

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C21-C34 Aromatics		mg/kg	–	–	–	–	–	**240** J	–	–					–
C8-C10 Aliphatics		mg/kg	–	–	–	–	–	--	–	–					–
C8-C10 Aromatics		mg/kg	–	–	–	–	–	--	–	–					–
Method NWVPH															
C10-C12 Aliphatics		mg/kg	–	–	–	–	–	15 UJ	–	–					–
C10-C12 Aromatics		mg/kg	–	–	–	–	–	15 UJ	–	–					–
C12-C13 Aromatics		mg/kg	–	–	–	–	–	15 UJ	–	–					–
C5-C6 Aliphatics		mg/kg	–	–	–	–	–	15 UJ	–	–					–
C6-C8 Aliphatics		mg/kg	–	–	–	–	–	15 UJ	–	–					–
C8-C10 Aliphatics		mg/kg	–	–	–	–	–	15 UJ	–	–					–
C8-C10 Aromatics		mg/kg	–	–	–	–	–	15 UJ	–	–					–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled												
			070 MW-9(5) 12/16/2013	150 S-DP-20A(2.5-3.5) 9/12/2013	200 S-DP-2(1.5-2.5) 9/12/2013	200 S-DP-7(1-2) 9/12/2013	200 S-DP-13(0-1) 9/12/2013	200 S-DP-14(1.5-2.5) 9/12/2013	250 S-DP-75A(2-3) 9/14/2013	250 S-DP-81(2-2.5) 9/14/2013	250 S-DP-82(7.5-8.5) 9/13/2013	250 S-DP-97(2-3) 9/13/2013	250 SDP75A-TP2A(2) 11/13/2013	250 SDP75A-TP5(3) 11/12/2013	250 TP-B1 (4-5) 12/20/2013
Method EPA 8260B															
1,1,1,2-Tetrachloroethane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,1,1-Trichloroethane	2,000	ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,1,2,2-Tetrachloroethane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)		ug/Kg	–	–	–	–	–	–	–	–	–	–	147 U	125 U	–
1,1,2-Trichloroethane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,1-Dichloroethane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,1-Dichloroethene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,1-Dichloropropene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,2,3-Trichlorobenzene		ug/Kg	–	920 U	890 U	810 U	690 U	620 U	–	730 U	1400 UJ	1200 U	147 U	125 U	–
1,2,3-Trichloropropane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,2,4-Trichlorobenzene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,2,4-Trimethylbenzene		ug/Kg	–	180 U	180 U	**110** J	140 U	120 U	–	**180**	270 UJ	**170** J	147 U	125 U	–
1,2-Dibromo-3-Chloropropane		ug/Kg	–	920 U	890 U	810 U	690 U	620 U	–	730 U	1400 UJ	1200 U	734 U	626 U	–
1,2-dibromoethane (EDB)	5	ug/Kg	–	31 U[7]	30 U[7]	28 U[7]	23 U[7]	28 U[7]	–	31 U[7]	47 UJ[7]	42 U[7]	150 U	128 U	–
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,2-Dichloroethane (EDC)		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,2-Dichloropropane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,3,5-Trimethylbenzene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	**76** J	270 UJ	**260**	147 U	125 U	–
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,3-Dichloropropane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
2,2-Dichloropropane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
2-Butanone (MEK)		ug/Kg	–	1800 U	1800 U	1600 U	1400 U	1200 U	–	1500 U	2700 UJ	2500 U	–	–	–
2-Butanone, 4-(Acetyloxy)-		ug/Kg	–	–	–	–	–	–	–	–	–	–	1470 U	1250 U	–
2-Chlorotoluene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
2-Hexanone		ug/Kg	–	1800 U	1800 U	1600 U	1400 U	1200 U	–	1500 U	2700 UJ	2500 U	1470 U	1250 U	–
4-Chlorotoluene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
4-Methyl-2-Pentanone (Methyl isobutyl ketone)		ug/Kg	–	920 U	890 U	810 U	690 U	620 U	–	730 U	1400 UJ	1200 U	–	–	–
Acetone		ug/Kg	–	4600 U	4400 U	4100 U	3400 U	3100 U	–	3600 U	6900 UJ	6200 U	4400 U	3750 U	–
Benzene	30	ug/Kg	11.7 U	37 U[7]	35 U[7]	32 U[7]	27 U[7]	32 U[7]	–	29 U[7]	55 UJ[7]	50 U[7]	22.0 U	18.8 U	17.3 U
Bromobenzene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Bromochloromethane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Bromodichloromethane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Bromoform (Tribromomethane)		ug/Kg	–	920 U	890 U	810 U	690 U	620 U	–	730 U	1400 UJ	1200 U	147 U	125 U	–
Bromomethane		ug/Kg	–	920 U	890 U	810 U	690 U	620 U	–	730 U	1400 UJ	1200 U	734 U	626 U	–
Butane, 2-methoxy-2-methyl-		ug/Kg	–	–	–	–	–	–	–	–	–	–	147 U	125 U	–
Carbon Disulfide		ug/Kg	–	1800 U	1800 U	1600 U	1400 U	1200 U	–	1500 U	2700 UJ	2500 U	147 U	125 U	–
Carbon Tetrachloride		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Chlorobenzene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Chloroethane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Chloroform		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Chloromethane		ug/Kg	–	920 U	890 U	810 U	690 U	620 U	–	730 U	1400 UJ	1200 U	734 U	626 U	–
cis-1,2-Dichloroethene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Cis-1,3-Dichloropropene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Cyclohexane, Methyl-		ug/Kg	–	–	–	–	–	–	–	–	–	–	147 U	125 U	–
Dibromochloromethane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Dibromomethane		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled												
			070 MW-9(5) 12/16/2013	150 S-DP-20A(2.5-3.5) 9/12/2013	200 S-DP-2(1.5-2.5) 9/12/2013	200 S-DP-7(1-2) 9/12/2013	200 S-DP-13(0-1) 9/12/2013	200 S-DP-14(1.5-2.5) 9/12/2013	250 S-DP-75A(2-3) 9/14/2013	250 S-DP-81(2-2.5) 9/14/2013	250 S-DP-82(7.5-8.5) 9/13/2013	250 S-DP-97(2-3) 9/13/2013	250 SDP75A-TP2A(2) 11/13/2013	250 SDP75A-TP5(3) 11/12/2013	250 TP-B1 (4-5) 12/20/2013
Dichlorodifluoromethane (CFC-12)		ug/Kg	–	920 U	890 U	810 U	690 U	620 U	–	730 U	1400 UJ	1200 U	147 U	125 U	–
Ethylbenzene	6,000	ug/Kg	234 U	180 U	180 U	160 U	140 U	120 U	–	**230**	270 UJ	**130** J	147 U	125 U	346 U
HCFC-21		ug/Kg	–	–	–	–	–	–	–	–	–	–	147 U	125 U	–
Hexachlorobutadiene		ug/Kg	–	740 U	710 U	650 U	550 U	490 U	–	**45** JB	1100 UJ	990 U	147 U	125 U	–
Hexane		ug/Kg	–	–	–	–	–	–	–	–	–	–	147 U	125 U	–
Isopropylbenzene (Cumene)		ug/Kg	–	370 U	350 U	320 U	270 U	250 U	–	290 U	550 UJ	500 U	147 U	125 U	–
Methyl t-butyl ether (MTBE)	100	ug/Kg	–	24 U[7]	23 U[7]	21 U[7]	18 U[7]	21 U[7]	–	19 U[7]	36 UJ[7]	32 U[7]	44.0 U	37.5 U	–
Methylene Chloride	20	ug/Kg	–	26 U[7]	25 U[7]	23 U[7]	19 U[7]	23 U[7]	–	20 U[7]	38 UJ[7]	35 U[7]	1470 U	1250 U	–
Naphthalene	5,000[3]	ug/Kg	–	370 U	350 U	**51** JB	270 U	250 U	–	**190** JB	550 UJ	**69** JB	294 U	250 U	–
n-Butylbenzene		ug/Kg	–	920 U	890 U	810 U	690 U	620 U	–	730 U	1400 UJ	1200 U	147 U	125 U	–
n-Propylbenzene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	**78** J	250 U	147 U	125 U	–
Phenol, 2-bromo-		ug/Kg	–	–	–	–	–	–	–	–	–	–	1470 U	1250 U	–
p-Isopropyltoluene		ug/Kg	–	370 U	350 U	**40** J	270 U	**20** J	–	**11,000**	**400** J	**11,000**	147 U	125 U	–
Sec-Butylbenzene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	**45**	270 UJ	250 U	147 U	125 U	–
Styrene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Tert-Butylbenzene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	–	–	–
Tetrachloroethene	50	ug/Kg	–	50 U[7]	48 U[7]	34 U[7]	37 U[7]	44 U[7]	–	39 U[7]	74 UJ[7]	67 U[7]	44.0 U	37.5 U	–
Toluene	7,000	ug/Kg	234 U	180 U	180 U	**47** J	140 U	120 U	–	**25** J	**100** J	**340**	147 U	125 U	346 U
Total Xylenes	9,000	ug/Kg	3510 U	–	–	–	–	–	–	–	–	–	–	–	5190 U
Trans-1,2-Dichloroethene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Trans-1,3-Dichloropropene		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	147 U	125 U	–
Trans-1,4-Dichloro-2-butene		ug/Kg	–	–	–	–	–	–	–	–	–	–	147 U	125 U	–
Trichloroethene	30	ug/Kg	–	39 U[7]	37 U[7]	34 U[7]	29 U[7]	34 U[7]	–	31 U[7]	58 UJ[7]	52 U8	44.0 U[7]	37.5 U	–
Trichlorofluoromethane (CFC-11)		ug/Kg	–	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	44.0 U	37.5 U	–
Vinyl Chloride		ug/Kg	–	920 U	890 U	810 U	690 U	620 U	–	730 U	1400 UJ	1200 U	147 U	125 U	–
Xylene, m-,p-	9,000[4]	ug/Kg	936 U	370 U	350 U	320 U	270 U	250 U	–	290 U	550 UJ	500 U	587 U	500 U	1380 U
Xylene, o-	9,000[4]	ug/Kg	468 U	180 U	180 U	160 U	140 U	120 U	–	150 U	270 UJ	250 U	294 U	250 U	692 U
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1,2,4-Trichlorobenzene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/Kg	–	–	–	–	–	–	–	–	–	–	323 U	327 U	–
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/Kg	–	–	–	–	–	–	–	–	–	–	323 U	327 U	–
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
1-Methylnaphthalene		ug/Kg	–	–	–	–	–	–	–	–	–	–	65.0 U	65.8 U	–
2,2'-Oxybis[1-chloropropane]		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
2,4,5-Trichlorophenol		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	808 U	817 U	–
2,4,6-Trichlorophenol		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
2,4-Dichlorophenol		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
2,4-Dimethylphenol		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
2,4-Dinitrophenol		ug/Kg	–	2000 U	2100 U	7900 U	1800 U	33000 U	–	7300 U	–	41000 U	323 U	327 U	–
2,4-Dinitrotoluene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
2,6-Dinitrotoluene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
2-Chloronaphthalene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
2-Chlorophenol		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
2-Methylnaphthalene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	**220** J	–	8400 U	65.0 U	65.8 U	–
2-Nitroaniline		ug/Kg	–	2000 U	2100 U	7900 U	1800 U	33000 U	–	7300 U	–	41000 U	808 U	817 U	–
2-Nitrophenol		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
3 & 4 Methylphenol		ug/Kg	–	–	–	–	–	–	–	–	–	–	323 U	327 U	–
3,3'-Dichlorobenzidine		ug/Kg	–	830 U	860 U	3300 U	750 U	13000 U	–	3000 U	–	17000 U	647 U	655 U	–
3-Nitroaniline		ug/Kg	–	2000 U	2100 U	7900 U	1800 U	33000 U	–	7300 U	–	41000 U	808 U	817 U	–
4,6-Dinitro-2-Methylphenol		ug/Kg	–	2000 U	2100 U	7900 UJ	1800 U	33000 U	–	7300 U	–	41000 U	323 U	327 U	–
4-Bromophenyl phenyl ether		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
4-Chloro-3-Methylphenol		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
4-Chloroaniline		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
4-Chlorophenyl-Phenylether		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–

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4-Nitroaniline		ug/Kg	–	2000 U	2100 U	7900 U	1800 U	33000 U	–	7300 U	–	41000 U	808 U	817 U	–
4-Nitrophenol (p-Nitrophenol)		ug/Kg	–	2000 U	2100 U	7900 U	1800 U	33000 U	–	7300 U	–	41000 U	323 U	327 U	–
Acenaphthene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	65.0 U	65.8 U	–
Acenaphthylene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	65.0 U	65.8 U	–
Anthracene		ug/Kg	–	410 U	430 U	**84** J	380 U	6700 U	–	1500 U	–	8400 U	65.0 U	65.8 U	–
Atrazine		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	–	–	–
Benzidine		ug/Kg	–	4100 U	4300 U	16000 U	3800 U	67000 U	–	15000 U	–	84000 U	–	–	–
Benzo(a)anthracene	100[5]	ug/Kg	–	25 U[7]	26 U[7]	**160** J	23 U[7]	410 U[7]	–	91 U[7]	–	510 U[7]	65.0 U	65.8 U	–
Benzo(a)pyrene	100[5]	ug/Kg	–	25 U[7]	26 U[7]	99 U[7]	23 U[7]	410 U[7]	–	91 U[7]	–	510 U[7]	65.0 U	65.8 U	–
Benzo(b)fluoranthene	100[5]	ug/Kg	–	33 U[7]	34 U[7]	130 U[7]	30 U[7]	530 U[7]	–	120 U[7]	–	660 U	65.0 U	65.8 U	–
Benzo(ghi)perylene		ug/Kg	–	410 U	430 U	**110** J	380 U	6700 U	–	1500 U	–	8400 U	65.0 U	65.8 U	–
Benzo(k)fluoranthene	100[5]	ug/Kg	–	50 U[7]	520 U[7]	200 U[7]	46 U[7]	820 U[7]	–	180 U[7]	–	1000 U[7]	65.0 U	65.8 U	–
Bis(2-Chloroethoxy)Methane		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Bis(2-Chloroethyl)Ether		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Bis(2-Ethylhexyl) Phthalate		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	**353**	**779**	–
Butyl benzyl phthalate		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Caprolactam		ug/Kg	–	2000 U	2100 U	7900 U	1800 U	33000 U	–	7300 U	–	41000 U	–	–	–
Carbazole		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Chrysene	100[5]	ug/Kg	–	34 U[7]	35 U[7]	**200** J	31 U[7]	550 U[7]	–	120 U[7]	–	680 U[7]	65.0 U	65.8 U	–
Cresol		ug/Kg	–	–	–	–	–	–	–	–	–	–	646 U	654 U	–
Dibenzo(a,h)anthracene	100[5]	ug/Kg	–	24 U[7]	25 U[7]	94 U[7]	22 U[7]	390 U[7]	–	87 U[7]	–	480 U[7]	65.0 U	65.8 U	–
Dibenzofuran		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Dibutyl phthalate		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Diethyl phthalate		ug/Kg	–	830 U	860 U	3300 U	750 U	13000 U	–	3000 U	–	17000 U	323 U	327 U	–
Dimethyl phthalate		ug/Kg	–	**300** JB	**380** JB	**470** JB	**120** JB	6700 U	–	**830** JB	–	**1300** JB	1620 U	1640 U	–
Di-N-Octyl Phthalate		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Ethanone, 1-Phenyl-		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	–	–	–
Fluoranthene		ug/Kg	–	410 U	430 U	**250** J	380 U	6700 U	–	1500 U	–	8400 U	65.0 U	65.8 U	–
Fluorene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	65.0 U	65.8 U	–
Hexachlorobenzene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Hexachlorobutadiene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Hexachlorocyclopentadiene		ug/Kg	–	2000 U	2100 UJ	7900 UJ	1800 UJ	33000 U	–	7300 UJ	–	41000 U	323 U	327 U	–
Hexachloroethane		ug/Kg	–	410 U	430 U	1600 UJ	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Indeno(1,2,3-cd)pyrene	100[5]	ug/Kg	–	28 U[7]	29 U[7]	110 U[7]	25 U[7]	450 U[7]	–	100 U[7]	–	560 U[7]	65.0 U	65.8 U	–
Isophorone		ug/Kg	–	–	–	–	–	–	–	–	–	–	323 U	327 U	–
m,p-Cresol		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	–	–	–
Naphthalene	5,000	ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	790 U[7]	65.0 U	65.8 U	–
Nitrobenzene		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
N-Nitrosodi-n-propylamine		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	**4500**	323 U	327 U	–
N-Nitrosodiphenylamine (as diphenylamine)		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	**9600**	323 U	327 U	–
o-Cresol (2-methylphenol)		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Pentachlorophenol		ug/Kg	–	2000 U	2100 U	7900 U	1800 U	33000 U	–	7300 U	–	41000 U	808 U	817 U	–
Phenanthrene		ug/Kg	–	410 U	430 U	**240** J	380 U	6700 U	–	**210**	–	8400 U	65.0 U	65.8 U	–
Phenol		ug/Kg	–	410 U	430 U	1600 U	380 U	6700 U	–	1500 U	–	8400 U	323 U	327 U	–
Pyrene		ug/Kg	–	410 U	430 U	**390** J	380 U	6700 U	–	**200**	–	8400 U	65.0 U	65.8 U	–
Calculated cPAH	100[6]	ug/Kg	–	<41.34	< 42.9	< 170.4 J	< 37.9	< 675.5	–	< 150	–	< 837.80	–	–	
Method NWEPH															
C10-C12 Aliphatics		mg/kg	–	–	–	–	–	–	–	–	–	–	4.92 UJ	4.95 UJ	–
C10-C12 Aromatics		mg/kg	–	–	–	–	–	–	40 UJ	–	–	–	4.92 U	4.95 U	–
C12-C16 Aliphatics		mg/kg	–	–	–	–	–	–	51 J	–	–	–	**17.1** J	**15.4** J	–
C12-C16 Aromatics		mg/kg	–	–	–	–	–	–	40 UJ	–	–	–	4.92 U	4.95 U	–
C16-C21 Aliphatics		mg/kg	–	–	–	–	–	–	410 J	–	–	–	**136**	**195**	–
C16-C21 Aromatics		mg/kg	–	–	–	–	–	–	**91** J	–	–	–	**16.3**	**22.7**	–
C21-C34 Aliphatics		mg/kg	–	–	–	–	–	–	5,000 J	–	–	–	**1280**	**2360**	–

Please refer to footnotes on Page 12

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled												
			070	150	200	200	200	200	250	250	250	250	250	250	250
			MW-9(5)	S-DP-20A(2.5-3.5)	S-DP-2(1.5-2.5)	S-DP-7(1-2)	S-DP-13(0-1)	S-DP-14(1.5-2.5)	S-DP-75A(2-3)	S-DP-81(2-2.5)	S-DP-82(7.5-8.5)	S-DP-97(2-3)	SDP75A-TP2A(2)	SDP75A-TP5(3)	TP-B1 (4-5)
			12/16/2013	9/12/2013	9/12/2013	9/12/2013	9/12/2013	9/12/2013	9/14/2013	9/14/2013	9/13/2013	9/13/2013	11/13/2013	11/12/2013	12/20/2013
C21-C34 Aromatics		mg/kg	–	–	–	–	–	–	**650** J	–	–	–	**142**	**225**	–
C8-C10 Aliphatics		mg/kg	–	–	–	–	–	–	--	–	–	–	4.92 UJ	4.95 UJ	–
C8-C10 Aromatics		mg/kg	–	–	–	–	–	–	--	–	–	–	4.92 U	4.95 U	–
Method NWVPH															
C10-C12 Aliphatics		mg/kg	–	–	–	–	–	–	7.9 U	–	–	–	5.00 U	5.00 U	–
C10-C12 Aromatics		mg/kg	–	–	–	–	–	–	7.9 UJ	–	–	–	4.74 U	4.13 U	–
C12-C13 Aromatics		mg/kg	–	–	–	–	–	–	7.9 UJ	–	–	–	4.74 U	4.13 U	–
C5-C6 Aliphatics		mg/kg	–	–	–	–	–	–	7.9 UJ	–	–	–	5.00 U	5.00 U	–
C6-C8 Aliphatics		mg/kg	–	–	–	–	–	–	7.9 UJ	–	–	–	5.00 U	5.00 U	–
C8-C10 Aliphatics		mg/kg	–	–	–	–	–	–	7.9 UJ	–	–	–	5.00 U	5.00 U	–
C8-C10 Aromatics		mg/kg	–	–	–	–	–	–	7.9 U	–	–	–	4.74 U	4.13 U	–

	Regulatory Levels[2]	Parcel Number, Sample Number and Date Drilled						
			500	550	550	550	650	650	650
			N-DP-39(2-3)	N-DP-8A (2-3)	N-DP-9 (5-6)	NDP8-TP5(6.5)	N-DP-1 (6-7)	N-DP-2 (2.5-3)	N-DP-3 (5-6)
		Units	9/14/2013	9/10/2013	9/10/2013	11/12/2013	9/9/2013	9/9/2013	9/9/2013
Method EPA 8260B									
1,1,1,2-Tetrachloroethane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,1,1-Trichloroethane	2,000	ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,1,2,2-Tetrachloroethane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)		ug/Kg	–	–	–	123 U	–	–	–
1,1,2-Trichloroethane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,1-Dichloroethane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,1-Dichloroethene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,1-Dichloropropene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,2,3-Trichlorobenzene		ug/Kg	750 U	670 U	520 U	123 U	–	–	–
1,2,3-Trichloropropane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,2,4-Trichlorobenzene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,2,4-Trimethylbenzene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,2-Dibromo-3-Chloropropane		ug/Kg	750 U	670 U	520 U	613 U	–	–	–
1,2-dibromoethane (EDB)	5	ug/Kg	26 U[7]	23 U[7]	18 U[7]	123 U	–	–	–
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,2-Dichloroethane (EDC)		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,2-Dichloropropane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,3,5-Trimethylbenzene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,3-Dichloropropane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
2,2-Dichloropropane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
2-Butanone (MEK)		ug/Kg	1500 U	1300 U	1000 U	–	–	–	–
2-Butanone, 4-(Acetyloxy)-		ug/Kg	–	–	–	1230 U	–	–	–
2-Chlorotoluene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
2-Hexanone		ug/Kg	1500 U	1300 U	1000 U	1230 U	–	–	–
4-Chlorotoluene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
4-Methyl-2-Pentanone (Methyl isobutyl ketone)		ug/Kg	750 U	670 U	520 U	–	–	–	–
Acetone		ug/Kg	3800 U	3300 U	2600 U	3680 U	–	–	–
Benzene	30	ug/Kg	30 U[7]	27 U[7]	21 U[7]	18.4 U	36 U[7]	45 U[7]	39 U[7]
Bromobenzene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Bromochloromethane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Bromodichloromethane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Bromoform (Tribromomethane)		ug/Kg	750 U	670 U	520 U	123 U	–	–	–
Bromomethane		ug/Kg	750 U	670 U	520 U	613 U	–	–	–
Butane, 2-methoxy-2-methyl-		ug/Kg	–	–	–	123 U	–	–	–
Carbon Disulfide		ug/Kg	1500 U	1300 U	1000 U	123 U	–	–	–
Carbon Tetrachloride		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Chlorobenzene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Chloroethane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Chloroform		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Chloromethane		ug/Kg	750 U	670 U	520 U	613 U	–	–	–
cis-1,2-Dichloroethene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Cis-1,3-Dichloropropene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Cyclohexane, Methyl-		ug/Kg	–	–	–	123 U	–	–	–
Dibromochloromethane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Dibromomethane		ug/Kg	150 U	130 U	100 U	123 U	–	–	–

	Regulatory Levels[2]	Parcel Number, Sample Number and Date Drilled						
			500	550	550	550	650	650	650
			N-DP-39(2-3)	N-DP-8A (2-3)	N-DP-9 (5-6)	NDP8-TP5(6.5)	N-DP-1 (6-7)	N-DP-2 (2.5-3)	N-DP-3 (5-6)
		Units	9/14/2013	9/10/2013	9/10/2013	11/12/2013	9/9/2013	9/9/2013	9/9/2013
Dichlorodifluoromethane (CFC-12)		ug/Kg	750 U	670 U	520 U	123 U	–	–	–
Ethylbenzene	6,000	ug/Kg	150 U	130 U	100 U	123 U	32 U	40 U	36 U
HCFC-21		ug/Kg	–	–	–	123 U	–	–	–
Hexachlorobutadiene		ug/Kg	600 U	**33** JB	420 U	123 U	–	–	–
Hexane		ug/Kg	–	–	–	123 U	–	–	–
Isopropylbenzene (Cumene)		ug/Kg	300 U	270 U	210 U	123 U	–	–	–
Methyl t-butyl ether (MTBE)	100	ug/Kg	20 U[7]	17 U[7]	14 U[7]	36.8 U	–	–	–
Methylene Chloride	20	ug/Kg	21 U[7]	**89** JB	**50** JB	1230 U	–	–	–
Naphthalene	5,000[3]	ug/Kg	300 U	270 U	210 U	245 U	–	–	–
n-Butylbenzene		ug/Kg	750 U	670 U	520 U	123 U	–	–	–
n-Propylbenzene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Phenol, 2-bromo-		ug/Kg	–	–	–	1230 U	–	–	–
p-Isopropyltoluene		ug/Kg	**160** J	270 U	210 U	123 U	–	–	–
Sec-Butylbenzene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Styrene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Tert-Butylbenzene		ug/Kg	150 U	130 U	100 U	–	–	–	–
Tetrachloroethene	50	ug/Kg	41 U[7]	36 U[7]	28 U[7]	36.8 U	–	–	–
Toluene	7,000	ug/Kg	150 U	130 U	100 U	123 U	**240**	**92**	**66**
Total Xylenes	9,000	ug/Kg	–	–	–	–	540 U	670 U	590 U
Trans-1,2-Dichloroethene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Trans-1,3-Dichloropropene		ug/Kg	150 U	130 U	100 U	123 U	–	–	–
Trans-1,4-Dichloro-2-butene		ug/Kg	–	–	–	123 U	–	–	–
Trichloroethene	30	ug/Kg	32 U[7]	28 U[7]	22 U[7]	36.8 U	–	–	–
Trichlorofluoromethane (CFC-11)		ug/Kg	150 U	130 U	100 U	36.8 U	–	–	–
Vinyl Chloride		ug/Kg	750 U	670 U	520 U	123 U	–	–	–
Xylene, m-,p-	9,000[4]	ug/Kg	300 U	270 U	210 U	491 U	–	–	–
Xylene, o-	9,000[4]	ug/Kg	150 U	130 U	100 U	245 U	–	–	–
Method EPA 8270C									
1,2,4-Trichlorobenzene		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/Kg	–	–	–	327 U	–	–	–
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/Kg	–	–	–	327 U	–	–	–
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
1-Methylnaphthalene		ug/Kg	–	–	–	65.8 U	–	–	–
2,2'-Oxybis[1-chloropropane]		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
2,4,5-Trichlorophenol		ug/Kg	360 U	340 U	350 U	819 U	–	–	–
2,4,6-Trichlorophenol		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
2,4-Dichlorophenol		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
2,4-Dimethylphenol		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
2,4-Dinitrophenol		ug/Kg	1800 U	1700 U	1700 U	327 U	–	–	–
2,4-Dinitrotoluene		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
2,6-Dinitrotoluene		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
2-Chloronaphthalene		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
2-Chlorophenol		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
2-Methylnaphthalene		ug/Kg	360 U	340 U	350 U	65.8 U	–	–	–
2-Nitroaniline		ug/Kg	1800 U	1700 U	1700 U	819 U	–	–	–
2-Nitrophenol		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
3 & 4 Methylphenol		ug/Kg	–	–	–	327 U	–	–	–
3,3'-Dichlorobenzidine		ug/Kg	730 U	680 U	690 U	655 U	–	–	–
3-Nitroaniline		ug/Kg	1800 U	1700 U	1700 U	819 U	–	–	–
4,6-Dinitro-2-Methylphenol		ug/Kg	1800 U	1700 U	1700 U	327 U	–	–	–
4-Bromophenyl phenyl ether		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
4-Chloro-3-Methylphenol		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
4-Chloroaniline		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
4-Chlorophenyl-Phenylether		ug/Kg	360 U	340 U	350 U	327 U	–	–	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled						
			500 N-DP-39(2-3) 9/14/2013	550 N-DP-8A (2-3) 9/10/2013	550 N-DP-9 (5-6) 9/10/2013	550 NDP8-TP5(6.5) 11/12/2013	650 N-DP-1 (6-7) 9/9/2013	650 N-DP-2 (2.5-3) 9/9/2013	650 N-DP-3 (5-6) 9/9/2013
4-Nitroaniline		ug/Kg	1800 U	1700 U	1700 U	819 U	–	–	–
4-Nitrophenol (p-Nitrophenol)		ug/Kg	1800 U	1700 U	1700 U	327 U	–	–	–
Acenaphthene		ug/Kg	360 U	340 U	**25** J	65.8 U	–	–	–
Acenaphthylene		ug/Kg	360 U	340 U	350 U	65.8 U	–	–	–
Anthracene		ug/Kg	360 U	340 U	350 U	65.8 U	–	–	–
Atrazine		ug/Kg	360 U	340 U	350 U	–	–	–	–
Benzidine		ug/Kg	3600 U	3400 U	3500 U	–	–	–	–
Benzo(a)anthracene	100[5]	ug/Kg	22 U[7]	**22** J	21 U[7]	65.8 U	–	–	–
Benzo(a)pyrene	100[5]	ug/Kg	22 U[7]	21 U[7]	21 U[7]	65.8 U	–	–	–
Benzo(b)fluoranthene	100[7]	ug/Kg	29 U[7]	28 U[7]	28 U[7]	65.8 U	–	–	–
Benzo(ghi)perylene		ug/Kg	360 U	340 U	350 U	65.8 U	–	–	–
Benzo(k)fluoranthene	100[5]	ug/Kg	44 U[7]	42 U[7]	42 U[7]	65.8 U	–	–	–
Bis(2-Chloroethoxy)Methane		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Bis(2-Chloroethyl)Ether		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Bis(2-Ethylhexyl) Phthalate		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Butyl benzyl phthalate		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Caprolactam		ug/Kg	1800 U	1700 U	1700 U	–	–	–	–
Carbazole		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Chrysene	100[5]	ug/Kg	30 U[7]	**31** J	28 U[7]	65.8 U	–	–	–
Cresol		ug/Kg	–	–	–	654 U	–	–	–
Dibenzo(a,h)anthracene	100[5]	ug/Kg	21 U[7]	20 U[7]	20 U[9]	65.8 U	–	–	–
Dibenzofuran		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Dibutyl phthalate		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Diethyl phthalate		ug/Kg	730 U	680 U	690 U	327 U	–	–	–
Dimethyl phthalate		ug/Kg	**830** B	**550** B	**760**	1640 U	–	–	–
Di-N-Octyl Phthalate		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Ethanone, 1-Phenyl-		ug/Kg	360 U	340 U	350 U	–	–	–	–
Fluoranthene		ug/Kg	360 U	340 U	350 U	65.8 U	–	–	–
Fluorene		ug/Kg	360 U	340 U	350 U	65.8 U	–	–	–
Hexachlorobenzene		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Hexachlorobutadiene		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Hexachlorocyclopentadiene		ug/Kg	1800 U	1700 U	1700 U	327 U	–	–	–
Hexachloroethane		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Indeno(1,2,3-cd)pyrene	100[5]	ug/Kg	24 U[7]	23 U[7]	23 U[7]	65.8 U	–	–	–
Isophorone		ug/Kg	–	–	–	327 U	–	–	–
m,p-Cresol		ug/Kg	360 U	340 U	350 U	–	–	–	–
Naphthalene	5,000	ug/Kg	360 U	340 U	350 U	65.8 U	–	–	–
Nitrobenzene		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
N-Nitrosodi-n-propylamine		ug/Kg	360 U	**140** J	350 U	327 U	–	–	–
N-Nitrosodiphenylamine (as diphenylamine)		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
o-Cresol (2-methylphenol)		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Pentachlorophenol		ug/Kg	1800 U	1700 U	1700 U	819 U	–	–	–
Phenanthrene		ug/Kg	360 U	**19** J	350 U	65.8 U	–	–	–
Phenol		ug/Kg	360 U	340 U	350 U	327 U	–	–	–
Pyrene		ug/Kg	**17** J	**37** J	350 U	65.8 U	–	–	–
Calculated cPAHs	100[6]	ug/Kg	< 36.3	< 41.7 J	< 34.68	< 99.36	–	–	–
Method NWEPH									
C10-C12 Aliphatics		mg/kg	–	–	–	4.89 U	–	–	–
C10-C12 Aromatics		mg/kg	–	–	–	4.89 U	–	–	–
C12-C16 Aliphatics		mg/kg	–	–	–	4.89 U	–	–	–
C12-C16 Aromatics		mg/kg	–	–	–	4.89 U	–	–	–
C16-C21 Aliphatics		mg/kg	–	–	–	**5.76**	–	–	–
C16-C21 Aromatics		mg/kg	–	–	–	4.89 U	–	–	–
C21-C34 Aliphatics		mg/kg	–	–	–	**38.0**	–	–	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled						
			500 N-DP-39(2-3) 9/14/2013	550 N-DP-8A (2-3) 9/10/2013	550 N-DP-9 (5-6) 9/10/2013	550 NDP8-TP5(6.5) 11/12/2013	650 N-DP-1 (6-7) 9/9/2013	650 N-DP-2 (2.5-3) 9/9/2013	650 N-DP-3 (5-6) 9/9/2013
C21-C34 Aromatics		mg/kg	–	–	–	4.89 U	–	–	–
C8-C10 Aliphatics		mg/kg	–	–	–	4.89 U	–	–	–
C8-C10 Aromatics		mg/kg	–	–	–	4.89 U	–	–	–
Method NWVPH									
C10-C12 Aliphatics		mg/kg	–	–	–	5.00 U	–	–	–
C10-C12 Aromatics		mg/kg	–	–	–	4.08 U	–	–	–
C12-C13 Aromatics		mg/kg	–	–	–	4.08 U	–	–	–
C5-C6 Aliphatics		mg/kg	–	–	–	5.00 U	–	–	–
C6-C8 Aliphatics		mg/kg	–	–	–	5.00 U	–	–	–
C8-C10 Aliphatics		mg/kg	–	–	–	5.00 U	–	–	–
C8-C10 Aromatics		mg/kg	–	–	–	4.08 U	–	–	–

Notes:

[1]Chemical analyses conducted by TestAmerica of Portland, Oregon and Spokane, Washington.

[2]Regulatory level refers to Washington State Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use unless otherwise footnoted.

[3]Cleanup level refers to sum of naphthalenes.

[4]Cleanup level for total xylenes.

[5]Cleanup level referenced to benzo (a) pyrene. If other carcinogenic PAHs are present, the cleanup level represents the total carcinogenic PAH concentration.

[6]Concentration of carcenogenic PAHs (cPAHs) was calculated using the Toxicity Equivalency Factors in Table 708-2 of WAC 173-340-900.

[7]Value listed for non-detect result is the Method Detection Limit (MDL).

Bold indicates concentration was detected above reporting limit.

Red outline indicates concentration greater than regulatory level.

Shading indicates reporting limit for non-detected analyte was greater than regulatory level.

"--" = not analyzed (tested in field); mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram;

U indicates analyte not detected at a concentration greater than listed reporting limit, unless otherwise noted (see note 8 where applicable).

J indicates result is qualified as estimated. Refer to the applicable Data Quality Report for details. Result is less than the Reporting Limit (RL) or equal to or greater than the Method Detection Limit (MDL) and the reported concentration is an approximate value.

B indicates compound was found in both the method blank and sample. Result is flagged as likely due to laboratory contamination.

Table 4

Summary of Chemical Analytical Results - Metals[1] in Soil

Former Cashmere Mill Site
Cashmere, Washington

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled														
			010 N-DP-27(7-8) 9/10/2013	010 N-DP-27(12-13) 9/10/2013	010 N-DP-43(0.5-1.5) 9/11/2013	070 S-DP-86(5-5.5) 9/13/2013	070 S-DP-87(1.5-2.5) 9/14/2013	070 S-DP-87(5-6) 9/14/2013	070 S-DP-88(4-5) 9/13/2013	070 S-DP-88(7-8) 9/13/2013	070 S-DP-93(1-2) 9/14/2013	070 S-DP-93(5-6) 9/14/2013	070 S-DP-94(2-2.5) 9/14/2013	70 S-DP-95(3-4) 9/13/2013	070 S-DP-101(3-3.5) 9/14/2013	070 SDP87-TP1(1-2) 12/19/2013	070 SDP87-TP1(2-3) 12/19/2013
Method EPA 6010/6020																	
Arsenic	20	mg/Kg	**2.4**	**1.5**	**0.75**	–	–	–	**5.4**	**4.1**	–	–	–	–	–	–	–
Barium		mg/Kg	**130**	**41**	**79**	–	–	–	**220**	**120**	–	–	–	–	–	–	–
Cadmium	2	mg/Kg	0.54 U	0.56 U	0.50 U	–	–	–	0.61 U	0.80 U	–	–	–	–	–	–	–
Chromium	2,000[3]	mg/Kg	**29**	**69**	**10**	–	–	–	**40**	**33**	–	–	–	–	–	–	–
Lead	250	mg/Kg	**170**	**1.2**	**1.6**	–	–	–	**54**	**21**	–	–	–	–	–	–	–
Selenium		mg/Kg	0.54 U	0.56 U	0.50 U	–	–	–	0.61 U	0.80 U	–	–	–	–	–	–	–
Silver		mg/Kg	0.54 U	0.56 U	0.50 U	–	–	–	0.61 U	0.80 U	–	–	–	–	–	–	–
Method EPA 7471A																	
Mercury	2	mg/Kg	**2.1**	0.10 U	0.083 U	**0.027** J	0.12 UJ	**13** J	**7.2**	**0.64**	**0.074** J	0.11 U	**0.029** J	–	**4.8**	0.05 U	0.0424 U
Method EPA 7470 (TCLP)																	
Mercury	0.2[4]	mg/L						0.00020 UJ									

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled														
			070 SDP87-TP2(2-3) 12/19/2013	070 SDP87-TP2(1-2) 12/19/2013	070 SDP87-TP3(1-2) 12/20/2013	070 SDP87-TP3(2-3) 12/20/2013	070 SDP87-TP4(2-3) 12/19/2013	070 SDP87-TP4(1-2) 12/19/2013	070 SDP88-TP1(3.5) 11/12/2013	070 SDP88-TP2(3) 11/12/2013	070 SDP88-TP3(4) 11/12/2013	070 SDP88-TP4(3) 11/12/2013	070 TP-B2 (1-2) 12/20/2013	070 TP-B2 (3-4) 12/20/2013	070 TP-B3 (1-2) 12/19/2013	070 TP-B3 (3-4) 12/19/2013	070 TP-B4 (1-2) 12/20/2013
Method EPA 6010/6020																	
Arsenic	20	mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Barium		mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cadmium	2	mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Chromium	2,000[3]	mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lead	250	mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Selenium		mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Silver		mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Method EPA 7471A																	
Mercury	2	mg/Kg	0.0521 U	0.0417 U	0.0556 U	0.0463 U	0.0403 U	**0.48**	**1.76**	**1.19**	0.0191 U	**1.46**	**0.143**	0.0446 U	**0.157**	0.0455 U	**2.38**
Method EPA 7470 (TCLP)																	
Mercury	0.2[4]	mg/L															0.0005 U

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled														
			070 TP-B4 (3-4) 12/20/2013	070 TP-B5 (1-2) 12/20/2013	070 TP-B5 (3-4) 12/20/2013	070 TP-B6 (1-2) 12/20/2013	070 TP-B6 (3-4) 12/20/2013	070 TP-B7 (1-2) 12/20/2013	070 TP-B7 (4-5) 12/20/2013	070 TP-B8 (1-2) 12/20/2013	070 TP-B8 (4-5) 12/20/2013	070 TP-B9 (1-2) 12/19/2013	070 TP-B9 (3-4) 12/19/2013	070 TP-B10 (1-2) 12/19/2013	070 TP-B10 (3-4) 12/19/2013	070 TP-B11 (1-2) 12/19/2013	070 TP-B11 (3-4) 12/19/2013
Method EPA 6010/6020																	
Arsenic	20	mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Barium		mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cadmium	2	mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Chromium	2,000[3]	mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lead	250	mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Selenium		mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Silver		mg/Kg	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Method EPA 7471A																	
Mercury	2	mg/Kg	**1.08**	**0.0533**	0.0472 U	0.0455 U	0.049 U	**0.108**	0.0472 U	**0.161**	0.0431 U	**0.103**	0.0481 U	**0.0674**	0.05 U	**0.0793**	0.0472 U
Method EPA 7470 (TCLP)																	
Mercury	0.2[4]	mg/L															

Please refer to footnotes on Page 2

GeoEngineers

	Regulatory Levels[2]	Units	Parcel Number, Sample Number and Date Drilled														
			070 MW-9(10) 12/16/2013	070 MW-9(5) 12/16/2013	150 S-DP-20A(2.5-3.5) 9/12/2013	200 S-DP-2(1.5-2.5) 9/12/2013	200 S-DP-7(1-2) 9/12/2013	200 S-DP-13(0-1) 9/12/2013	200 S-DP-14(1.5-2.5) 9/12/2013	250 S-DP-78(0-1) 9/13/2013	250 S-DP-81(2-2.5) 9/14/2013	250 S-DP-97(2-3) 9/13/2013	250 TP-B1 (1-2) 12/20/2013	250 TP-B1 (4-5) 12/20/2013	500 N-DP-39(2-3) 9/14/2013	550 N-DP-8A (2-3) 9/10/2013	550 N-DP-9 (5-6) 9/10/2013
Method EPA 6010/6020																	
Arsenic	20	mg/Kg	**3.21**	**4.44**	**6.8**	**3.5**	**4.7**	**3.9**	**2.4**	–	**3.9**	**12**	–	–	**3.6**	**15**	**2.6**
Barium		mg/Kg	**62.7**	**106**	**110**	**120**	**72**	**110**	**82** J	–	**61**	**89**	–	–	**75**	**90**	**95**
Cadmium	2	mg/Kg	0.212 U	0.239 U	0.63 U	0.66 U	0.62 U	0.57 U	0.50 U	–	0.57 U	0.61 U	–	–	0.55 U	0.53 U	0.53 U
Chromium	2,000[3]	mg/Kg	**34.7**	**28.7**	**50**	**63**	**48**	**78**	**25**	–	**110**	**51**	–	–	**61**	**32**	**47**
Lead	250	mg/Kg	**1.62**	**7.6**	**15**	**18**	**31**	**5.3**	**9.2**	–	**8.2**	**130**	–	–	**2.8**	**65**	**5.7**
Selenium		mg/Kg	2.65 U	2.99 U	0.63 U	0.66 U	0.62 U	0.57 U	0.50 U	–	0.57 U	0.61 U	–	–	0.55 U	0.53 U	0.53 U
Silver		mg/Kg	0.531 U	0.597 U	0.63 U	0.66 U	0.62 U	0.57 U	0.50 U	–	0.57 U	0.61 U	–	–	0.55 U	0.53 U	0.53 U
Method EPA 7471A																	
Mercury	2	mg/Kg	0.0439 U	0.0521 U	**0.12**	0.13 U	**0.19**	0.12 U	**0.13**	**0.11 J**	0.11 U	0.12 U	**0.223**	**0.0396**	0.080 U	0.091 U	0.073 U
Method EPA 7470 (TCLP)																	
Mercury	0.2[4]	mg/L															

Notes:

[1]Chemical analyses conducted by TestAmerica of Portland, Oregon and Spokane, Washington.

[2]Regulatory level refers to Washington State Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use unless otherwise footnoted.

[3]Cleanup level is 2,000 mg/Kg for Chromium III.

[4]Regulatory level for designation as hazardous waste based on the Toxicity Characteristic Leaching Procedure (TCLP).

Bold indicates concentration was detected above reporting limit.

Red outline indicates concentration greater than regulatory level.

"--" = not analyzed (tested in field); mg/kg = milligrams per kilogram; mg/L = milligrams per liter

U indicates analyte not detected at a concentration greater than listed reporting limit, unless otherwise noted (see note 8 where applicable).

J indicates result is qualified as estimated. Refer to the applicable Data Quality Report for details. Result is less than the Reporting Limit (RL) or equal to or greater than the Method Detection Limit (MDL) and the reported concentration is an approximate value.

Table 5

Summary of Chemical Analytical Results - GRPH, DRPH, ORPH, VOCs, SVOCs and Metals[1] in Groundwater

Former Cashmere Mill Site
Cashmere, Washington

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date											
			500 MW-1-102813 10/28/2013	500 MW-1-120313 12/3/2013	010 MW-2-102813 10/28/2013	010 MW-2-120313 12/3/2013	010 MW-2-120413(16) 12/4/2013	650 MW-3-102813 10/28/2013	650 MW-3-120413 12/4/2013	550 MW-4-102813 10/28/2013	550 MW-4-120413 12/4/2013	200 MW-5-102813 10/28/2013	200 DUPLICATE-1-102813 (MW-5) 10/28/2013	200 MW-5-120413 12/4/2013
Method NWTPH-Gx														
Gasoline-range petroleum hydrocarbons	1000[3]	ug/L	100 U	100 U	100 U	100 U	--	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Method NWTPH-Dx				--					--		--			
Diesel-range petroleum hydrocarbons	500	ug/L	239 U	238 U	239 U	247 U	--	240 U	**1,450**	238 U	244 U	237 U	238 U	246 U
Heavy oil-range petroleum hydrocarbons	500	ug/L	382 U	397 U	382 U	412 U	--	384 U	**875**	380 U	407 U	380 U	382 U	410 U
Method EPA 200.8														
Arsenic (Total)	5	ug/L	**17**	**3.2**	**6.0**	**5.8**	**6.1**	**6.7**	**7.2**	**2.4**	**2.5**	**16**	**17**	**4.8**
Arsenic (Dissolved)		ug/L	**14**	**2.1**	**5.0**	**4.2**	**4.0**	**2.50**	**2.1**	**1.8**	**1.5**	**13**	**13**	**3.2**
Arsenic III		ug/L	--	**--**	--	**4.4**	--	--	**--**	--	**--**	--	--	**--**
Arsenic V		ug/L	--	**--**	--	3 U	--	--	**--**	--	**--**	--	--	**--**
Barium (Total)	2,000	ug/L	**130**	**120**	**130**	**120**	**--**	**280**	**260**	**110**	**110**	**120**	**130**	**130**
Barium (Dissolved)		ug/L	**130**	**100**	**110**	**110**	**--**	**48**	**67**	**98**	**83**	**120**	**120**	**99**
Cadmium (Total)	5	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**--**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cadmium (Dissolved)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**--**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chromium (Total)	50	ug/L	2.0 U	2.0 U	2.0 U	**2.2**	**--**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (Dissolved)		ug/L	2.0 U	2.0 U	2.0 U	2.0 U	**--**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Copper (Total)		ug/L		2.0 U		2.0 U	**--**		2.0 U	--	2.0 U	--	--	2.0 U
Copper (Dissolved)		ug/L		2.0 U		2.0 U	**--**		2.0 U	--	2.0 U	--	--	2.0 U
Iron (Total)		ug/L		**800**		**1300**	**--**		**69,000**	--	**2,800**	--	--	**2,300**
Iron (Dissolved)		ug/L		25 U		25 U	**--**		**38,000**	--	25 U	--	--	25 U
Lead (Total)	15	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**--**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Lead (Dissolved)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**--**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Manganese (Total)		ug/L	**--**	**390**	**--**	**350**	**--**	**--**	**2,800**	**--**	**1,100**	**--**	**--**	**1,300**
Manganese (Dissolved)		ug/L	**300**	**370**	**380**	**340**	**--**	**3,200**	**2,800**	**1,000**	**1,100**	**1,100**	**1,100**	**1,300**
Selenium (Total)	50	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**--**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Selenium (Dissolved)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**--**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Silver (Total)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**--**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Silver (Dissolved)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	**--**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Method EPA 245.1														
Mercury (Total)	2	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Mercury (Dissolved)			0.20 U	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Method EPA 300.0														
Nitrate	10,000	ug/L	**200**	**220 J**	200 U	**310**	**--**	200 U	**250**	200 U	200 U	200 U	200 U	200 U
Sulfate		ug/L	**10,100**	**9,130**	**27,600**	**19,500**	**--**	**580**	**1,360**	**8,450**	**9,090**	**5,400**	**6,300**	**9,200**
Method RSK-175														
Methane		ug/L	**53.1**	**78.8**	**276**	**213**	**--**	**5,730**	**5,740**	**114**	**123**	**159**	**172**	**359**
Method EPA SM2320B														
Alkalinity, Total		ug/L	**340,000**	**325,000**	**400,000**	**380,000**	**--**	**470,000**	**405,000**	**350,000**	**345,000**	**370,000**	**375,000**	**390,000**
Method EPA 4500PE														
Phosphorus				60.0 U	**--**	**99.4**	**--**	**--**	**2,590**	**--**	**143**	**--**	**--**	**136**
Method EPA 8260B (VOCs)														
1,1,1,2-Tetrachloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	**--**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	200	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	**--**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	**--**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	**--**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2-Trichloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	**--**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	**--**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date											
			500 MW-1-102813 10/28/2013	500 MW-1-120313 12/3/2013	010 MW-2-102813 10/28/2013	010 MW-2-120313 12/3/2013	010 MW-2-120413(16) 12/4/2013	650 MW-3-102813 10/28/2013	650 MW-3-120413 12/4/2013	550 MW-4-102813 10/28/2013	550 MW-4-120413 12/4/2013	200 MW-5-102813 10/28/2013	200 DUPLICATE-1-102813 (MW-5) 10/28/2013	200 MW-5-120413 12/4/2013
1,1-Dichloroethene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloropropene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichloropropane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-Chloropropane		ug/L	5.00 U	5.00 U	5.00 U	5.00 U	–	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
1,2-dibromoethane (EDB)	0.01	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane (EDC)	5	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloropropane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2,2-Dichloropropane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Butanone (MEK)		ug/L		10.0 U	–	10.0 U	–		10.0 U		10.0 U	–	–	10.0 U
2-Butanone, 4-(Acetyloxy)-		ug/L	10.0 U	10.0 U	10.0 U	10.0 U	–	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
2-Chlorotoluene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Hexanone		ug/L	10.0 U	10.0 U	10.0 U	10.0 U	–	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-Chlorotoluene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Acetone		ug/L	25.0 U	25.0 U	25.0 U	25.0 U	–	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Benzene	5	ug/L	0.200 U	0.200 U	0.200 U	0.200 U	–	**0.300**	**0.270**	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
Bromobenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromochloromethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromoform (Tribromomethane)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromomethane		ug/L	5.00 U	5.00 U	5.00 U	5.00 U	–	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Butane, 2-methoxy-2-methyl-		ug/L	1.00 U	–	1.00 U	–	–	1.00 U	–	1.00 U	–	1.00 U	1.00 U	–
Carbon Disulfide		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Carbon Tetrachloride	5	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloroform		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloromethane		ug/L	3.00 U	3.00 U	3.00 U	3.00 U	–	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
cis-1,2-Dichloroethene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Cis-1,3-Dichloropropene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
D14-Terphenyl		ug/L	5.00 U	–	5.00 U	–	–	5.00 U	–	5.00 U	–	5.00 U	5.00 U	–
Dibromochloromethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dibromomethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	700	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
HCFC-21		ug/L	0.100 U	0.100 U	0.100 U	0.100 U	–	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Hexachlorobutadiene		ug/L	2.00 U	2.00 U	2.00 U	2.00 U	–	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Hexane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Isopropylbenzene (Cumene)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methyl t-butyl ether (MTBE)	20	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methylene Chloride	5	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	–	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Naphthalene	160[4]	ug/L	2.00 U	2.00 U	2.00 U	2.00 U	–	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
n-Butylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
n-Propylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Phenol, 2-bromo-		ug/L	10.0 U	–	10.0 U	–	–	10.0 U	–	10.0 U	–	10.0 U	10.0 U	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date											
			500 MW-1-102813 10/28/2013	500 MW-1-120313 12/3/2013	010 MW-2-102813 10/28/2013	010 MW-2-120313 12/3/2013	010 MW-2-120413(16) 12/4/2013	650 MW-3-102813 10/28/2013	650 MW-3-120413 12/4/2013	550 MW-4-102813 10/28/2013	550 MW-4-120413 12/4/2013	200 MW-5-102813 10/28/2013	200 DUPLICATE-1-102813 (MW-5) 10/28/2013	200 MW-5-120413 12/4/2013
p-Isopropyltoluene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Sec-Butylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Styrene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Tert-Butylbenzene			–	1.00 U	–	1.00 U	–	–	1.00 U	–	1.00 U	–	–	1.00 U
Tetrachloroethene (PCE)	5	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Toluene	1,000	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Total Xylenes			–	–	–	–	–	–	–	–	–	–	–	–
Trans-1,2-Dichloroethene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trans-1,3-Dichloropropene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trans-1,4-Dichloro-2-butene		ug/L	0.100 U	0.100 U	0.100 U	0.100 U	–	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Trichloroethene (TCE)	5	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trichlorofluoromethane (CFC-11)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Vinyl Chloride	0.2	ug/L	0.200 U	0.200 U	0.200 U	0.200 U	–	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U
Xylene, m-,p-	1000[5]	ug/L	2.00 U	2.00 U	2.00 U	2.00 U	–	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Xylene, o-	1000[5]	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Method EPA 8270C (SVOCs)														
1,2,4,5-Tetrachlorobenzene		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
1,2,4-Trichlorobenzene		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
1,3,5-Trinitrobenzene		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
1,3-Dinitrobenzene		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
1,4-Naphthoquinone		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–
1-Methylnaphthalene			–	2.00 U	–	1.90 U	–		1.92 U	–	1.89 U	–	–	1.89 U
1-Naphthylamine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
2,2'-Oxybis[1-chloropropane]			–	10.0 U	–	9.52 U	–		9.62 U	–	9.43 U	–	–	9.43 U
2,3,4,6-Tetrachlorophenol		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–
2,4,5-Trichlorophenol		ug/L	11 U	25.0 U	11 U	23.8 U	–	9.5 U	24.0 U	9.2 U	23.6 U	9.3 U	11 U	23.6 U
2,4,6-Trichlorophenol		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
2,4-Dichlorophenol		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
2,4-Dimethylphenol		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
2,4-Dinitrophenol		ug/L	34 U	25.0 U	33 U	23.8 U	–	28 U	24.0 U	27 U	23.6 U	28 U	32 U	23.6 U
2,4-Dinitrotoluene		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
2,6-Dichlorophenol		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
2,6-Dinitrotoluene		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
2-Acetylaminofluorene		ug/L	110 U	–	110 U	–	–	95 U	–	92 U	–	93 U	110 U	–
2-Chloronaphthalene		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
2-Chlorophenol		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
2-Methylnaphthalene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
2-Naphthylamine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
2-Nitroaniline		ug/L	11 U	25.0 U	11 U	23.8 U	–	9.5 U	24.0 U	9.2 U	23.6 U	9.3 U	11 U	23.6 U
2-Nitrophenol		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
2-Picoline		ug/L	22 U	–	22 U	–	–	19 U	–	18 U	–	19 U	21 U	–
2-Toluidine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
3 & 4 Methylphenol		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
3,3'-Dichlorobenzidine		ug/L	56 U	10.0 U	55 U	9.52 U	–	47 U	9.62 U	46 U	9.43 U	47 U	53 U	9.43 U
3,3'-Dimethylbenzidine		ug/L	22 U	–	22 U	–	–	19 U	–	18 U	–	19 U	21 U	–
3-Methylcholanthrene		ug/L	22 U	–	22 U	–	–	19 U	–	18 U	–	19 U	21 U	–
3-Nitroaniline		ug/L	11 U	25.0 U	11 U	23.8 U	–	9.5 U	24.0 U	9.2 U	23.6 U	9.3 U	11 U	23.6 U
4,6-Dinitro-2-Methylphenol		ug/L	56 U	25.0 U	55 U	23.8 U	–	47 U	24.0 U	46 U	23.6 U	47 U	53 U	23.6 U
4-Amino-2,6-Dinitrotoluene		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date											
			500 MW-1-102813 10/28/2013	500 MW-1-120313 12/3/2013	010 MW-2-102813 10/28/2013	010 MW-2-120313 12/3/2013	010 MW-2-120413(16) 12/4/2013	650 MW-3-102813 10/28/2013	650 MW-3-120413 12/4/2013	550 MW-4-102813 10/28/2013	550 MW-4-120413 12/4/2013	200 MW-5-102813 10/28/2013	200 DUPLICATE-1-102813 (MW-5) 10/28/2013	200 MW-5-120413 12/4/2013
4-Bromophenyl phenyl ether		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
4-Chloro-3-Methylphenol		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
4-Chloroaniline		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
4-Chlorophenyl-Phenylether		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
4-Nitroaniline		ug/L	11 U	25.0 U	11 U	23.8 U	–	9.5 U	24.0 U	9.2 U	23.6 U	9.3 U	11 U	23.6 U
4-Nitrophenol (p-Nitrophenol)		ug/L	11 U	25.0 U	11 U	23.8 U	–	9.5 U	24.0 U	9.2 U	23.6 U	9.3 U	11 U	23.6 U
5-Nitro-o-toluidine		ug/L	22 U	–	22 U	–	–	19 U	–	18 U	–	19 U	21 U	–
7,12-Dimethylbenz(a)anthracene		ug/L	22 U	–	22 U	–	–	19 U	–	18 U	–	19 U	21 U	–
Acenaphthene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Acenaphthylene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Aniline		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
Anthracene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Aramite, Total		ug/L	21 U	–	20 U	–	–	17 U	–	17 U	–	17 U	20 U	–
Benzo(a)anthracene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Benzo(a)pyrene	0.1[6]	ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Benzo(b)fluoranthene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Benzo(ghi)perylene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Benzo(k)fluoranthene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Benzyl Alcohol		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
Bis(2-Chloroethoxy)Methane		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
Bis(2-Chloroethyl)Ether		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
Bis(2-Ethylhexyl) Phthalate		ug/L	11 U	10.0 UJ	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
Butyl benzyl phthalate		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
Carbazole			–	10.0 U	–	9.52 U	–	–	9.62 U	–	9.43 U	–	–	9.43 U
Chrysene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Cresol			–	10.0 U	–	9.52 U	–	–	9.62 U	–	9.43 U	–	–	9.43 U
Diallate		ug/L	6.3 U	–	6.2 U	–	–	5.3 U	–	5.1 U	–	5.2 U	6.0 U	–
Dibenzo(a,h)anthracene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Dibenzofuran		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
Dibutyl phthalate		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
Diethyl phthalate		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
Dimethoate		ug/L	22 U	–	22 U	–	–	19 U	–	18 U	–	19 U	21 U	–
Dimethyl phthalate		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
Di-N-Octyl Phthalate		ug/L	4.5 U	10.0 U	4.4 U	9.52 U	–	3.8 U	9.62 U	3.7 U	9.43 U	3.7 U	4.3 U	9.43 U
Diphenylamine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
Disulfoton (Di-Syston)		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–
Ethanone, 1-Phenyl-		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
Ethoprop		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
Ethyl methanesulfonate		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
Fluoranthene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Fluorene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Hexachlorobenzene		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
Hexachlorobutadiene		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
Hexachlorocyclopentadiene		ug/L	56 U	10.0 U	55 U	9.52 U	–	47 U	9.62 U	46 U	9.43 U	47 U	53 U	9.43 U
Hexachloroethane		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
Hexachloropropene		ug/L	110 U	–	110 U	–	–	95 U	–	92 U	–	93 U	110 U	–
Indeno(1,2,3-cd)pyrene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Isodrin		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
Isophorone		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
Isosafrole		ug/L	3.9 U	–	3.9 U	–	–	3.3 U	–	3.2 U	–	3.3 U	3.7 U	–
Methapyrilene		ug/L	170 U	–	170 U	–	–	140 U	–	140 U	–	140 U	160 U	–
Methyl methanesulfonate		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date											
			500 MW-1-102813 10/28/2013	500 MW-1-120313 12/3/2013	010 MW-2-102813 10/28/2013	010 MW-2-120313 12/3/2013	010 MW-2-120413(16) 12/4/2013	650 MW-3-102813 10/28/2013	650 MW-3-120413 12/4/2013	550 MW-4-102813 10/28/2013	550 MW-4-120413 12/4/2013	200 MW-5-102813 10/28/2013	200 DUPLICATE-1-102813 (MW-5) 10/28/2013	200 MW-5-120413 12/4/2013
Methyl Parathion		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–
Naphthalene	160[4]	ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Nitrobenzene		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
N-Nitrosodiethylamine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
N-Nitrosodimethylamine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
N-Nitrosodi-n-butylamine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
N-Nitrosodi-n-propylamine		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
N-Nitrosodiphenylamine (as diphenylamine)		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
N-Nitrosomethylethylamine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
N-Nitrosomorpholine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
N-Nitrosopiperidine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
N-Nitrosopyrrolidine		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
o-Cresol (2-methylphenol)		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
Parathion (ethyl)		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–
Pentachlorobenzene		ug/L	11 U	–	11 U	–	–	9.5 U	–	9.2 U	–	9.3 U	11 U	–
Pentachloroethane		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–
Pentachloronitrobenzene		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–
Pentachlorophenol		ug/L	56 U	25.0 U	55 U	23.8 U	–	47 U	24.0 U	46 U	23.6 U	47 U	53 U	23.6 U
Phenacetin		ug/L	22 U	–	22 U	–	–	19 U	–	18 U	–	19 U	21 U	–
Phenanthrene		ug/L	4.5 U	2.00 U	4.4 U	1.90 U	–	3.8 U	1.92 U	3.7 U	1.89 U	3.7 U	4.3 U	1.89 U
Phenol		ug/L	11 U	10.0 U	11 U	9.52 U	–	9.5 U	9.62 U	9.2 U	9.43 U	9.3 U	11 U	9.43 U
Phorate		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–
Pronamide (Kerb)		ug/L	22 U	–	22 U	–	–	19 U	–	18 U	–	19 U	21 U	–
Pyrene		ug/L	11 U	2.00 U	11 U	1.90 U	–	9.5 U	1.92 U	9.2 U	1.89 U	9.3 U	11 U	1.89 U
Pyridine		ug/L	22 U	–	22 U	–	–	19 U	–	18 U	–	19 U	21 U	–
Quinoline, 4-nitro-, 1-oxid		ug/L	110 U	–	110 U	–	–	95 U	–	92 U	–	93 U	110 U	–
Thiodiglycol		ug/L	56 U	–	55 U	–	–	47 U	–	46 U	–	47 U	53 U	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date										
			200 MW-6-102813 10/28/2013	200 MW-6-120413 12/4/2013	150 MW-7-102813 10/28/2013	150 MW-7-120313 12/3/2013	150 MW-7-120413(11) 12/4/2013	070 MW-8-102813 10/28/2013	070 MW-8-120313 12/3/2013	070 MW-9-122013 12/20/2013	650 B-1-102813 10/28/2013	650 B-1-120413 12/4/2013	OW-1-120413 12/4/2013
Method NWTPH-Gx													
Gasoline-range petroleum hydrocarbons	1,000[3]	ug/L	100 U	100 U	100 U	100 U	--	100 U	100 U	90 U	100 U	100 U	--
Method NWTPH-Dx												--	--
Diesel-range petroleum hydrocarbons	500	ug/L	239 U	245 U	238 U	242 U	--	238 U	241 U	238 U	**2,170**	**1,910**	--
Heavy oil-range petroleum hydrocarbons	500	ug/L	382 U	408 U	381 U	403 U	--	380 U	401 U	397 U	**5,390**	**1,370**	--
Method EPA 200.8													
Arsenic (Total)	5	ug/L	**2.5**	**2.8**	**83**	**17**	**8.7**	**13**	**12**	**3.4**	--		1.0 U
Arsenic (Dissolved)		ug/L	**2.0**	**1.8**	**79**	**13**	**7.2**	**4.7**	**4.5**	--			1.0 U
Arsenic III		ug/L	--	--	--	**13.5**	--	--	--	--	--	--	--
Arsenic V		ug/L	--	--	--	3 U	--	--	--	--	--	--	--
Barium (Total)	2,000	ug/L	**68**	**110**	**110**	**110**	--	**90**	**110**	**87**	--		--
Barium (Dissolved)		ug/L	**62**	**91**	**100**	**85**	--	**69**	**65**	--			--
Cadmium (Total)	5	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1 U	--		--
Cadmium (Dissolved)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	--			--
Chromium (Total)	50	ug/L	**2.2**	2.0 U	2.0 U	2.0 U	--	2.0 U	20 U	2 U	--		--
Chromium (Dissolved)		ug/L	2.0 U	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	--	--		--
Copper		ug/L	--	2.0 U	--	2.0 U	--	--	2.0 U	--			--
Copper		ug/L	--	2.0 U	--	2.0 U	--	--	2.0 U	--			--
Iron		ug/L	--	**1,100**	--	**1,000**	--	--	**15,000**	--			--
Iron		ug/L	--	25 U	--	25 U	--	--	**3,700**	--			--
Lead (Total)	15	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1 U	--		--
Lead (Dissolved)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	--			--
Manganese (Total)		ug/L	--	**1,100**	--	**1,100**	--	--	**760**	--	--		--
Manganese (Dissolved)		ug/L	**980**	**1,100**	**660**	**1,000**	--	**630**	**730**	--			--
Selenium (Total)	50	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1 U	--		--
Selenium (Dissolved)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	--			--
Silver (Total)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1 U	--		--
Silver (Dissolved)		ug/L	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	--			--
Method EPA 245.1													
Mercury (Total)	2	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.333 U	--		--
Mercury (Dissolved)			0.20 U	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	--			--
Method EPA 300.0													
Nitrate	10	ug/L	200 U	**200**	200 U	200 UJ	--	200 U	200 UJ	--	--	--	--
Sulfate		ug/L	**10,200**	**12,500**	**7,540**	**6,480**	--	**1,370**	**1,420**	--	--	--	--
Method RSK-175													
Methane		ug/L	**107**	**90.0**	**63.0**	**87.0**	--	**3,050**	**2,860**	--	--	**3,250**	--
Method EPA SM2320B													
Alkalinity, Total		ug/L	**360,000**	**340,000**	**340,000**	**330,000**	--	**230,000**	**250,000**	--	--	--	--
Method EPA 4500PE													
Phosphorus			--	60.0 U	--	**101**	--	--	**509**	--	--	--	--
Method EPA 8260B (VOCs)													
1,1,1,2-Tetrachloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	--	1.00 U	1.00 U	--	1.00 U	1.00 U	--
1,1,1-Trichloroethane	200	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	--	1.00 U	1.00 U	--	1.00 U	1.00 U	--
1,1,2,2-Tetrachloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	--	1.00 U	1.00 U	--	1.00 U	1.00 U	--
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	--	1.00 U	1.00 U	--	1.00 U	1.00 U	--
1,1,2-Trichloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	--	1.00 U	1.00 U	--	1.00 U	1.00 U	--
1,1-Dichloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	--	1.00 U	1.00 U	--	1.00 U	1.00 U	--

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date										
			200 MW-6-102813 10/28/2013	200 MW-6-120413 12/4/2013	150 MW-7-102813 10/28/2013	150 MW-7-120313 12/3/2013	150 MW-7-120413(11) 12/4/2013	070 MW-8-102813 10/28/2013	070 MW-8-120313 12/3/2013	070 MW-9-122013 12/20/2013	650 B-1-102813 10/28/2013	650 B-1-120413 12/4/2013	OW-1-120413 12/4/2013
1,1-Dichloroethene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,1-Dichloropropene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,2,3-Trichlorobenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,2,3-Trichloropropane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,2,4-Trichlorobenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,2,4-Trimethylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,2-Dibromo-3-Chloropropane		ug/L	5.00 U	5.00 U	5.00 U	5.00 U	–	5.00 U	5.00 U	–	5.00 U	5.00 U	–
1,2-dibromoethane (EDB)	0.01	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,2-Dichloroethane (EDC)	5	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,2-Dichloropropane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,3,5-Trimethylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,3-Dichloropropane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
2,2-Dichloropropane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
2-Butanone (MEK)			–	10.0 U	–	10.0 U	–	–	10.0 U	–		10.0 U	–
2-Butanone, 4-(Acetyloxy)-		ug/L	10.0 U	10.0 U	10.0 U	10.0 U	–	10.0 U	10.0 U	–	10.0 U	10.0 U	–
2-Chlorotoluene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
2-Hexanone		ug/L	10.0 U	10.0 U	10.0 U	10.0 U	–	10.0 U	10.0 U	–	10.0 U	10.0 U	–
4-Chlorotoluene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Acetone		ug/L	25.0 U	25.0 U	25.0 U	25.0 U	–	25.0 U	25.0 U	–	25.0 U	25.0 U	–
Benzene	5	ug/L	0.200 U	0.200 U	0.200 U	0.200 U	–	0.200 U	0.200 U	0.2 U	0.200 U	0.200 U	–
Bromobenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Bromochloromethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Bromodichloromethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Bromoform (Tribromomethane)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Bromomethane		ug/L	5.00 U	5.00 U	5.00 U	5.00 U	–	5.00 U	5.00 U	–	5.00 U	5.00 U	–
Butane, 2-methoxy-2-methyl-		ug/L	1.00 U	–	1.00 U	–	–	1.00 U	–	–	1.00 U	–	–
Carbon Disulfide		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Carbon Tetrachloride	5	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Chlorobenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Chloroethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Chloroform		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Chloromethane		ug/L	3.00 U	3.00 U	3.00 U	3.00 U	–	3.00 U	3.00 U	–	3.00 U	3.00 U	–
cis-1,2-Dichloroethene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Cis-1,3-Dichloropropene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
D14-Terphenyl		ug/L	5.00 U	–	5.00 U	–	–	5.00 U	–	–	5.00 U	–	–
Dibromochloromethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Dibromomethane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Dichlorodifluoromethane (CFC-12)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Ethylbenzene	700	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	0.5 U	1.00 U	1.00 U	–
HCFC-21		ug/L	0.100 U	0.100 U	0.100 U	0.100 U	–	0.100 U	0.100 U	–	0.100 U	0.100 U	–
Hexachlorobutadiene		ug/L	2.00 U	2.00 U	2.00 U	2.00 U	–	2.00 U	2.00 U	–	2.00 U	2.00 U	–
Hexane		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Isopropylbenzene (Cumene)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Methyl t-butyl ether (MTBE)	20	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Methylene Chloride	5	ug/L	10.0 U	10.0 U	10.0 U	10.0 U	–	10.0 U	10.0 U	–	10.0 U	10.0 U	–
Naphthalene	160[4]	ug/L	2.00 U	2.00 U	2.00 U	2.00 U	–	2.00 U	2.00 U	–	**4.69**	**6.23**	–
n-Butylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
n-Propylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Phenol, 2-bromo-		ug/L	10.0 U	–	10.0 U	–	–	10.0 U	–	–	10.0 U	–	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date										
			200 MW-6-102813 10/28/2013	200 MW-6-120413 12/4/2013	150 MW-7-102813 10/28/2013	150 MW-7-120313 12/3/2013	150 MW-7-120413(11) 12/4/2013	070 MW-8-102813 10/28/2013	070 MW-8-120313 12/3/2013	070 MW-9-122013 12/20/2013	650 B-1-102813 10/28/2013	650 B-1-120413 12/4/2013	OW-1-120413 12/4/2013
p-Isopropyltoluene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Sec-Butylbenzene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Styrene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Tert-Butylbenzene				1.00 U		1.00 U	–		1.00 U	–		1.00 U	–
Tetrachloroethene (PCE)	5	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Toluene	1,000	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	0.5 U	1.00 U	1.00 U	–
Total Xylenes				–		–	–		–	1.5 U		–	–
Trans-1,2-Dichloroethene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Trans-1,3-Dichloropropene		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Trans-1,4-Dichloro-2-butene		ug/L	0.100 U	0.100 U	0.100 U	0.100 U	–	0.100 U	0.100 U	–	0.100 U	0.100 U	–
Trichloroethene (TCE)	5	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Trichlorofluoromethane (CFC-11)		ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	–	1.00 U	1.00 U	–
Vinyl Chloride	0.2	ug/L	0.200 U	0.200 U	0.200 U	0.200 U	–	0.200 U	0.200 U	–	0.200 U	0.200 U	–
Xylene, m-,p-	1000[5]	ug/L	2.00 U	2.00 U	2.00 U	2.00 U	–	2.00 U	2.00 U	0.5 U	2.00 U	2.00 U	–
Xylene, o-	1000[5]	ug/L	1.00 U	1.00 U	1.00 U	1.00 U	–	1.00 U	1.00 U	0.5 U	1.00 U	1.00 U	–
Method EPA 8270C (SVOCs)													
1,2,4,5-Tetrachlorobenzene		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
1,2,4-Trichlorobenzene		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
1,2-Dichlorobenzene (o-Dichlorobenzene)		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
1,3,5-Trinitrobenzene		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–
1,3-Dichlorobenzene (m-Dichlorobenzene)		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
1,3-Dinitrobenzene		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
1,4-Dichlorobenzene (p-Dichlorobenzene)		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
1,4-Naphthoquinone		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–
1-Methylnaphthalene			–	1.89 U		2.00 U	–		5.00 U	–		–	–
1-Naphthylamine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
2,2'-Oxybis[1-chloropropane]			–	9.43 U		10.0 U	–		25.0 U	–		–	–
2,3,4,6-Tetrachlorophenol		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–
2,4,5-Trichlorophenol		ug/L	9.2 U	23.6 U	9.7 U	25.0 U	–	9.5 U	62.5 U	–	–	–	–
2,4,6-Trichlorophenol		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
2,4-Dichlorophenol		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
2,4-Dimethylphenol		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
2,4-Dinitrophenol		ug/L	28 U	23.6 U	29 U	25.0 U	–	29 U	62.5 U	–	–	–	–
2,4-Dinitrotoluene		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
2,6-Dichlorophenol		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
2,6-Dinitrotoluene		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
2-Acetylaminofluorene		ug/L	92 U	–	97 U	–	–	95 U	–	–	–	–	–
2-Chloronaphthalene		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
2-Chlorophenol		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
2-Methylnaphthalene		ug/L	**5.9**	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
2-Naphthylamine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
2-Nitroaniline		ug/L	9.2 U	23.6 U	9.7 U	25.0 U	–	9.5 U	62.5 U	–	–	–	–
2-Nitrophenol		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
2-Picoline		ug/L	18 U	–	19 U	–	–	19 U	–	–	–	–	–
2-Toluidine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
3 & 4 Methylphenol		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
3,3'-Dichlorobenzidine		ug/L	46 U	9.43 U	49 U	10.0 U	–	48 U	25.0 U	–	–	–	–
3,3'-Dimethylbenzidine		ug/L	18 U	–	19 U	–	–	19 U	–	–	–	–	–
3-Methylcholanthrene		ug/L	18 U	–	19 U	–	–	19 U	–	–	–	–	–
3-Nitroaniline		ug/L	9.2 U	23.6 U	9.7 U	25.0 U	–	9.5 U	62.5 U	–	–	–	–
4,6-Dinitro-2-Methylphenol		ug/L	46 U	23.6 U	49 U	25.0 U	–	48 U	62.5 U	–	–	–	–
4-Amino-2,6-Dinitrotoluene		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date										
			200 MW-6-102813 10/28/2013	200 MW-6-120413 12/4/2013	150 MW-7-102813 10/28/2013	150 MW-7-120313 12/3/2013	150 MW-7-120413(11) 12/4/2013	070 MW-8-102813 10/28/2013	070 MW-8-120313 12/3/2013	070 MW-9-122013 12/20/2013	650 B-1-102813 10/28/2013	650 B-1-120413 12/4/2013	OW-1-120413 12/4/2013
4-Bromophenyl phenyl ether		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
4-Chloro-3-Methylphenol		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
4-Chloroaniline		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
4-Chlorophenyl-Phenylether		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
4-Nitroaniline		ug/L	9.2 U	23.6 U	9.7 U	25.0 U	–	9.5 U	62.5 U	–	–	–	–
4-Nitrophenol (p-Nitrophenol)		ug/L	9.2 U	23.6 U	9.7 U	25.0 U	–	9.5 U	62.5 U	–	–	–	–
5-Nitro-o-toluidine		ug/L	18 U	–	19 U	–	–	19 U	–	–	–	–	–
7,12-Dimethylbenz(a)anthracene		ug/L	18 U	–	19 U	–	–	19 U	–	–	–	–	–
Acenaphthene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Acenaphthylene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Aniline		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
Anthracene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Aramite, Total		ug/L	17 U	–	18 U	–	–	18 U	–	–	–	–	–
Benzo(a)anthracene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Benzo(a)pyrene	0.1[6]	ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Benzo(b)fluoranthene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Benzo(ghi)perylene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Benzo(k)fluoranthene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Benzyl Alcohol		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
Bis(2-Chloroethoxy)Methane		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
Bis(2-Chloroethyl)Ether		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
Bis(2-Ethylhexyl) Phthalate		ug/L	9.2 U	9.43 U	9.7 U	10.0 UJ	–	9.5 U	25.0 U	–	–	–	–
Butyl benzyl phthalate		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
Carbazole			–	9.43 U		10.0 U	–		25.0 U	–		–	–
Chrysene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Cresol			–	9.43 U		10.0 U	–		25.0 U	–		–	–
Diallate		ug/L	5.2 U	–	5.4 U	–	–	5.3 U	–	–	–	–	–
Dibenzo(a,h)anthracene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Dibenzofuran		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
Dibutyl phthalate		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
Diethyl phthalate		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
Dimethoate		ug/L	18 U	–	19 U	–	–	19 U	–	–	–	–	–
Dimethyl phthalate		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
Di-N-Octyl Phthalate		ug/L	3.7 U	9.43 U	3.9 U	10.0 U	–	3.8 U	25.0 U	–	–	–	–
Diphenylamine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
Disulfoton (Di-Syston)		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–
Ethanone, 1-Phenyl-		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
Ethoprop		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
Ethyl methanesulfonate		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
Fluoranthene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Fluorene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Hexachlorobenzene		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
Hexachlorobutadiene		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
Hexachlorocyclopentadiene		ug/L	46 U	9.43 U	49 U	10.0 U	–	48 U	25.0 U	–	–	–	–
Hexachloroethane		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
Hexachloropropene		ug/L	92 U	–	97 U	–	–	95 U	–	–	–	–	–
Indeno(1,2,3-cd)pyrene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Isodrin		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
Isophorone		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
Isosafrole		ug/L	3.2 U	–	3.4 U	–	–	3.3 U	–	–	–	–	–
Methapyrilene		ug/L	140 U	–	150 U	–	–	140 U	–	–	–	–	–
Methyl methanesulfonate		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–

	Regulatory Levels[2]	Units	Parcel Number, Sample Number, and Sampled Date										
			200 MW-6-102813 10/28/2013	200 MW-6-120413 12/4/2013	150 MW-7-102813 10/28/2013	150 MW-7-120313 12/3/2013	150 MW-7-120413(11) 12/4/2013	070 MW-8-102813 10/28/2013	070 MW-8-120313 12/3/2013	070 MW-9-122013 12/20/2013	650 B-1-102813 10/28/2013	650 B-1-120413 12/4/2013	OW-1-120413 12/4/2013
Methyl Parathion		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–
Naphthalene	160[4]	ug/L	**4.2**	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Nitrobenzene		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
N-Nitrosodiethylamine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
N-Nitrosodimethylamine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
N-Nitrosodi-n-butylamine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
N-Nitrosodi-n-propylamine		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
N-Nitrosodiphenylamine (as diphenylamine)		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
N-Nitrosomethylethylamine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
N-Nitrosomorpholine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
N-Nitrosopiperidine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
N-Nitrosopyrrolidine		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
o-Cresol (2-methylphenol)		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
Parathion (ethyl)		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–
Pentachlorobenzene		ug/L	9.2 U	–	9.7 U	–	–	9.5 U	–	–	–	–	–
Pentachloroethane		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–
Pentachloronitrobenzene		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–
Pentachlorophenol		ug/L	46 U	23.6 U	49 U	25.0 U	–	48 U	62.5 U	–	–	–	–
Phenacetin		ug/L	18 U	–	19 U	–	–	19 U	–	–	–	–	–
Phenanthrene		ug/L	3.7 U	1.89 U	3.9 U	2.00 U	–	3.8 U	5.00 U	–	–	–	–
Phenol		ug/L	9.2 U	9.43 U	9.7 U	10.0 U	–	9.5 U	25.0 U	–	–	–	–
Phorate		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–
Pronamide (Kerb)		ug/L	18 U	–	19 U	–	–	19 U	–	–	–	–	–
Pyrene		ug/L	9.2 U	1.89 U	9.7 U	2.00 U	–	9.5 U	5.00 U	–	–	–	–
Pyridine		ug/L	18 U	–	19 U	–	–	19 U	–	–	–	–	–
Quinoline, 4-nitro-, 1-oxid		ug/L	92 U	–	97 U	–	–	95 U	–	–	–	–	–
Thiodiglycol		ug/L	46 U	–	49 U	–	–	48 U	–	–	–	–	–

Notes:

[1]Chemical analyses conducted by TestAmerica in Spokane, Washington.

[2]Regulatory level refers to Washington State Model Toxics Control Act (MTCA) Method A cleanup levels unless otherwise footnoted.

[3]Washington State Model Toxics Control Act (MTCA) Method A cleanup level for gasoline-range petroleum hydrocarbons is 1,000 µg/l, if benzene is not detected; otherwise the cleanup level is 800 µg/l.

[4]Cleanup level refers to sum of naphthalenes.

[5]Cleanup level for total xylenes.

[6]Cleanup level referenced to benzo (a) pyrene. If other carcinogenic PAHs are present, the cleanup level represents the total carcinogenic PAH concentration.

Bold indicates concentration was detected above reporting limit.

Red outline indicates concentration greater than regulatory level.

Shading indicates the reporting limit of a non-detected analyte exceeded the MTCA Method A Cleanup Level.

U indicates analyte was not detected at a concentration greater than the listed reporting limit.

J indicates result is qualified as estimated. Refer to applicable Data Validation Reports for details. Result is less than the Reporting Limit (RL) or equal to or greater than the Method Detection Limit (MDL) and the reported concentration is an approximate value.

-- = not applicable; mg/L = milligrams per liter; µg/L = micrograms per liter

Table 6

Summary of Chemical Analytical Results - Metals and Parameters[1] in Surface Water

Former Cashmere Mill Site
Cashmere, Washington

	Units	Sample Number and Date Sampled		
		DOWNSTREAM-111313	MIDSTREAM-111313	UPSTREAM-111313
		11/13/2013	11/13/2013	11/13/2013
Method EPA 200.7				
Arsenic (Total)	mg/L	0.0250 U	0.0250 U	0.0250 U
Arsenic (Dissolved)	mg/L	0.0250 U	0.0250 U	0.0250 U
Barium (Total)	mg/L	**0.0731**	**0.0724**	**0.0342**
Barium (Dissolved)	mg/L	**0.0515**	**0.0495**	**0.0248**
Cadmium (Total)	mg/L	0.00500 U	0.00500 U	0.00500 U
Cadmium (Dissolved)	mg/L	0.00500 U	0.00500 U	0.00500 U
Chromium (Total)	mg/L	0.0100 U	0.0100 U	0.0100 U
Chromium (Dissolved)	mg/L	0.0100 U	0.0100 U	0.0100 U
Copper (Total)	mg/L	0.0100 U	0.0100 U	0.0100 U
Copper (Dissolved)	mg/L	0.0100 U	0.0100 U	0.0100 U
Iron (Total)	mg/L	0.0375 U	**0.0759**	**0.107**
Iron (Dissolved)	mg/L	0.0375 U	0.0375 U	0.0375 U
Lead (Total)	mg/L	0.0175 U	0.0175 U	0.0175 U
Lead (Dissolved)	mg/L	0.0188 U	0.0188 U	0.0188 U
Selenium (Total)	mg/L	0.0625 U	0.0625 U	0.0625 U
Selenium (Dissolved)	mg/L	0.0625 U	0.0625 U	0.0625 U
Silver (Total)	mg/L	0.0250 U	0.0250 U	0.0250 U
Silver (Dissolved)	mg/L	0.0125 U	0.0125 U	0.0125 U
Method EPA 245.1				
Mercury (Total)	mg/L	0.000333 U	0.000333 U	0.000333 U
Mercury (Dissolved)	mg/L	0.000250 U	0.000250 U	0.000250 U
Method SM2320				
Alkalinity, Total	mg/L	**253**	**253**	**204**
Method SM4500H+B				
pH	SU	**7.52** J	**7.39** J	**7.44** J
Method EPA 120.1				
Specific Conductance	uS/cm	**551**	**523**	**429**

Notes:

[1]Chemical analyses conducted by TestAmerica of Spokane, Washington.

U indicates analyte was not detected at a concentration greater than the listed reporting limit (RL).

J indicates result is an approximate level. Refer to applicable Data Validation Report in Appendix C for details.

Bold indicates concentration was detected above reporting limit.

mg/L = milligrams per liter; uS/cm = microsiemens per centimeter; SU = standard units.

Table 7

Summary of Groundwater Level Measurements

Cashmere Former Mill Site
Cashmere, Washington

Well Number	Date Measured	Top of Casing Elevation[1] (feet)	Depth to Water[2] (feet)	Groundwater Elevation[1] (feet)
MW-1	10/28/13	788.78	6.83	781.95
	12/03/13		6.41	782.37
MW-2	10/28/13	788.91	5.90	783.01
	12/03/13		5.70	783.21
MW-3	10/28/13	790.25	7.36	782.89
	12/03/13		7.23	783.02
MW-4	10/28/13	788.79	4.83	783.96
	12/03/13		4.72	784.07
MW-5	10/28/13	786.99	2.67	784.32
	12/03/13		2.57	784.42
MW-6	10/28/13	787.28	2.55	784.73
	12/03/13		2.47	784.81
MW-7	10/28/13	790.49	3.10	787.39
	12/03/13		3.03	787.46
MW-8	10/28/13	794.95	3.87	791.08
	12/03/13		3.87	791.08
OW-1	10/28/13	794.91	4.45	790.46
	12/03/13		4.45	790.46
OW-4	10/28/13	795.80	5.09	790.71
	12/04/13		5.08	790.72
OW-7	10/28/13	792.03	2.60	789.43
	12/04/13		2.54	789.49
B-1	10/28/13	789.79	6.26	783.53
	12/03/13		6.34	783.45

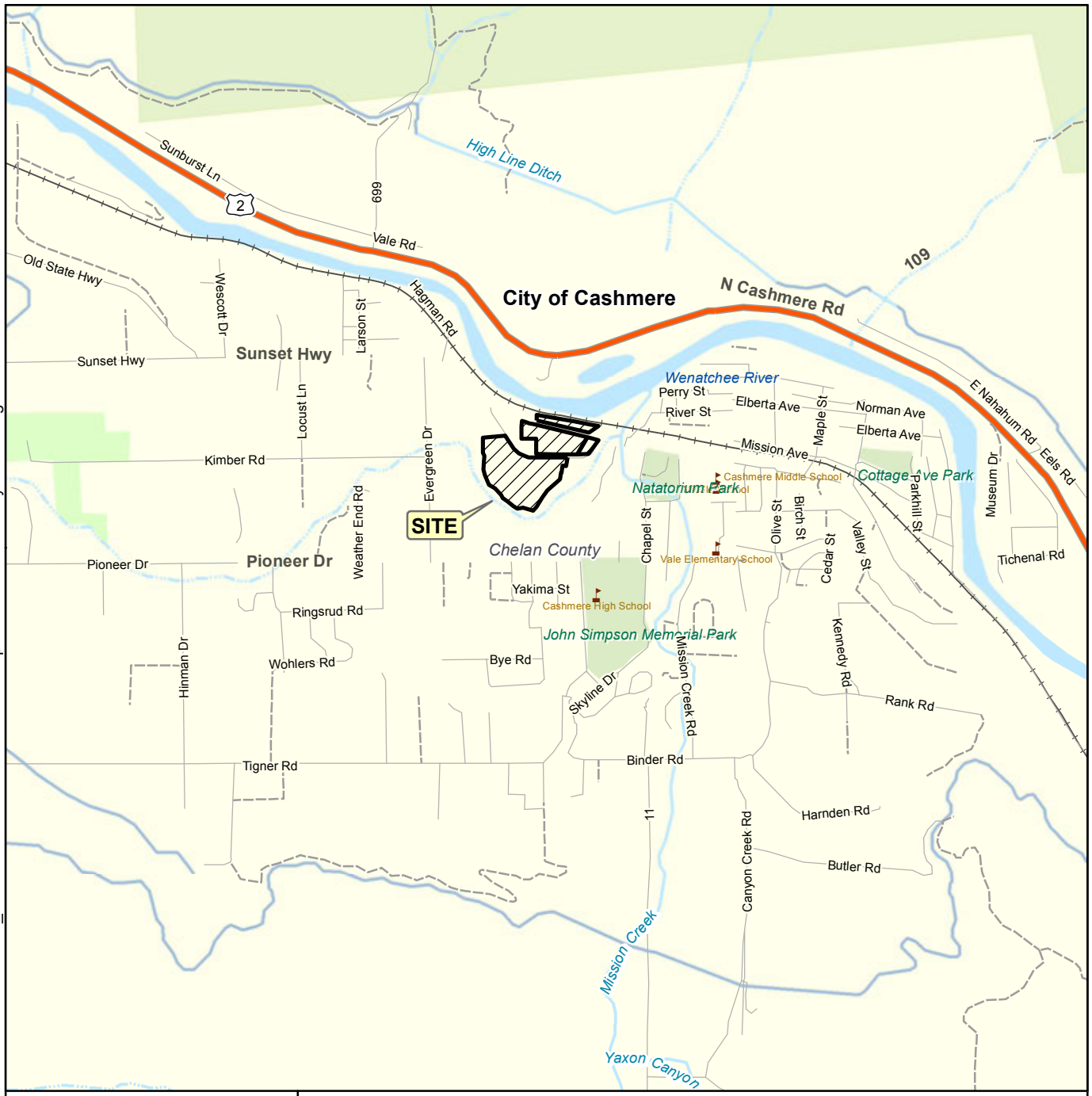
Notes:

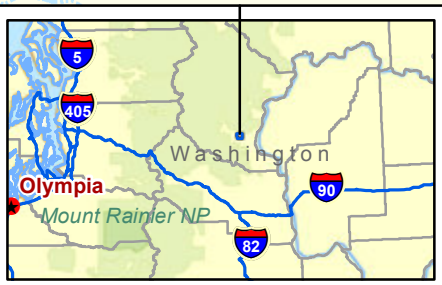
[1]Elevations are referenced to NAVD 88. Top of casing elevation survey performed by LandLine Survey.

[2]Depth to water measurements referenced to the top of PVC casing.

FIGURES

GeoEngineers





N
W E
S

2,000 0 2,000

Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.

Data Sources: ESRI Data & Maps, Street Maps 2005

Transverse Mercator, State Plane South, North American Datum 1983
North arrow oriented to grid north

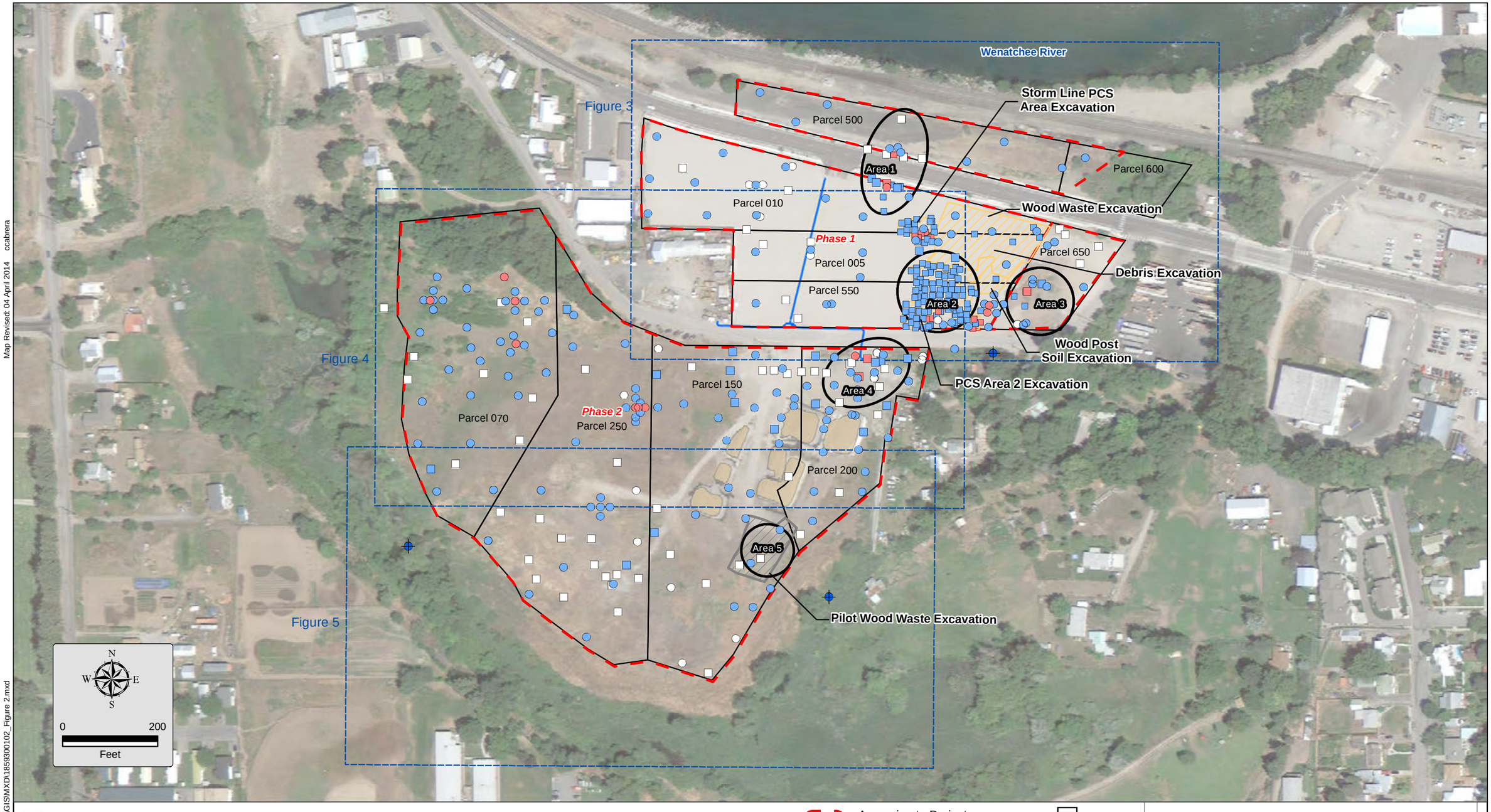
Vicinity Map

Former Cashmere Mill Site
Cashmere, Washington

GeoEngineers

Figure 1

Office: SPOK Path: W:\Spokane\Projects\18\18593001\GIS\MXD\18593000102_F1.mxd Map Revised: 23 January 2014 cgonzales



Map Revised: 04 April 2014 ccabrera

Path: P:\18\18593001\GIS\MXD\18593001 02_Figure 2.mxd

Office: SEA

Data References
Existing site boundary, parcel, previous explorations, remedial site boundaries, and PCS Soil stockpiles based on data provided by Maul, Foster & Alongi, Inc. and RH2 Engineering Inc., 2013.
Imagery from Google Earth Pro, 2013
Projection: NAD 1983 NSRS2007 StatePlane Oregon North FIPS 3601 Ft Intl

Notes:
1. Parcel labels in drawing refer to the last three digits in the parcel numbers below.
Parcels in map include:
231905924005, 231905925010, 231905110650, 231905110550, 231905110500, 231905110600, 231905141200, 231905110150, 231905141250, 231905924070.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

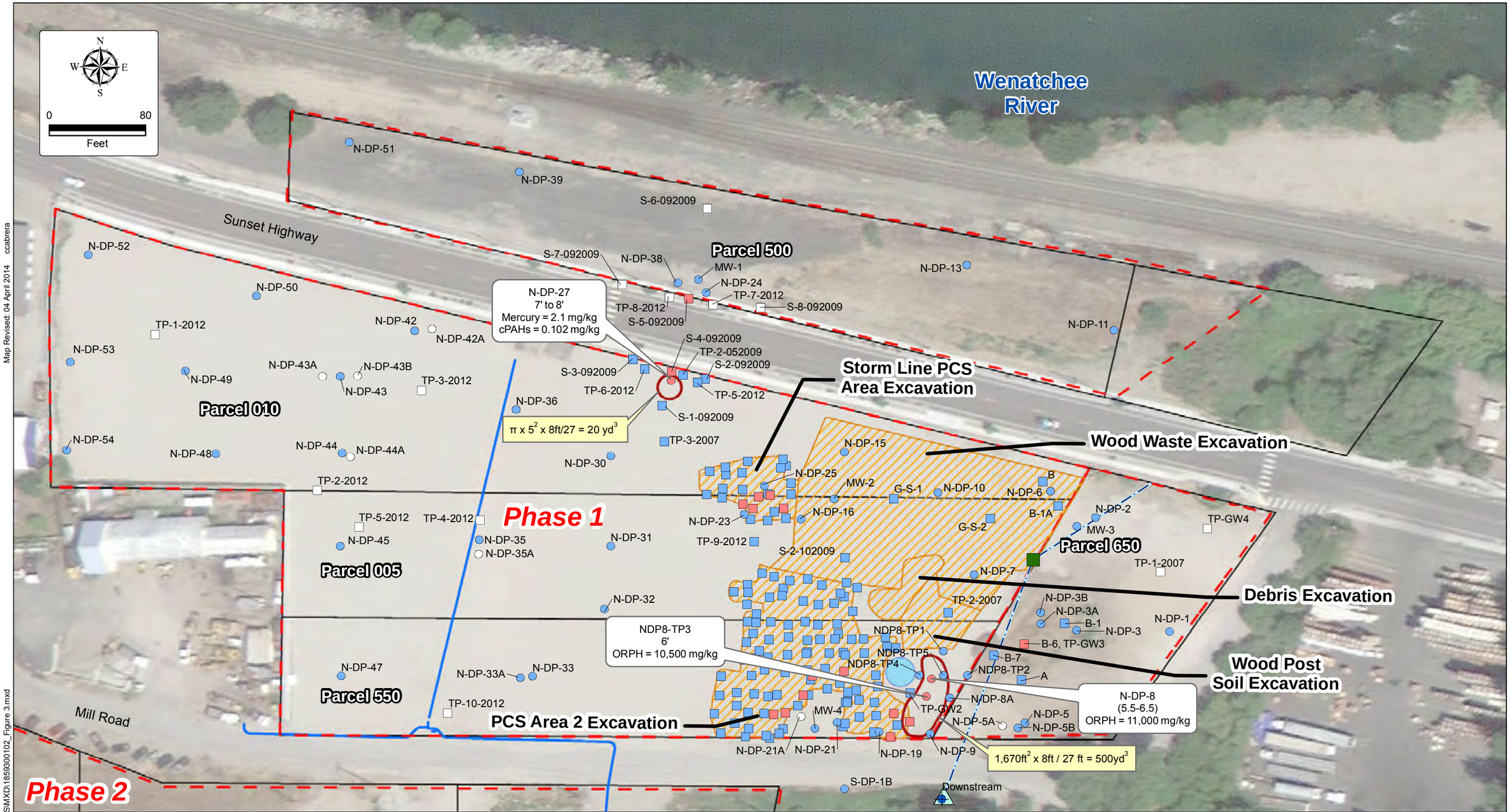
- Previous Explorations Not Tested
- Previous Explorations < MTCA Method A Cleanup Levels
- Previous Explorations > MTCA Method A Cleanup Levels
- Surface Water Location Regulatory Levels Not Applicable
- GeoEngineers Explorations Not Tested
- GeoEngineers Explorations < MTCA Applicable Method A or B Cleanup Levels
- GeoEngineers Explorations > MTCA Applicable Method A or B Cleanup Levels
- Approximate Location of Previous Remedial Excavation Areas
- Approximate Project Site Boundary
- Previous Pilot Wood Waste Area
- Existing PCS Stockpiles from Phase 1
- Area of Concern Previously Identified by Maul Foster Alongi
- Parcels
- Pipeline

Site Plan (Overview)

Former Cashmere Mill Site
Cashmere, Washington

GeoEngineers

Figure 2



Map Revised: 04 April 2014 ccabrera

Path: P:\181859300\1\GIS\MXD\185930102_Figure 3.mxd

Office: SEA

Data References
Existing site boundary, parcel, previous explorations, remedial site boundaries, and PCS Soil stockpiles based on data provided by Maul, Foster & Alongi, Inc. (MFA) and RH2 Engineering Inc., 2013.
Bypass vault, inlet and creek culvert alignment from MFA, April, 2014.
Imagery from Google Earth Pro, 2013
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes:
1. Parcel labels in drawing refer to the last three digits in the parcel numbers below. Parcels in map include:
231905924005, 231905925010, 231905110650, 231905110550, 231905110500, 231905110600, 231905141200, 231905110150, 231905141250, 231905924070.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

- Previous Explorations Not Tested
- Previous Explorations < MTCA Method A Cleanup Levels
- Previous Explorations > MTCA Method A Cleanup Levels
- Pipeline
- GeoEngineers Explorations Not Tested
- GeoEngineers Explorations < MTCA Applicable Method A or B Cleanup Levels
- GeoEngineers Explorations > MTCA Applicable Method A or B Cleanup Levels
- Surface Water Location Regulatory Levels Not Applicable
- Inlet at No Name Creek Bypass
- No Name Creek Bypass Vault
- Water Structure
- No Name Creek Culvert Approximate Alignment
- Approximate Location of Previous Remedial Excavation Areas
- Estimated Extent of Contaminated Soil Requiring Removal
- Approximate Project Site Boundary

Site Plan (North)

Former Cashmere Mill Site
Cashmere, Washington

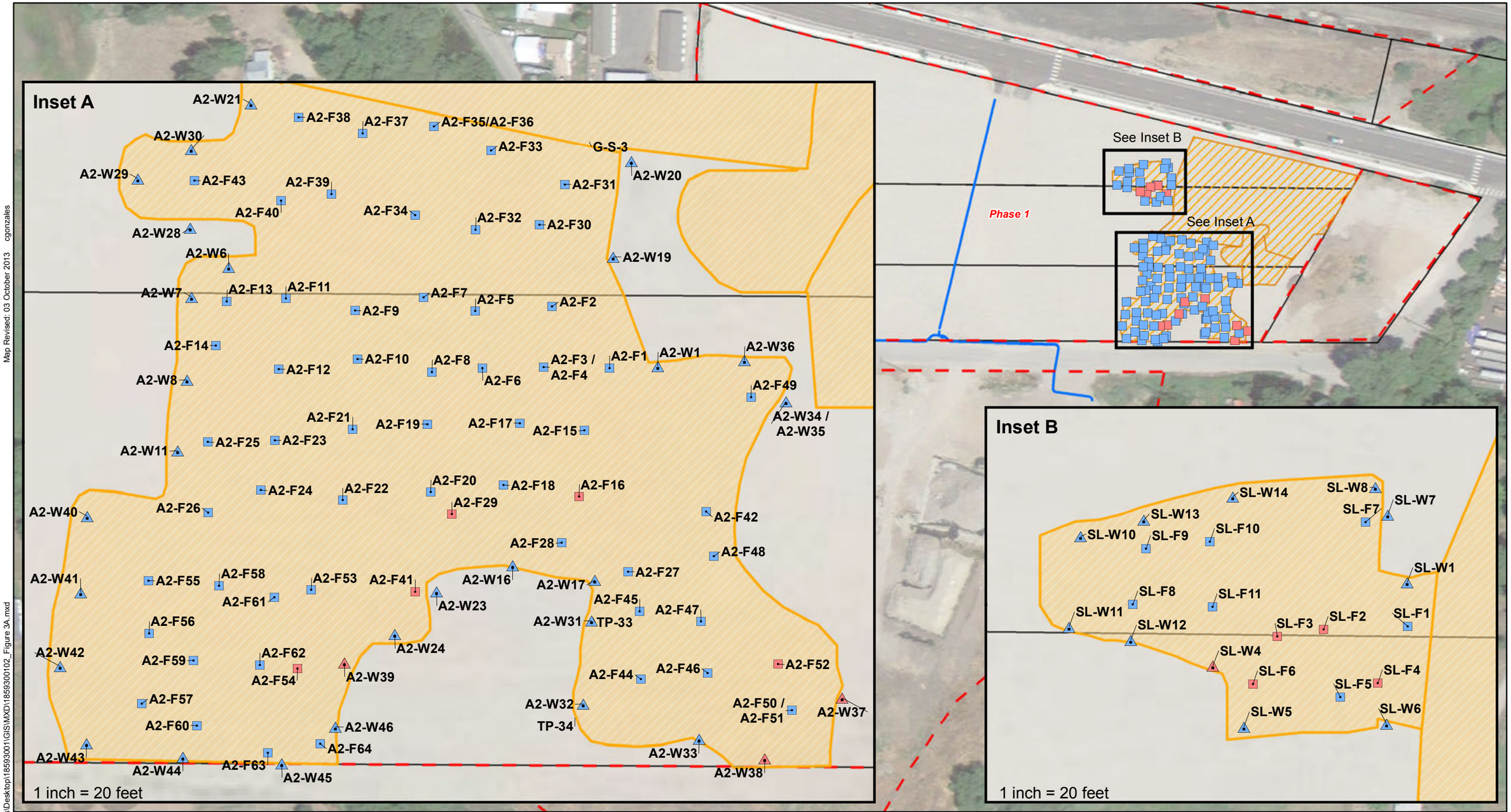
GeoEngineers

Figure 3

Map Revised: 03 October 2013 cgonzales

Path: C:\Users\cgonzales\Desktop\18593001\GIS\MXD\18593001_Figure 3A.mxd

Office: SEA



Data References
Existing site boundary, parcel, previous explorations, remedial site boundaries, and PCS Soil stockpiles based on data provided by Maul, Foster & Alongi, Inc. and RH2 Engineering Inc., 2013.
Imagery from Google Earth Pro, 2013
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes:
1. Parcel labels in drawing refer to the last three digits in the parcel numbers below.
Parcels in map include:
231905924005, 231905925010, 231905110650, 231905110550, 231905110500, 231905110600, 231905141200, 231905110150, 231905141250, 231905924070.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

- Previous Explorations (Floor Samples) < MTCA Method A Cleanup Levels
- Previous Explorations (Wall Samples) < MTCA Method A Cleanup Levels
- Previous Explorations (Floor Samples) > MTCA Method A Cleanup Levels
- Previous Explorations (Wall Samples) > MTCA Method A Cleanup Levels
- Approximate Location of Previous Remedial Excavation Areas
- Approximate Project Site Boundary
- Parcels
- Pipeline

N W E S

Previous Remediation Area Sample Locations (Expanded View)

Former Cashmere Mill Site
Cashmere, Washington

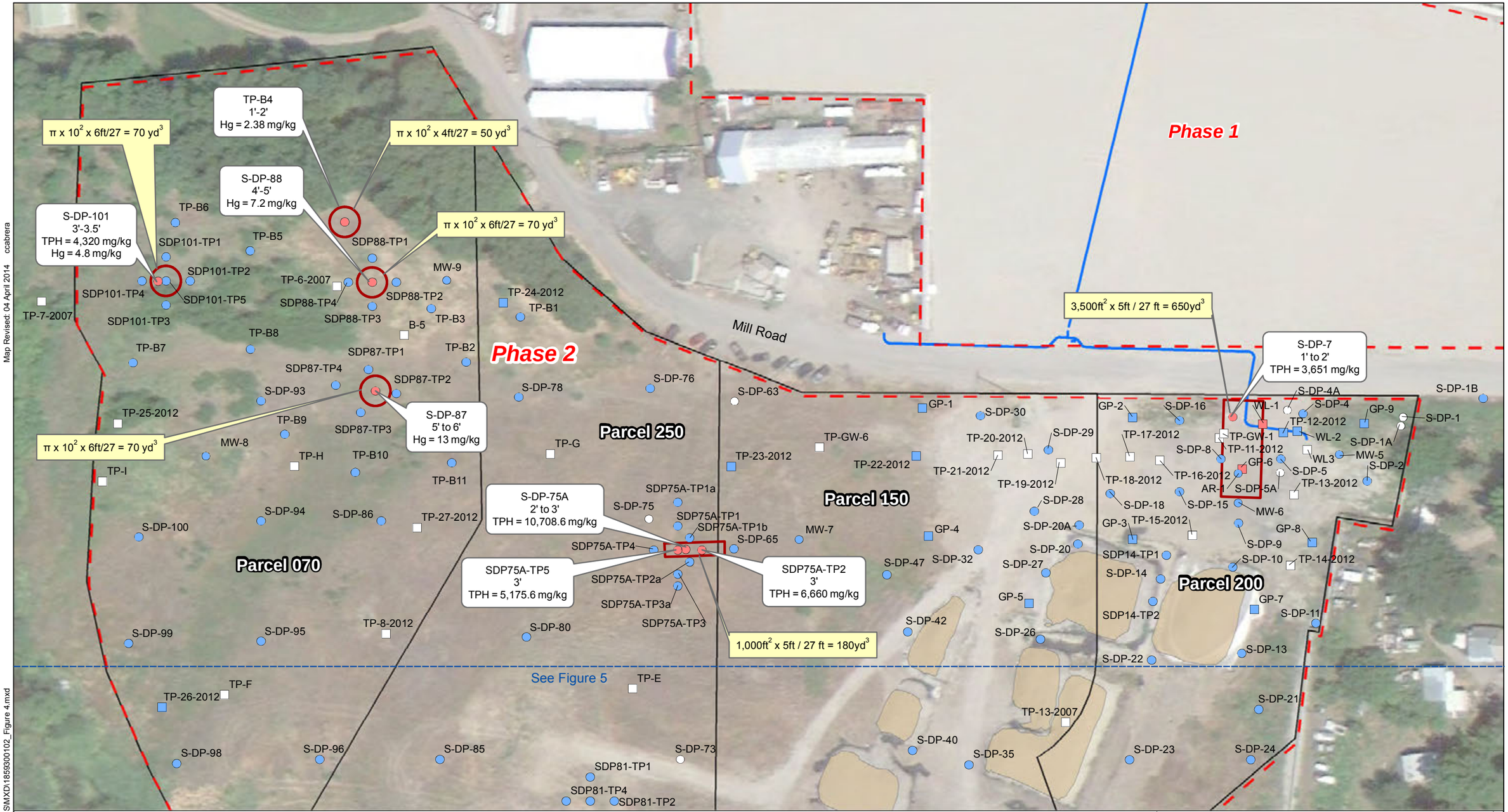
GeoEngineers

Figure 3A

Map Revised: 04 April 2014 ccabrera

Path: P:\18\18593001\GIS\MXD\18593000102_Figure 4.mxd

Office: SEA



Data References
Existing site boundary, parcel, previous explorations, remedial site boundaries, and PCS Soil stockpiles based on data provided by Maul, Foster & Alongi, Inc. and RH2 Engineering Inc., 2013.
Imagery from Google Earth Pro, 2013

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes:
1. Parcel labels in drawing refer to the last three digits in the parcel numbers below.
Parcels in map include:
231905924005, 231905925010, 231905110650, 231905110550, 231905110500, 231905110600, 231905141200, 231905110150, 231905141250, 231905924070.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

- Previous Explorations Not Tested
- Previous Explorations < MTCA Method A Cleanup Levels
- Previous Explorations > MTCA Method A Cleanup Levels
- Approximate Project Site Boundary
- GeoEngineers Explorations Not Tested
- GeoEngineers Explorations < MTCA Applicable Method A or B Cleanup Levels
- GeoEngineers Explorations > MTCA Applicable Method A or B Cleanup Levels
- Pipeline
- Estimated Extent of Contaminated Soil Requiring Removal
- Existing PCS Stockpiles from Phase 1
- Parcels

N W E S

0 80
Feet

Site Plan (Middle)

Former Cashmere Mill Site
Cashmere, Washington

GeoEngineers

Figure 4

Map Revised: 20 January 2014 ccabrera

Path: P:\18\18593001\GIS\MXD\18593000102_Figure 5.mxd

Office: SEA

Data References
Existing site boundary, parcel, previous explorations, remedial site boundaries, and PCS Soil stockpiles based on data provided by Maul, Foster & Alongi, Inc. and RH2 Engineering Inc., 2013.
Imagery from Google Earth Pro, 2013

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes:
1. Parcel labels in drawing refer to the last three digits in the parcel numbers below. Parcels in map include:
231905924005, 231905925010, 231905110650, 231905110550, 231905110500, 231905110600, 231905141200, 231905110150, 231905141250, 231905924070.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

- Previous Explorations Not Tested
- Previous Explorations < MTCA Method A Cleanup Levels
- Previous Explorations > MTCA Method A Cleanup Levels
- GeoEngineers Explorations Not Tested
- GeoEngineers Explorations < MTCA Applicable Method A or B Cleanup Levels
- GeoEngineers Explorations > MTCA Applicable Method A or B Cleanup Levels
- Surface Water Location Regulatory Levels Not Applicable
- Approximate Project Site Boundary
- Existing PCS Stockpiles from Phase 1
- Parcels
- Previous Pilot Wood Waste Area

N W E S

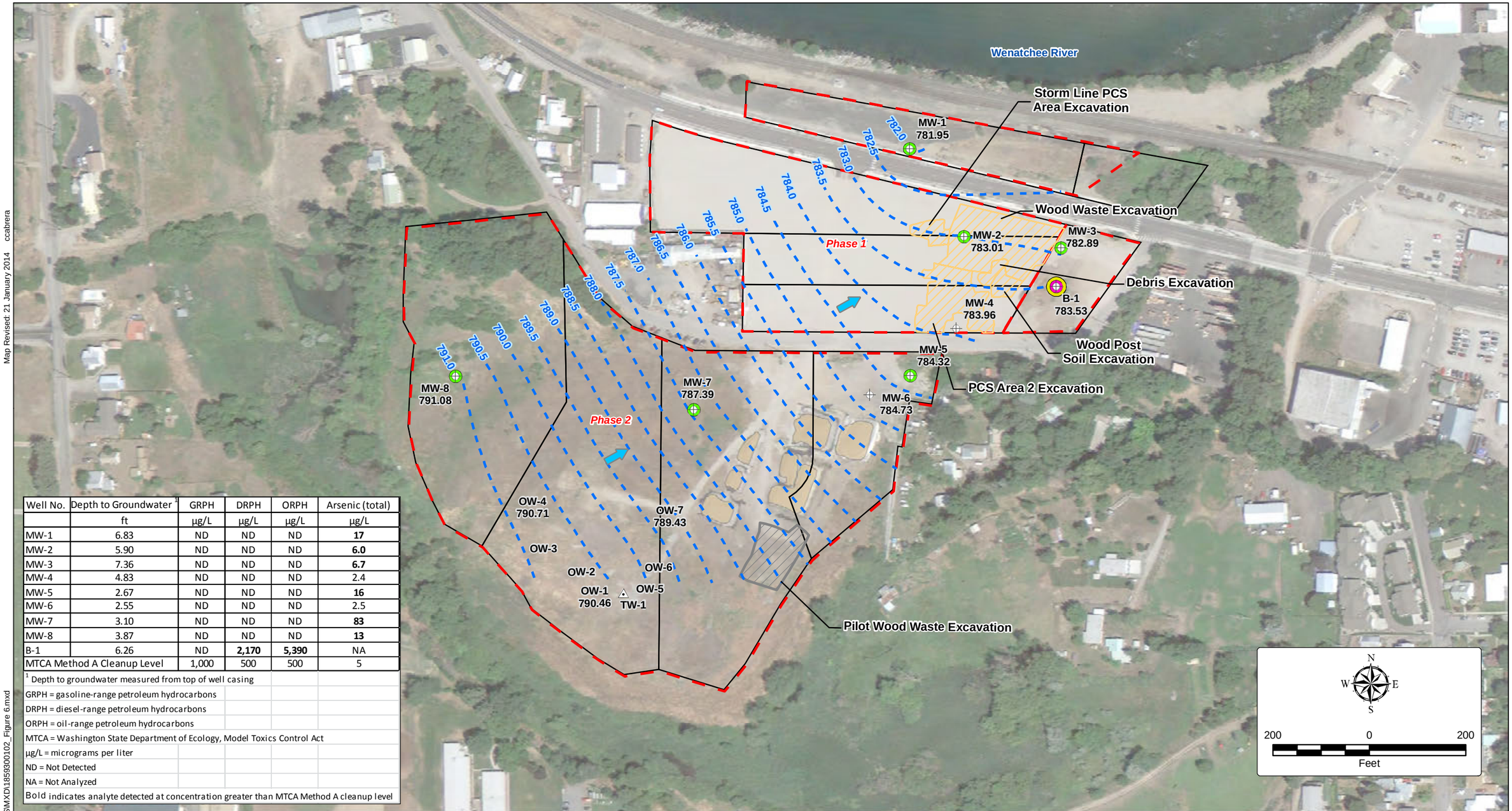
0 80
Feet

Site Plan (South)

Former Cashmere Mill Site
Cashmere, Washington

GeoEngineers

Figure 5



Well No.	Depth to Groundwater [1]	GRPH	DRPH	ORPH	Arsenic (total)
	ft	µg/L	µg/L	µg/L	µg/L
MW-1	6.83	ND	ND	ND	**17**
MW-2	5.90	ND	ND	ND	**6.0**
MW-3	7.36	ND	ND	ND	**6.7**
MW-4	4.83	ND	ND	ND	2.4
MW-5	2.67	ND	ND	ND	**16**
MW-6	2.55	ND	ND	ND	2.5
MW-7	3.10	ND	ND	ND	**83**
MW-8	3.87	ND	ND	ND	**13**
B-1	6.26	ND	**2,170**	**5,390**	NA
MTCA Method A Cleanup Level		1,000	500	500	5

[1] Depth to groundwater measured from top of well casing

GRPH = gasoline-range petroleum hydrocarbons

DRPH = diesel-range petroleum hydrocarbons

ORPH = oil-range petroleum hydrocarbons

MTCA = Washington State Department of Ecology, Model Toxics Control Act

µg/L = micrograms per liter

ND = Not Detected

NA = Not Analyzed

Bold indicates analyte detected at concentration greater than MTCA Method A cleanup level

Data References: Contours generated using Surfer software.
Existing site boundary, parcel, previous explorations, remedial site boundaries, and PCS Soil stockpiles based on data provided by Maul, Foster & Alongi, Inc. and RH2 Engineering Inc., 2013.
Imagery from Google Earth Pro, 2013

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes:
1. Parcel labels in drawing refer to the last three digits in the parcel numbers below.
Parcels in map include:
231905924005, 231905925010, 231905110650, 231905110550, 231905110500, 231905110600, 231905141200, 231905110150, 231905141250, 231905924070.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

- Monitoring Well Number and Approximate Location
- Observation Well Number and Approximate Location
- Test Well Number and Approximate Location
- Previous Pilot Wood Waste Area
- Approximate Location of Previous Remedial Excavation Areas
- Approximate Project Site Boundary
- Existing PCS Stockpiles from Phase 1
- Approximate Groundwater Elevation Contour (0.5- foot Interval)
- Interpreted Groundwater Flow Direction
- Parcels
- Arsenic detected at concentration greater than MTCA Method A cleanup level
- ORPH detected at concentration greater than MTCA Method A cleanup level
- DRPH detected at concentration greater than MTCA Method A cleanup level

Groundwater Elevations and Inferred Contours, October 28, 2013

Former Cashmere Mill Site
Cashmere, Washington

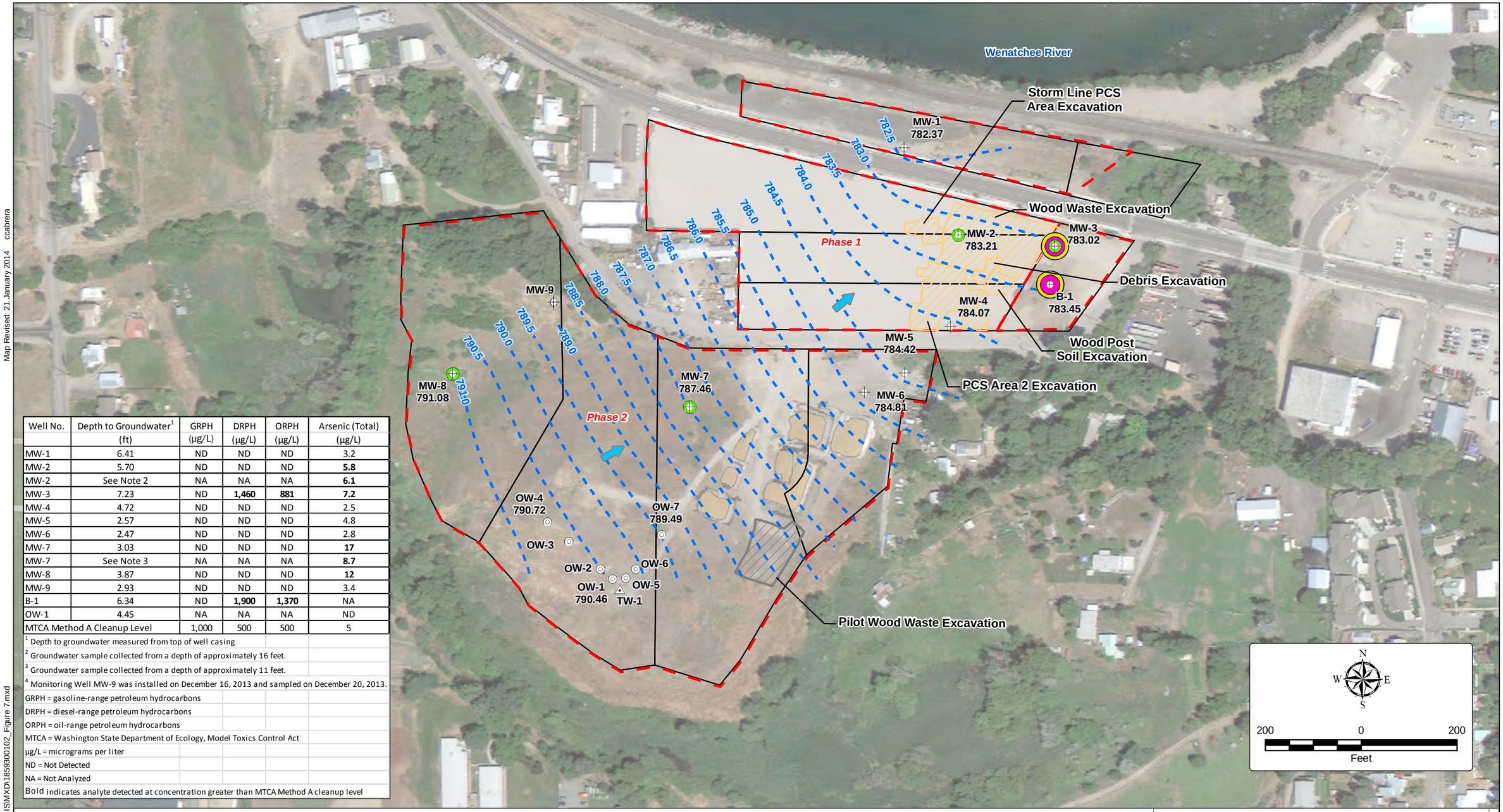
GeoEngineers

Figure 6

Map Revised: 21 January 2014 ccabrera

Path: P:\18\18593001\GIS\MXD\18593000102_Figure 6.mxd

Office: SPO



Well No.	Depth to Groundwater[1] (ft)	GRPH (µg/L)	DRPH (µg/L)	ORPH (µg/L)	Arsenic (Total) (µg/L)
MW-1	6.41	ND	ND	ND	3.2
MW-2	5.70	ND	ND	ND	**5.8**
MW-2	See Note 2	NA	NA	NA	**6.1**
MW-3	7.23	ND	**1,460**	**881**	**7.2**
MW-4	4.72	ND	ND	ND	2.5
MW-5	2.57	ND	ND	ND	4.8
MW-6	2.47	ND	ND	ND	2.8
MW-7	3.03	ND	ND	ND	**17**
MW-7	See Note 3	NA	NA	NA	**8.7**
MW-8	3.87	ND	ND	ND	**12**
MW-9	2.93	ND	ND	ND	3.4
B-1	6.34	ND	**1,900**	**1,370**	NA
OW-1	4.45	NA	NA	NA	ND
MTCA Method A Cleanup Level		1,000	500	500	5

[1] Depth to groundwater measured from top of well casing

[2] Groundwater sample collected from a depth of approximately 16 feet.

[3] Groundwater sample collected from a depth of approximately 11 feet.

[4] Monitoring Well MW-9 was installed on December 16, 2013 and sampled on December 20, 2013.

GRPH = gasoline-range petroleum hydrocarbons

DRPH = diesel-range petroleum hydrocarbons

ORPH = oil-range petroleum hydrocarbons

MTCA = Washington State Department of Ecology, Model Toxics Control Act

µg/L = micrograms per liter

ND = Not Detected

NA = Not Analyzed

Bold indicates analyte detected at concentration greater than MTCA Method A cleanup level

Data References: Contours generated using Surfer software.
Existing site boundary, parcel, previous explorations, remedial site boundaries, and PCS Soil stockpiles based on data provided by Maul, Foster & Alongi, Inc. and RH2 Engineering Inc., 2013.
Imagery from Google Earth Pro, 2013

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes:
1. Parcel labels in drawing refer to the last three digits in the parcel numbers below.
Parcels in map include:
231905924005, 231905925010, 231905110650, 231905110550, 231905110500, 231905110600, 231905141200, 231905110150, 231905141250, 231905924070.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

- Monitoring Well Number and Approximate Location
- Observation Well Number and Approximate Location
- Test Well Number and Approximate Location
- Previous Pilot Wood Waste Area
- Approximate Location of Previous Remedial Excavation Areas
- Approximate Project Site Boundary
- Existing PCS Stockpiles from Phase 1
- Approximate Groundwater Elevation Contour (0.5- foot Interval)
- Interpreted Groundwater Flow Direction
- Parcels
- Arsenic detected at concentration greater than MTCA Method A cleanup level
- ORPH detected at concentration greater than MTCA Method A cleanup level
- DRPH detected at concentration greater than MTCA Method A cleanup level

Groundwater Elevations and Inferred Contours, December 3, 2013

Former Cashmere Mill Site
Cashmere, Washington

GeoEngineers

Figure 7

Map Revised: 21 January 2014 ccabrera

Path: P:\181\18593001\GIS\MXD\18593001_Figure 7.mxd

Office: SPO

APPENDICES

GeoEngineers

APPENDIX A
Monitoring Well, Boring and Test Pit Logs

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	TS	Topsoil/ Forest Duff/Sod

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata or geologic units

Approximate location of soil strata change within a geologic soil unit

Material Description Contact

Distinct contact between soil strata or geologic units

Approximate location of soil strata change within a geologic soil unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

A "P" indicates sampler pushed using the weight of the drill rig.

Laboratory / Field Tests

%F	Percent fines
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
PPM	Parts per million
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen
NT	Not Tested

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

KEY TO EXPLORATION LOGS

GeoEngineers

FIGURE A-1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	10/24/2013	10/24/2013	21.5	KAH	DRL	Environmental West	Air Rotary

Hammer Data	140 (lbs) / 30 (in) Drop	Drilling Equipment	Schramm T-300
Surface Elevation (ft) Vertical Datum	788.87 NAVD88	Top of Casing Elevation (ft)	788.78
Easting (X) Northing (Y)	1727943.39 190542.48	Horizontal Datum	NAD 83-98

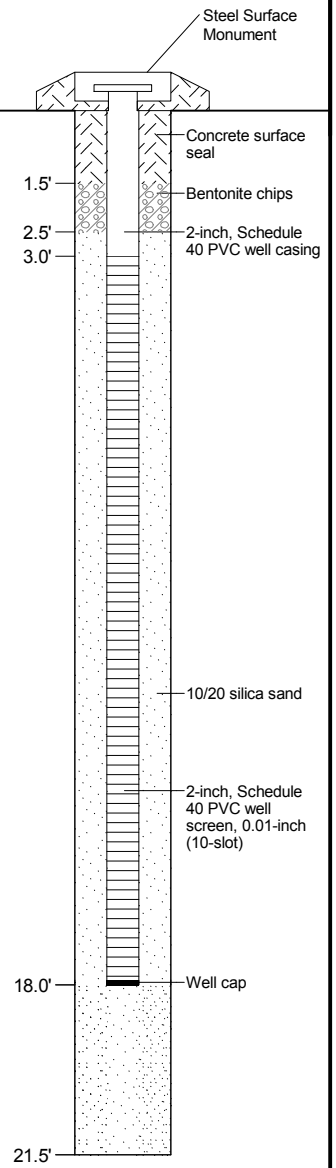
A 2 (in) well was installed on 10/24/2013 to a depth of 18 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/28/2013	6.8	782.0

Notes:

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0							SP-SM	Brown fine to coarse sand with silt, gravel and cobbles (dense, moist)		
		2	77/10"		MW-1 (2-2.2)					NS	<1
785											
	5	8	63/9"		MW-1 (5-5.6)					NS	<1
									Becomes wet		
780											
	10	0	50/3"								
775											
	15	11	56		MW-1 (15-15.9)			SP	Brown fine to medium sand with occasional gravel and cobbles (dense, wet)	NS	<1
										NS	<1
770								GP	Brown fine to coarse gravel with sand and trace silt (dense, wet)		
	20	13	34		MW-1 (20-21)					NS	<1

WELL LOG



Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well MW-1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-2
Sheet 1 of 1

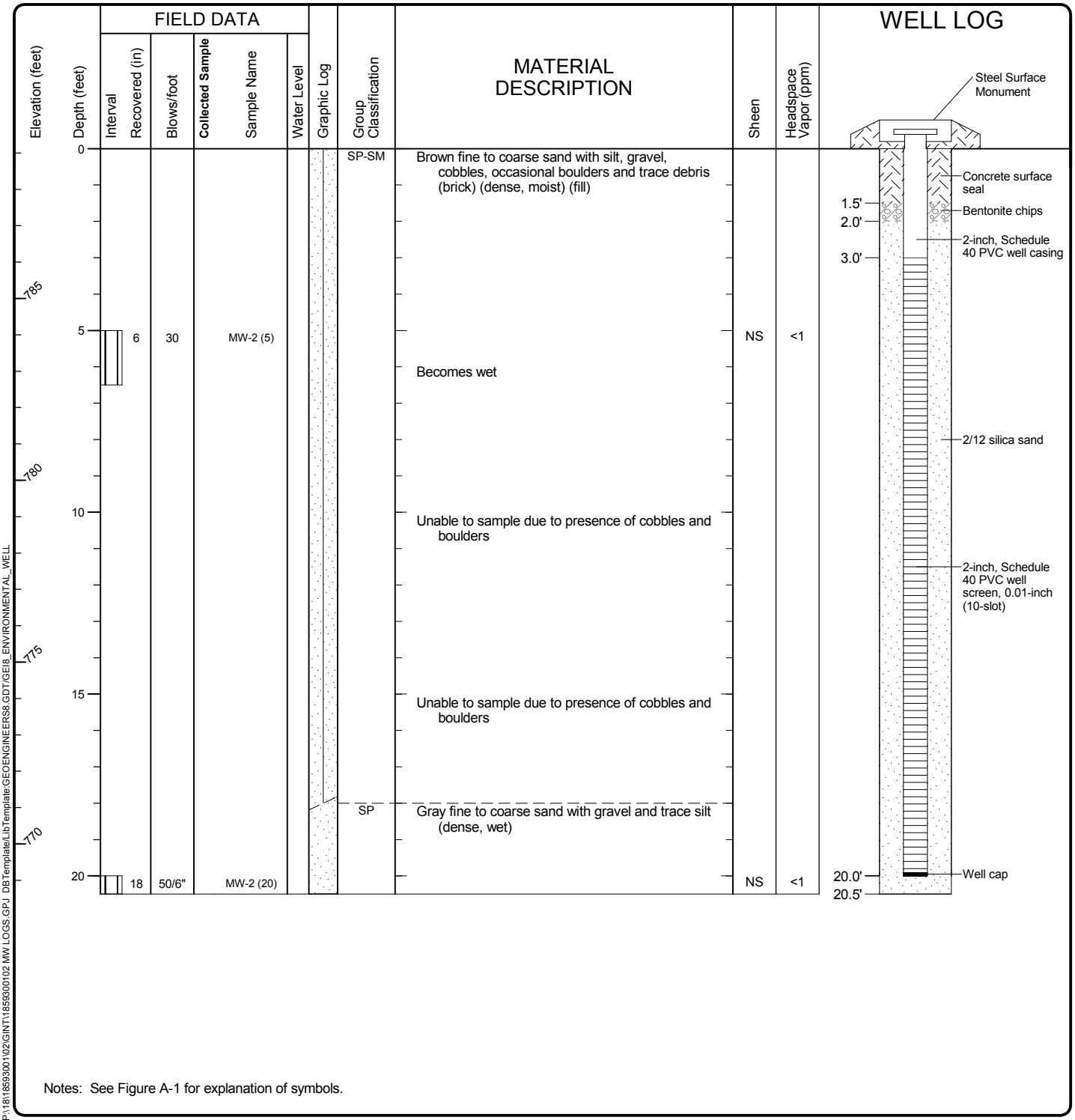
Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/10/2013	10/10/2013	20.5	SHL / DRL	Cascade Drilling	Hollow-Stem Auger

Hammer Data	300 (lbs) / 30 (in) Drop	Drilling Equipment	CME 75
Surface Elevation (ft) Vertical Datum	789.12 NAVD88	Top of Casing Elevation (ft)	788.91
Easting (X) Northing (Y)	1728056.37 190360.28	Horizontal Datum	NAD 83-98

A 2 (in) well was installed on 10/10/2013 to a depth of 20 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/28/2013	5.9	783.2

Notes:



Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well MW-2

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-3
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/9/2013	10/9/2013	21	SHL / DRL	Cascade Drilling	Hollow-Stem Auger

Hammer Data	300 (lbs) / 30 (in) Drop	Drilling Equipment	CME 75
Surface Elevation (ft) / Vertical Datum	790.53 / NAVD88	Top of Casing Elevation (ft)	790.25
Easting (X) / Northing (Y)	1728257.96 / 190337.29	Horizontal Datum	NAD 83-98

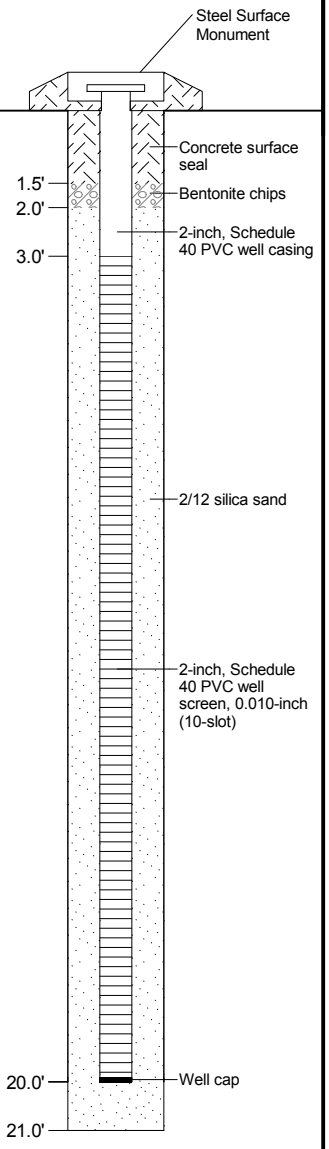
A 2 (in) well was installed on 10/9/2013 to a depth of 20 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/28/2013	7.4	783.2

Notes:

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
790	0							SP-SM	Dark gray fine to coarse sand with silt, gravel and cobbles (dense, moist) (fill)		
785	5	3	50/6"	●	MW-3 (5)					NS	<1
									Becomes wet		
								Fill	Dark gray silty fine to coarse sand with gravel and wood debris (loose, wet) (fill)		
780	10	12	5	●	MW-3 (10)				Wood chips	NS	<1
								GM	Gray silty fine to coarse gravel with sand and cobbles (dense, wet)		
775	15	18	50/6"	●	MW-3 (15)					NS	<1
								SP	Gray fine to medium sand with gravel, cobbles and trace silt (dense, wet)		
770	20	18	50/6"	●	MW-3 (20)					NS	<1

WELL LOG



Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well MW-3

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-4
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/24/2013	10/24/2013	21.5	KAH / DRL	Environmental West	Air Rotary

Hammer Data	140 (lbs) / 30 (in) Drop	Drilling Equipment	Schramm T-300
Surface Elevation (ft) / Vertical Datum	788.89 / NAVD88	Top of Casing Elevation (ft)	788.79
Easting (X) / Northing (Y)	1728040.19 / 190169.43	Horizontal Datum	NAD 83-98

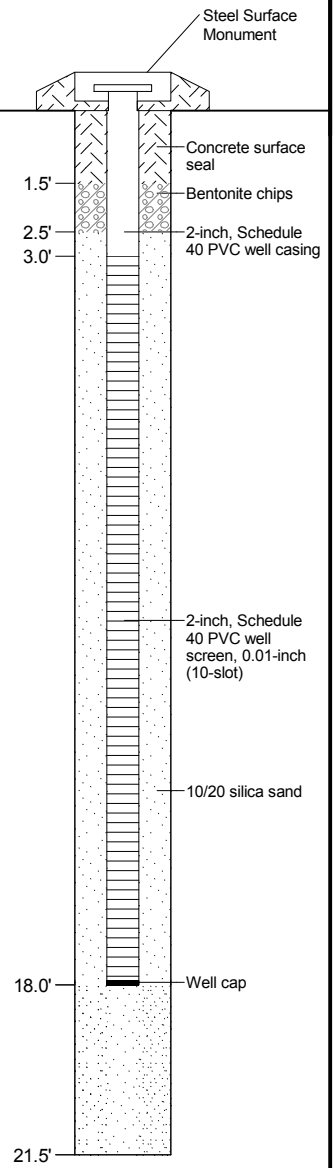
A 2 (in) well was installed on 10/24/2013 to a depth of 18 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/28/2013	4.8	784.1

Notes:

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample / Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0						GP-GM	Brown fine to coarse gravel and cobbles with silt, sand and occasional organic matter (wood chips) (dense, moist) (fill)		
785		6	85/10"	MW-4 (2-2.8)					NS	<1
	5	8	91	MW-4 (5-5.7)			SP-SM	Gray fine to medium sand with silt and organic matter (wood shavings) (dense, wet) (fill)	NS	<1
							GP-GM	Gray to brown fine to coarse gravel with silt, sand and cobbles (dense, wet)	NS	<1
780	10	6	52	MW-4 (10-10.5)					NS	<1
775	15	8	82	MW-4 (15-15.7)					NS	<1
770	20	17	88/11"	MW-4 (20.5-21.5)					NS	<1

WELL LOG



Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well MW-4

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-5
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/24/2013	10/24/2013	22	KAH / DRL	Environmental West	Air Rotary

Hammer Data	140 (lbs) / 30 (in) Drop	Drilling Equipment	Schramm T-300
Surface Elevation (ft) Vertical Datum	787.26 NAVD88	Top of Casing Elevation (ft)	786.99
Easting (X) Northing (Y)	1727945.19 190072.69	Horizontal Datum	NAD 83-98

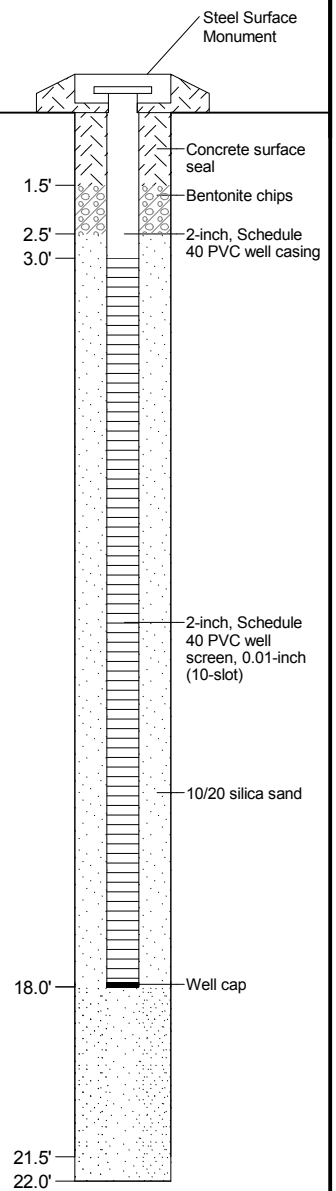
A 2 (in) well was installed on 10/24/2013 to a depth of 18 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/28/2013	2.7	784.6

Notes:

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample / Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0						GP-GM	Gray fine to coarse gravel with silt and sand (medium dense, moist) (fill)		
785		11	16	MW-5 (2.5-2.9)			Wood	Wood shavings	NS	<1
							ML	Gray silt with occasional gravel and organic matter (wood shavings) (medium stiff, moist) (fill)	NS	<1
	5	5	120/12"	MW-5 (5-5.4)			GP	Gray fine to coarse gravel with sand, cobbles and trace silt (dense, wet)	NS	<1
780										
	10	4	99/14"	MW-5 (10-10.3)					NS	<1
775										
	15	8	97	MW-5 (15-15.6)					NS	<1
770										
	20	10	67	MW-5 (20.5-21.4)					NS	<1

WELL LOG



Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well MW-5

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-6
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Driller	Drilling Method
	10/8/2013	10/8/2013	14	SHL / DRL	Cascade Drilling	Hollow-Stem Auger

Hammer Data	300 (lbs) / 30 (in) Drop	Drilling Equipment	CME 75
Surface Elevation (ft) / Vertical Datum	787.87 / NAVD88	Top of Casing Elevation (ft)	787.28
Easting (X) / Northing (Y)	1727860.75 / 190032.32	Horizontal Datum	NAD 83-98

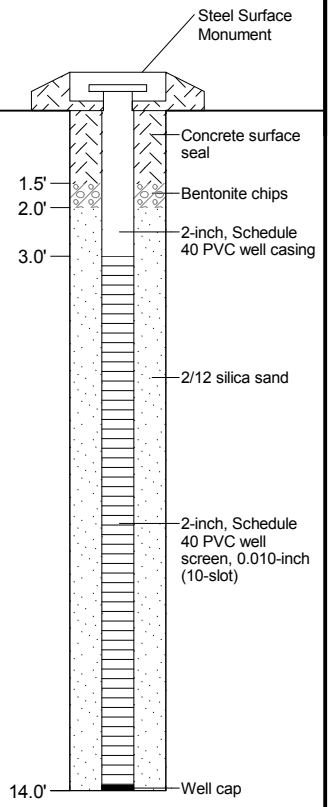
A 2 (in) well was installed on 10/8/2013 to a depth of 14 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/28/2013	2.6	785.3

Notes:

Depth (feet)	Elevation (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
0								GP-GM	Gray fine to coarse gravel with silt, sand and occasional cobbles (fill)		
								FILL	Wood debris (fill)		
	785							SM	Gray silty fine to coarse sand with gravel and cobbles (dense, wet)		
5		18	65/12"		MW-6 (5)					NS	<1
	780										
10		10	70/10"		MW-6 10)			SP	Gray fine to coarse sand with gravel, cobbles and trace silt (dense, wet)	NS	<1
	775								Boring terminated at approximate 14 foot depth due to auger refusal		

WELL LOG



Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well MW-6

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-7
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/25/2013	10/25/2013	21.5	KAH / DRL	Environmental West	Air Rotary

Hammer Data	140 (lbs) / 30 (in) Drop	Drilling Equipment	Schramm T-300
Surface Elevation (ft) Vertical Datum	790.68 NAVD88	Top of Casing Elevation (ft)	790.49
Easting (X) Northing (Y)	1727495.57 190001.63	Horizontal Datum	NAD 83-98

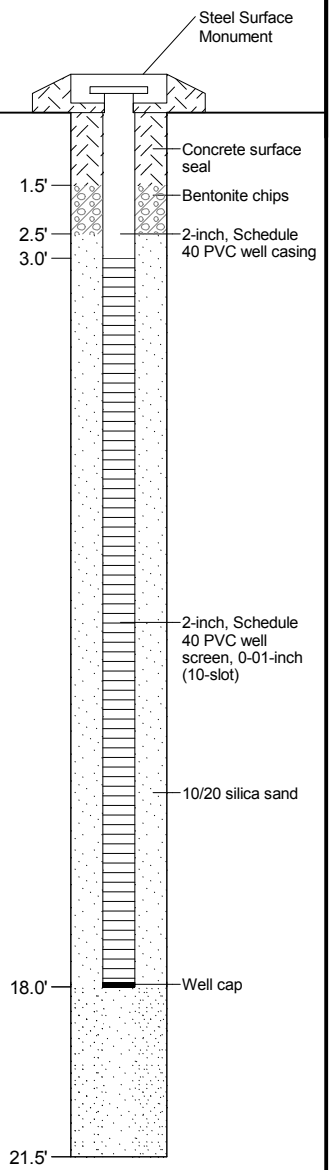
A 2 (in) well was installed on 10/25/2013 to a depth of 18 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/28/2013	3.1	787.6

Notes:

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
790	0	12	84		MW-7 (2-3)			GP-GM	Brown fine to coarse gravel with silt, sand and cobbles (dense, moist)	NS NS	<1 <1
785	5	5	61/11"		MW-7 (5-5.4)			GP	Brown fine to coarse gravel with sand, trace silt and cobbles (dense, wet)	NS	<1
780	10	4	70/8"								
775	15	0	50/3"								
770	20	9	91/10"		MW-7 (20-20.8)			GP-GM	Brown fine to coarse gravel with silt and sand (dense, wet)	NS NS	<1 <1

WELL LOG



Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well MW-7

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-8
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/25/2013	10/25/2013	21.5	KAH / DRL	Environmental West	Air Rotary

Hammer Data	140 (lbs) / 30 (in) Drop	Drilling Equipment	Schramm T-300
Surface Elevation (ft) Vertical Datum	795.05 NAVD88	Top of Casing Elevation (ft)	794.95
Easting (X) Northing (Y)	1727001.48 190071.18	Horizontal Datum	NAD 83-98

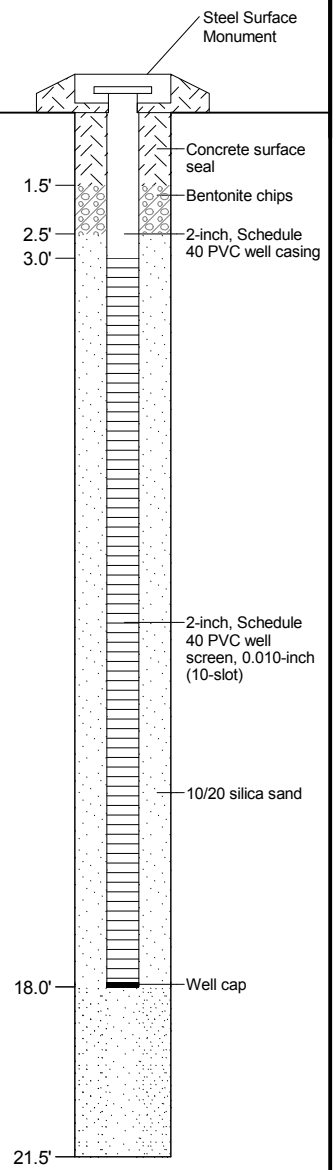
A 2 (in) well was installed on 10/25/2013 to a depth of 18 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/26/2013	3.9	791.2

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0							GP-GM	Brown fine to coarse gravel with silt, sand and occasional cobbles (medium dense, moist)		
		12	14		MW-8 (2-3)					NS	<1
										NS	<1
									Becomes wet		
790	5	5	19		MW-8 (5-5.4)					NS	<1
785	10	6	48		MW-8 (10-10.4)					NS	<1
780	15	0	50/0"								
775	20	6	101		MW-8 (20-20.5)					NS	<1

WELL LOG



Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well MW-8

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-9
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
12/16/2013	12/16/2013	21.5	KAH / DRL	Environmental West	Air Rotary

Hammer Data	140 (lbs) / 30 (in) Drop	Drilling Equipment	Schramm T-300
Surface Elevation (ft) Vertical Datum	791.85 NAVD88	Top of Casing Elevation (ft)	791.55
Easting (X) Northing (Y)	1727202.03 190217.38	Horizontal Datum	NAD 83-98

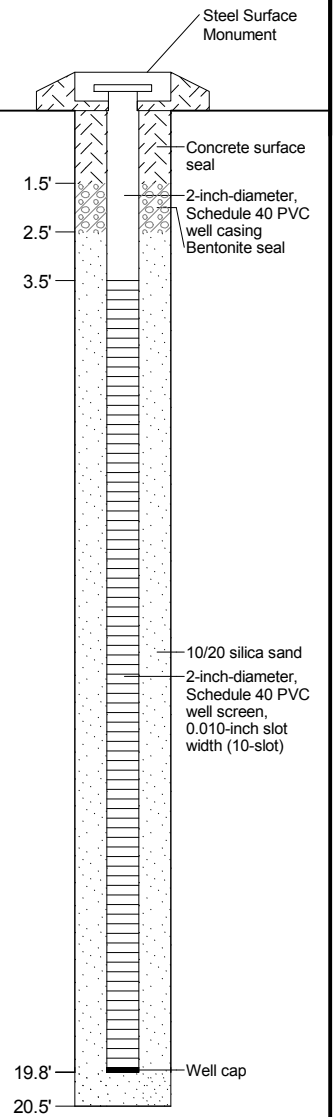
A 2 (in) well was installed on 12/16/2013 to a depth of 19.8 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
10/26/2013	3.9	787.7

Notes:

Depth (feet)	Elevation (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
0								SM	Gray silty fine to medium sand with wood debris and occasional cobbles (medium dense, moist) (fill)		
5	790	18	13		MW-9 (5)					NS	<1
	785							SP-SM	Gray fine to medium sand with silt (dense, wet)		
10		4	50/5"		MW-9 (10)					NS	<1
	780										
15		6	50/6"		MW-9 (15)				Grades with gravel	NS	<1
	775										
20			50/6"		MW-9 (20)					NS	<1

WELL LOG



Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well MW-9

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-10
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
10/25/2013	10/25/2013	4	KAH / DRL	Environmental West	Air Rotary

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined	140 (lbs) / 30 (in) Drop	Schram T-300

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52048 / -120.47944	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample: Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0						GP	Gray fine to coarse gravel with trace silt, sand and occasional cobbles (dense, moist) (fill)			
	12	41	AR-1 (2-3)			ML	Gray silt with wood and occasional gravel (medium stiff, moist to wet) (fill)	NS	<1	
	14	43/9"	AR-1 (3-3.3)			GP-GM	Gray fine to coarse gravel with silt, sand and occasional cobbles (dense, wet)	NS	<1	

Notes: See Figure A-1 for explanation of symbols.

Log of Air Rotary Boring AR-1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-11
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/9/2013	9/9/2013	15	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52100326660 / -120.47751749400	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48			1			ML	Brown silt with occasional gravel (moist) (fill)	SS	3.3	
									GP-GM	Light brown fine to coarse gravel with silt (moist) (fill)	SS	1.6	
									ML	Dark brown silt with occasional gravel and organic matter (wood/bark) (moist) (fill)			
									GP	White fine to coarse gravel with trace silt and sand (moist) (fill?)	SS	1.5	
	5		36						ML	Brownish-black silt with occasional gravel (moist) (fill?)	MS	4.4	
						2 CA					MS	2.8	
									GP-GM	Dark brown fine to coarse gravel with silt (moist)	MS	1.7	
										Becomes wet			Groundwater observed at approximately 10 feet during drilling
	10		30						GP	Gray to brown fine to coarse gravel with trace sand and silt (wet)	NS	<1	
						3					NS	2.1	
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-12
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Driller	Drilling Method
	9/9/2013	9/9/2013	15	ERH DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data		Drilling Equipment	Geoprobe
Latitude Longitude	47.52126345770 -120.47776451200	System Datum	Geographic WGS84	Groundwater Date Measured	Depth to Water (ft) / Elevation (ft)

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		48						ML	Medium brown to dark brown silt with occasional gravel (moist) (fill)	NS	3.3	
									Becomes gray	NS	3.8	
					1 CA				Becomes dark brown	NS	14.5	
									Becomes gray Becomes brown	NS	5.5	
5		36			2					NS	6.5	
								FILL	Brown sawdust and silt (fill)	NS	5.6	
								ML	Dark brown silt with occasional fine gravel (moist) (fill)	SS	5.0	
								FILL	Wood shavings (fill)			
									Becomes wet			Groundwater observed at approximately 9 feet during drilling
10		36						ML	Brown silt with sand (wet) (fill)	NS	8.1	
					3				Grades to dark brown silt with sand and organic matter (wet)	NS	12.2	
								GP	Brown fine to coarse gravel with silt and sand (wet)	NS	4.2	
15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-13
Sheet 1 of 1

Drilled	Start 9/9/2013	End 9/9/2013	Total Depth (ft)	20	Logged By ERH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data			Drilling Equipment	Geoprobe
Latitude / Longitude	47.52100719030 / -120.47783048100		System Datum	Geographic WGS84		Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:							

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		38			1			SP-SM	Brown fine to coarse sand with silt, gravel and trace organic matter (wood) (moist) (fill)	NS	2.3	
											NS	4.8	
									SM	Gray silty fine sand with gravel and trace organic matter (wood) (moist) (fill)	NS	3.5	
									FILL		NS	4.0	
										Brown wood fragments (fill)			
	5		36			2 CA			ML	Brown silt with occasional gravel (moist) (fill)	NS	5.4	
									GP-GM	Dark brown fine to coarse gravel with silt and wood fragments (moist) (fill)	SS	2.4	
											SS	2.3	
	10		42						SP-SM	Brown fine to coarse sand with silt and sawdust (wet) (fill)	NS	4.7	Groundwater observed at approximately 9½ feet during drilling
									GM	Gray silty fine to coarse gravel with sand (moist) (fill)	SS	4.5	
									FILL	Wood chips (fill)			
						3			ML	Gray to brown silt with sand and sawdust (wet) (fill)	NS	4.7	
	15		24			4			SP-SM	Brown fine to coarse sand with silt (wet)	NS	7.0	
						5				Grades to gray with occasional fine to coarse gravel (wet)	NS	3.7	
	20									Boring terminated at approximately 20 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-3

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-14
Sheet 1 of 1

Drilled	Start 9/14/2013	End 9/14/2013	Total Depth (ft)	11	Logged By / Checked By	RB / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52102261970 / -120.47795045800				System Datum	Geographic WGS84			Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		32			1			SM	Brown to gray silty fine to medium sand with occasional gravel (moist) (fill)	NS	<1	
	5		44			2 CA				Becomes gray (moist)	SS	<1	
										Becomes wet			Groundwater observed at approximately 6 feet during drilling
											NS	<1	
	10		12			3			FILL	Wood fragments (fill)	SS	<1	Diesel-like odor or wood-cedar odor
										Boring terminated at approximately 11 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-3A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-15
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	15	RB / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52104804160 / -120.47795069900	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		43			1			SM	Brown silty fine to medium sand with sawdust and occasional gravel (moist) (fill)	SS	<1	
										Grades to gray silty fine to medium sand with occasional gravel (moist)	SS	<1	
	5		18			2					NS	<1	
	10		24			3 CA			ML	Dark brown silt with occasional sawdust (moist) (fill)	SS	1.8	
									GM	Gray silty coarse gravel (wet)	NS	<1	Groundwater observed at approximately 11½ foot depth during drilling
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-3B

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-16
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Driller	Drilling Method
	9/9/2013	9/9/2013	9.5	ERH DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude Longitude	System Datum	Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
47.52079768920 -120.47800585300	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		40						ML	Brown silt with occasional gravel (moist) (fill)	NS	6.2	
									GP-GM	Gray to white fine to coarse gravel with silt (moist) (fill)	NS	5.1	
						1 CA			ML	Becomes light brown Dark brown silt with occasional wood and gravel (moist) (fill)	NS	7.1	
	5		18						GP-GM	Brown fine to coarse gravel with silt (moist)	NS	4.5	
										Boring terminated at approximately 9½ foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-5

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-17
Sheet 1 of 1

Drilled	Start 9/9/2013	End 9/9/2013	Total Depth (ft) 5	Logged By ERH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) / Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude / Longitude	47.52079000380 / -120.47808103800		System Datum	Geographic WGS84	Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:						

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30						ML	Brown silt with occasional gravel and roots (moist) (fill)	NS	4.9	
						1			GP-GM	White to gray fine to coarse gravel with silt (moist) (fill)	NS	6.4	
									FILL	Wood fragments (fill)			
	5									Boring terminated at approximately 5 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-5A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-18
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/10/2013	9/10/2013	14.5	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
	Geographic			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		44						SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist) (fill)	NS	4.5	
											NS		
									FILL	Wood waste (fill)	NS	7.3	
						1			GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill)	NS		
									GP		NS	8.8	
									SP-SM	Red fine to coarse gravel with trace sand and silt (moist) (fill)			
										Brown fine to coarse sand with silt and gravel (moist) (fill)			
	5		30			2 CA					NS	7.5	
									GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill)	NS	4.0	
											NS	6.3	
										Becomes wet			Groundwater observed at approximately 8 feet during drilling
	10		26						SP-SM	Dark brown fine to medium sand with silt and wood waste (wet) (fill)	NS	8.0	
									GP-GM				
						3			SP-SM	Dark brown fine to coarse gravel with silt and sand (wet)	NS	9.8	
									GP-GM	Gray fine to medium sand with silt (wet)			
										Gray fine to coarse gravel with silt and sand (wet)	NS	6.2	
										Boring terminated at approximately 14½ foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-5B

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-19
Sheet 1 of 1

Drilled	Start 9/9/2013	End 9/9/2013	Total Depth (ft) 14.7	Logged By ERH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude / Longitude	47.52132478430 / -120.47791615200		System Datum	Geographic WGS84	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:						

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48						SP-SM	Brown fine to coarse sand with silt (moist) (fill?)	NS		
									ML	Dark brown silt (moist) (fill?)	NS	4.5	
										Brown silt with occasional fine gravel (moist)	NS	4.8	
									GP	White fine to coarse gravel with sand and trace silt (moist) (fill?)	NS		
						1 CA			ML	Dark brown silt (moist) (fill?)	NS	4.3	
											NS	5.0	
	5		48							Grades to brown silt with occasional gravel (moist)	NS	2.2	
											NS	3.0	
						2				Becomes wet	NS	4.2	Groundwater observed at approximately 8 feet during drilling
	10		36			3			GP-GM	Brown fine to coarse gravel with silt (wet)	NS	7.8	
										Becomes gray			
										Becomes dark gray	NS	3.3	
										Boring terminated at approximately 14.7 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-6

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-20
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/10/2013	9/10/2013	14	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52113479130 / -120.47817353600	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1 CA			SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist) (fill)	NS	22.2	
											NS		
											NS	1.6	
	5		24			2					NS	3.2	
									GW	Gray fine to coarse gravel with trace sand and silt (moist) (fill)	NS		
									SP-SM		NS	1.6	
										Brown fine to coarse sand with silt and occasional gravel (moist) (fill)			
										Becomes wet			Groundwater observed at approximately 9 feet during drilling
	10		24						GP-GM	Brown fine to coarse gravel with silt and sand (wet) (fill)	NS	1.8	
						3				Grades to dark brown fine to coarse gravel with sand, silt and wood waste	NS		
											NS	1.9	
										Grades to gray fine to coarse gravel with silt and sand			
										Boring terminated at approximately 14 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-7

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-21
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/10/2013	9/10/2013	10	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52091346170 / -120.47833587400	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1			SP-SM	Brown fine to coarse sand with silt and gravel (moist) (fill)	NS	4.5	
											NS	4.5	
									GW	White fine to coarse gravel with sand and trace silt (moist) (fill)	NS	4.2	
									SP-SM	Brown fine to coarse sand with silt and gravel (moist) (fill)			
	5		30			2 CA				Grades with wood waste	SS	5.5	
											MS	4.8	
										Becomes wet			
									SP	Gray fine to medium sand with trace silt (moist)	NS	5.6	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-8

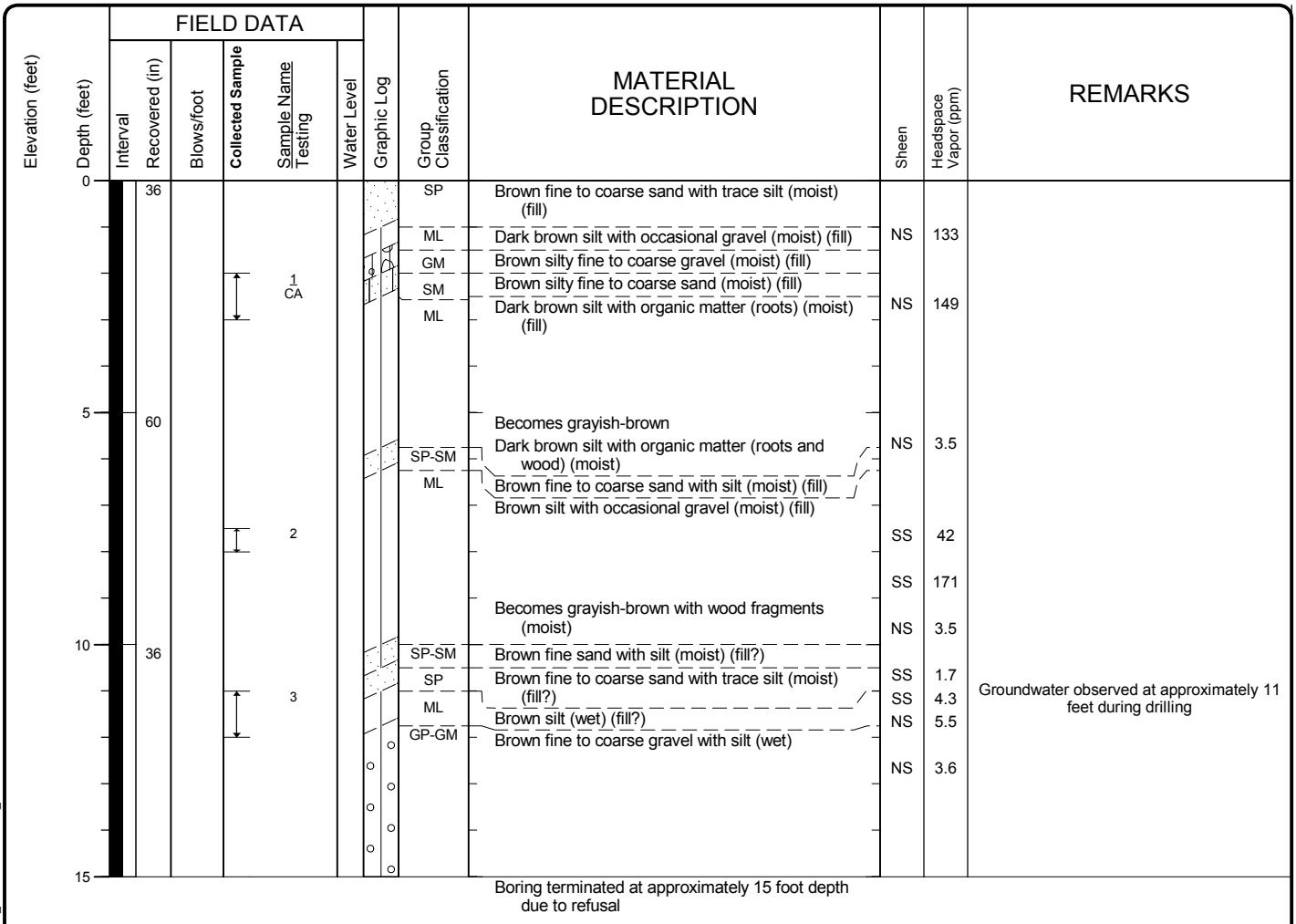
GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-22
Sheet 1 of 1

Drilled	Start 9/10/2013	End 9/10/2013	Total Depth (ft) 15	Logged By ERH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude / Longitude	47.521594 / -120.480246		System Datum	Geographic WGS84	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	

Notes:



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-8A

GeoEngineers

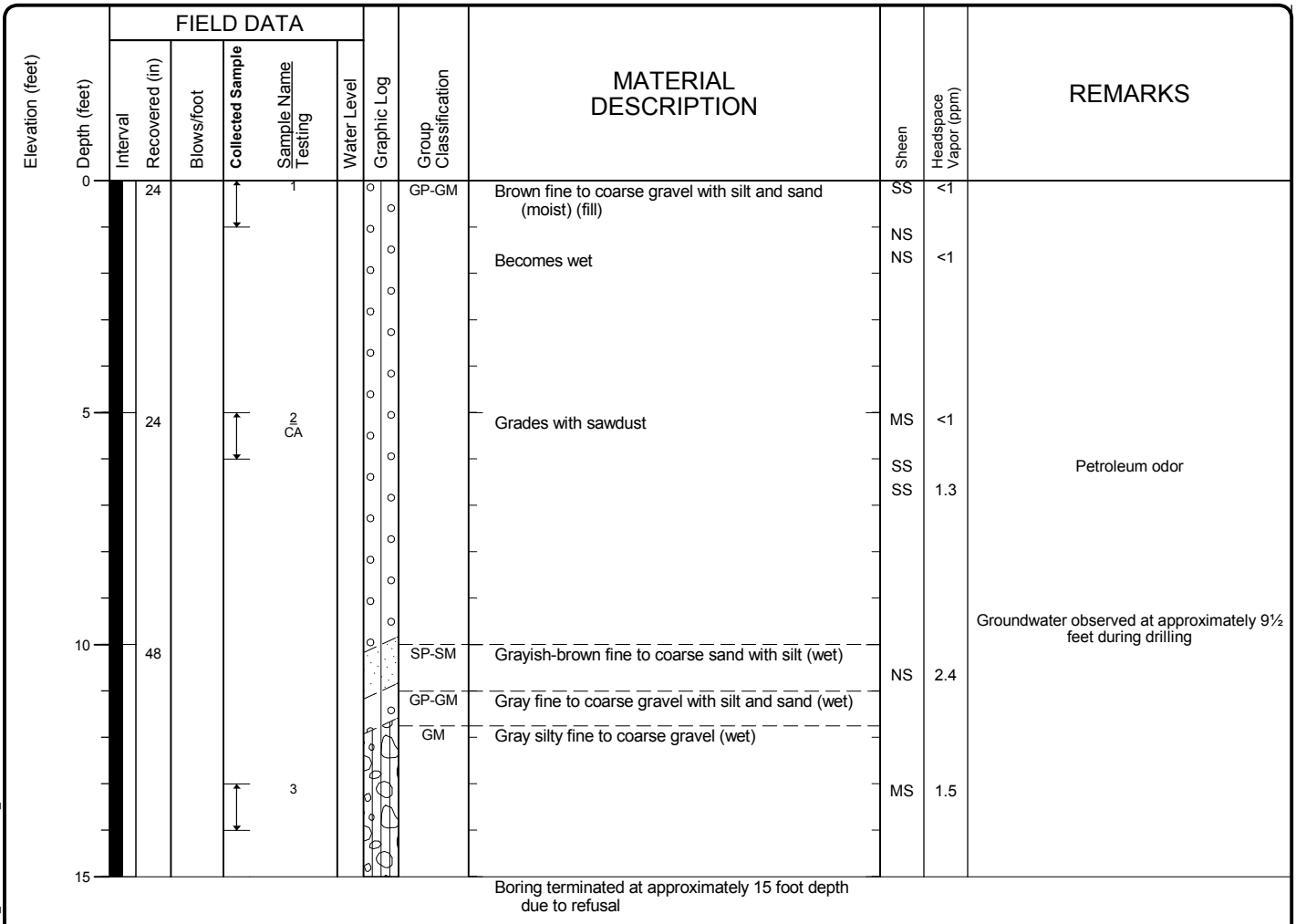
Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-23
Sheet 1 of 1

Drilled	Start 9/10/2013	End 9/10/2013	Total Depth (ft)	15	Logged By	KAH	Driller	Cascade Drilling	Drilling Method	Direct-Push
					Checked By	DRL				

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data		Drilling Equipment	Geoprobe
Latitude	47.52077361180	System Datum	Geographic	Groundwater	
Longitude	-120.47832458100		WGS84	Date Measured	Depth to Water (ft) / Elevation (ft)

Notes:



Notes: See Figure A-1 for explanation of symbols.

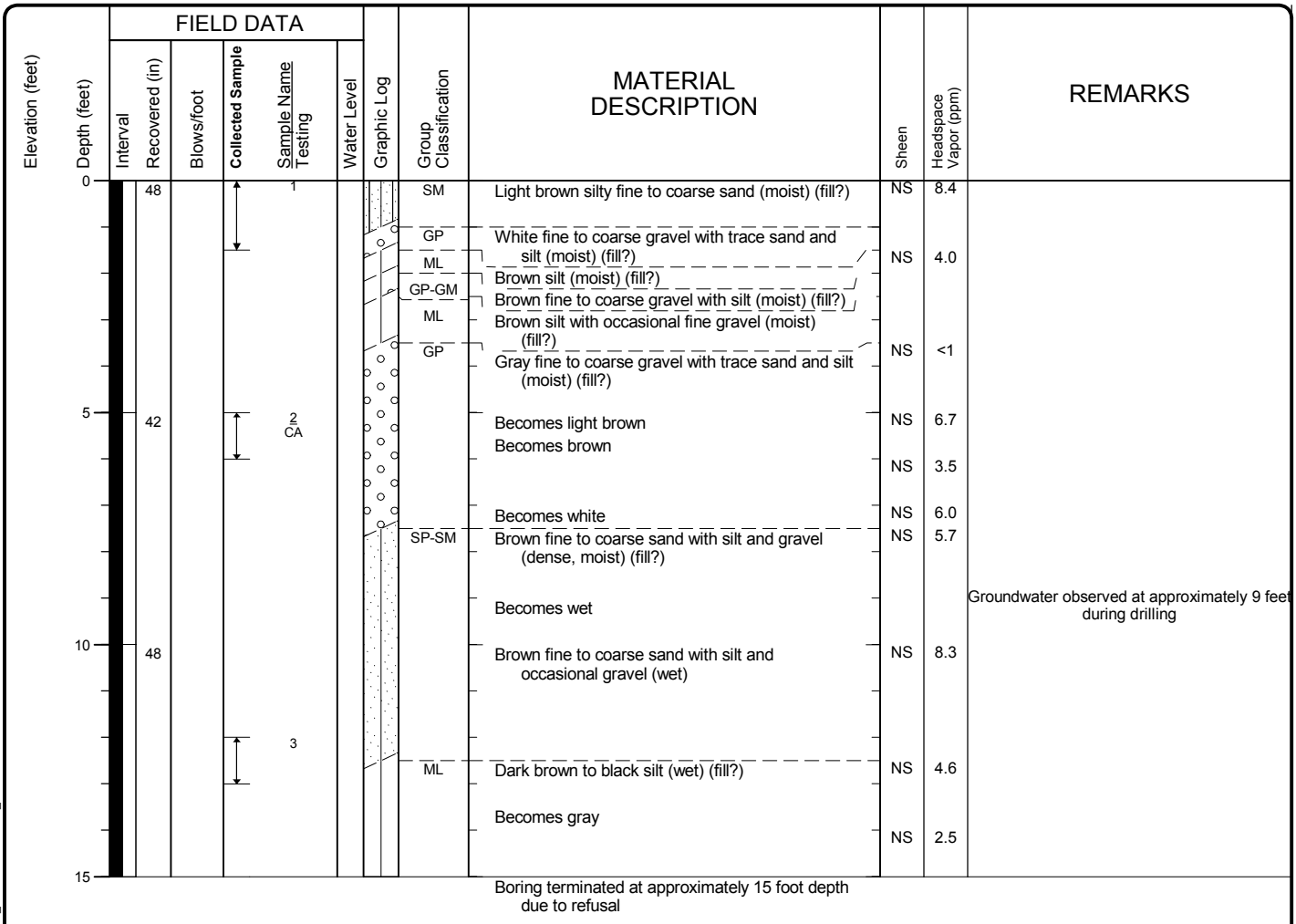
Log of Direct-Push Boring N-DP-9

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-24
Sheet 1 of 1

Drilled	Start 9/9/2013	End 9/9/2013	Total Depth (ft) 15	Logged By ERH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude	47.52132311160		System Datum	Geographic WGS84	Groundwater	
Longitude	-120.47829452400				Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:						



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-10

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-25
Sheet 1 of 1

Drilled	Start 9/14/2013	End 9/14/2013	Total Depth (ft)	15	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52169033570 / -120.47769967400		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1			GM	Light brown silty fine to coarse gravel with occasional organic matter (grass) (moist) (fill)	NS	<1	
	5		24			2			FILL	Brown wood waste (fill)	NS	<1	
									GP-GM	Gray fine to coarse gravel with silt (moist) (fill)	NS	<1	
	10		40			3 CA			ML	Dark brown to red silt with occasional wood waste (moist) (fill)	SS	<1	Groundwater observed between approximately 11 and 12 feet during drilling
									GP-GM	Gray fine to coarse gravel with silt and sand (wet)	NS	<1	
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-11

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-26
Sheet 1 of 1

Drilled	Start 9/14/2013	End 9/14/2013	Total Depth (ft)	15	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52184044880 / -120.47819359600		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0	36							ML	Light brown silt with occasional gravel and wood waste (moist) (fill)	NS	<1	
									GM		SS	<1	
						1				Dark brown silty fine to coarse gravel with occasional wood waste (moist) (fill)			
									ML	Dark brown silt (moist) (fill?)	NS	<1	
	5	36							SP-SM	Dark gray fine to medium sand with silt (moist)	NS	<1	
						2 CA					SS	<1	
									GP-GM	Gray to light brown fine to coarse gravel with sand and silt (moist)	SS	<1	
	10	20									NS	<1	
										Becomes dark gray (moist)	NS	<1	
						3				Becomes wet			Groundwater observed at approximately 12 feet during drilling
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

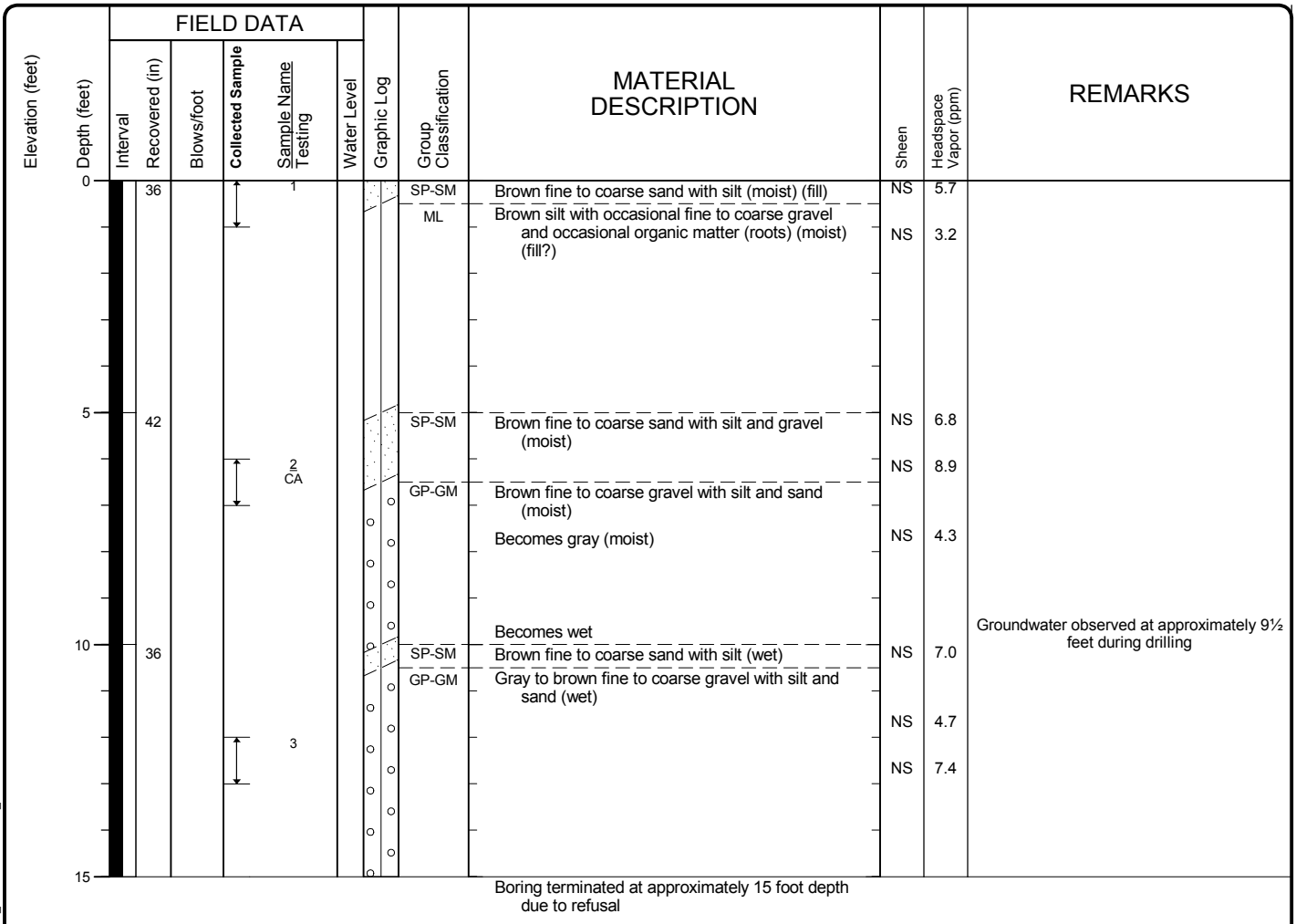
Log of Direct-Push Boring N-DP-13

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-27
Sheet 1 of 1

Drilled: Start 9/9/2013 End 9/9/2013	Total Depth (ft): 15	Logged By: ERH Checked By: DRL	Driller: Cascade Drilling	Drilling Method: Direct-Push	
Surface Elevation (ft) Vertical Datum: Undetermined		Hammer Data:		Drilling Equipment: Geoprobe	
Latitude: 47.52141599880 Longitude: -120.47860820500		System Datum: Geographic WGS84		Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:					



Notes: See Figure A-1 for explanation of symbols.

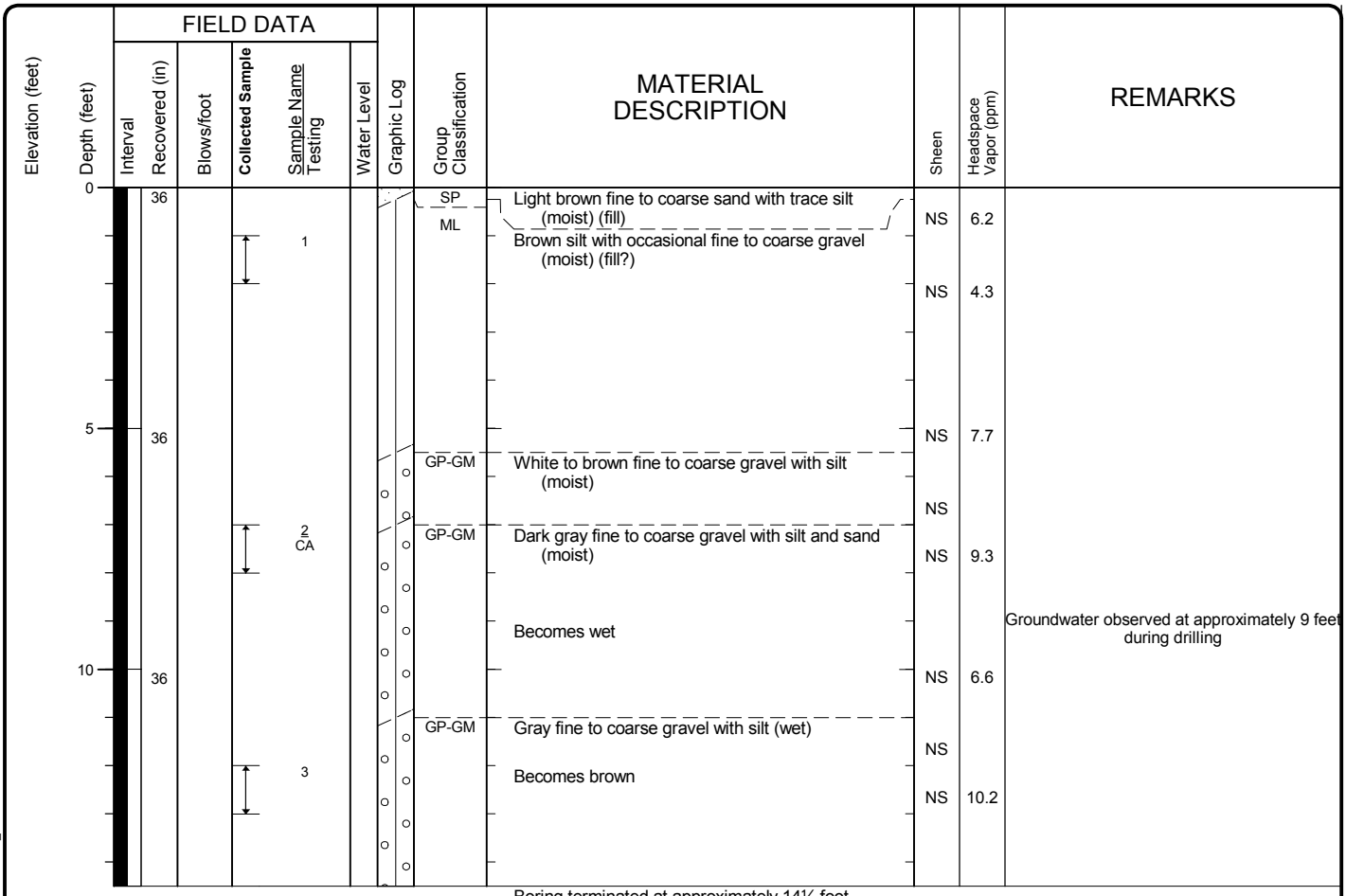
Log of Direct-Push Boring N-DP-15

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-28
Sheet 1 of 1

Drilled	Start 9/10/2013	End 9/10/2013	Total Depth (ft)	14.5	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52126345790 / -120.47875513100				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-16

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-29
Sheet 1 of 1

Drilled	Start 9/10/2013	End 9/10/2013	Total Depth (ft) 15	Logged By KAH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude / Longitude	47.52077814800 / -120.47849625000		System Datum	Geographic WGS84	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:						

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1 CA			SP-SM	Brown fine to coarse sand with silt (moist) (fill)	NS	5.8	
										Grades with gravel	NS	9.6	
										Becomes brown and gray mottled	NS	6.3	
	5		36			2			GP-GM	Gray fine to coarse gravel with silt, sand and trace wood waste (wet) (fill)	NS	2.8	Groundwater observed at approximately 5 feet during drilling
									SP	Gray fine to medium sand with trace silt (wet)			
									GP	Gray fine to coarse gravel with trace sand and silt (wet)	NS	1.7	
	10		36						SP	Gray fine to medium sand with trace silt (wet)	NS	4.2	
									GP-GM	Gray fine to coarse gravel with silt and sand (wet)	NS		
						3						3.3	
											NS		
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

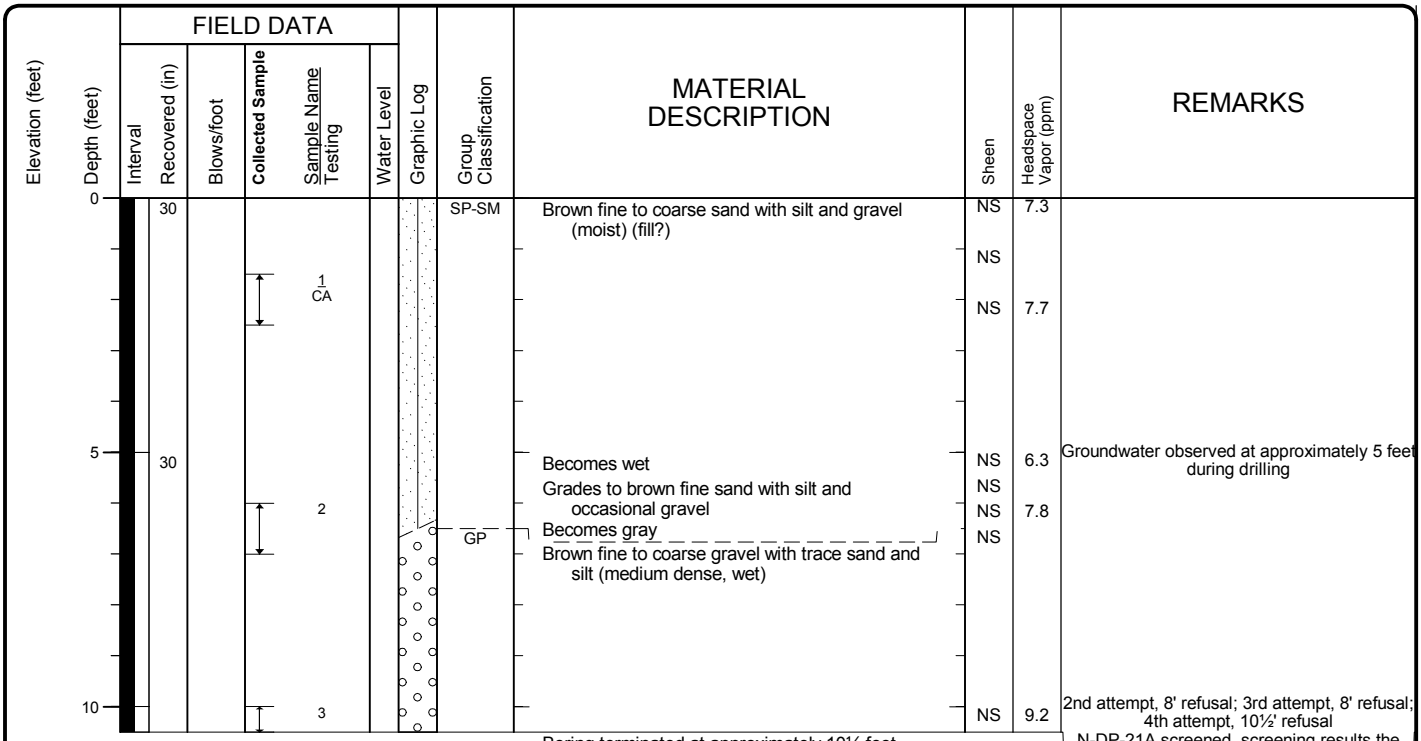
Log of Direct-Push Boring N-DP-19

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-30
Sheet 1 of 1

Drilled	Start 9/10/2013	End 9/10/2013	Total Depth (ft) 10.5	Logged By KAH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude 47.52080015260 / Longitude -120.47863670600			System Datum	Geographic WGS84	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:						



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-21/N-DP-21A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-31
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/10/2013	9/10/2013	15	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52127503240 / -120.47894638400	Geographic WGS84			

Notes:

Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		40			1 CA			SP-SM	Brown fine to coarse sand with silt (moist) (fill)	NS	2.5	
								ML	Brown silt with occasional sand (moist)			
								SP-SM	Brown fine to coarse sand with silt (moist)	NS	1.2	
5		36							Grades with occasional fine gravel (moist)	NS	<1	
					2			SP	Brown fine to coarse sand with trace silt and fine gravel (wet)			Groundwater observed at approximately 6½ feet during drilling
								GP-GM	Gray fine to coarse gravel with silt (wet)	NS	2.2	
10		40						SP	Brown fine to coarse sand with occasional silt and gravel (wet)	NS	2.3	
					3			GP-GM	Brown fine to coarse gravel with silt (wet)			
										NS	1.5	
15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

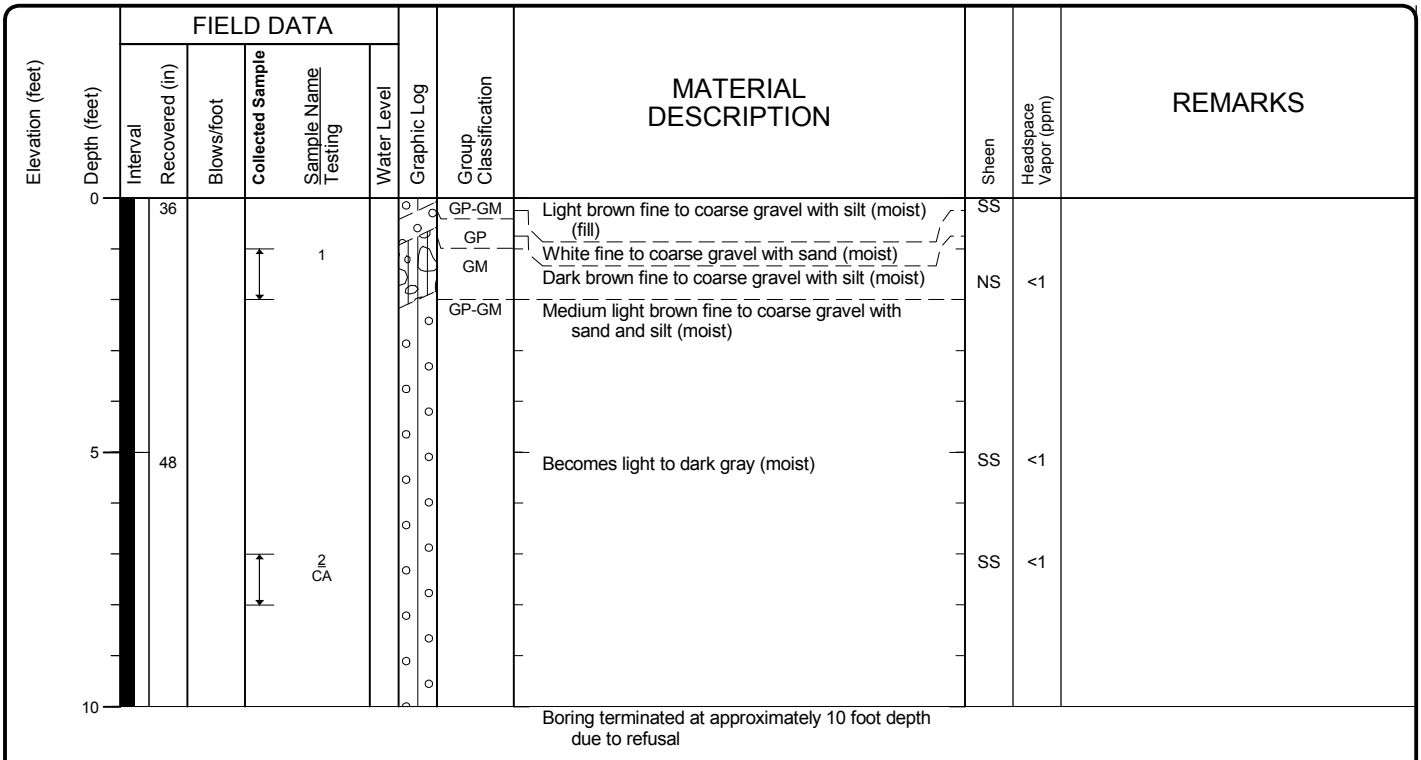
Log of Direct-Push Boring N-DP-23

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-32
Sheet 1 of 1

Drilled	Start 9/14/2013	End 9/14/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52178014480 / -120.47907121800				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-24

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-33
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/11/2013	9/11/2013	15	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52134020690 / -120.47887706500	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1			SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist) (fill?)	NS	2.8	
	5		40			2 CA				Becomes dark brown	NS	3.1	
									GP-GM	Gray fine to coarse gravel with silt (wet)	NS	1.4	Groundwater observed at approximately 7½ feet during drilling
	10		48			3			SP	Brown fine to coarse sand (wet)	NS	2.3	
										Becomes dark gray and grades with occasional gravel	NS	4.0	
									GP-GM	Gray fine to coarse gravel with silt (wet)	NS	1.8	
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-25

GeoEngineers

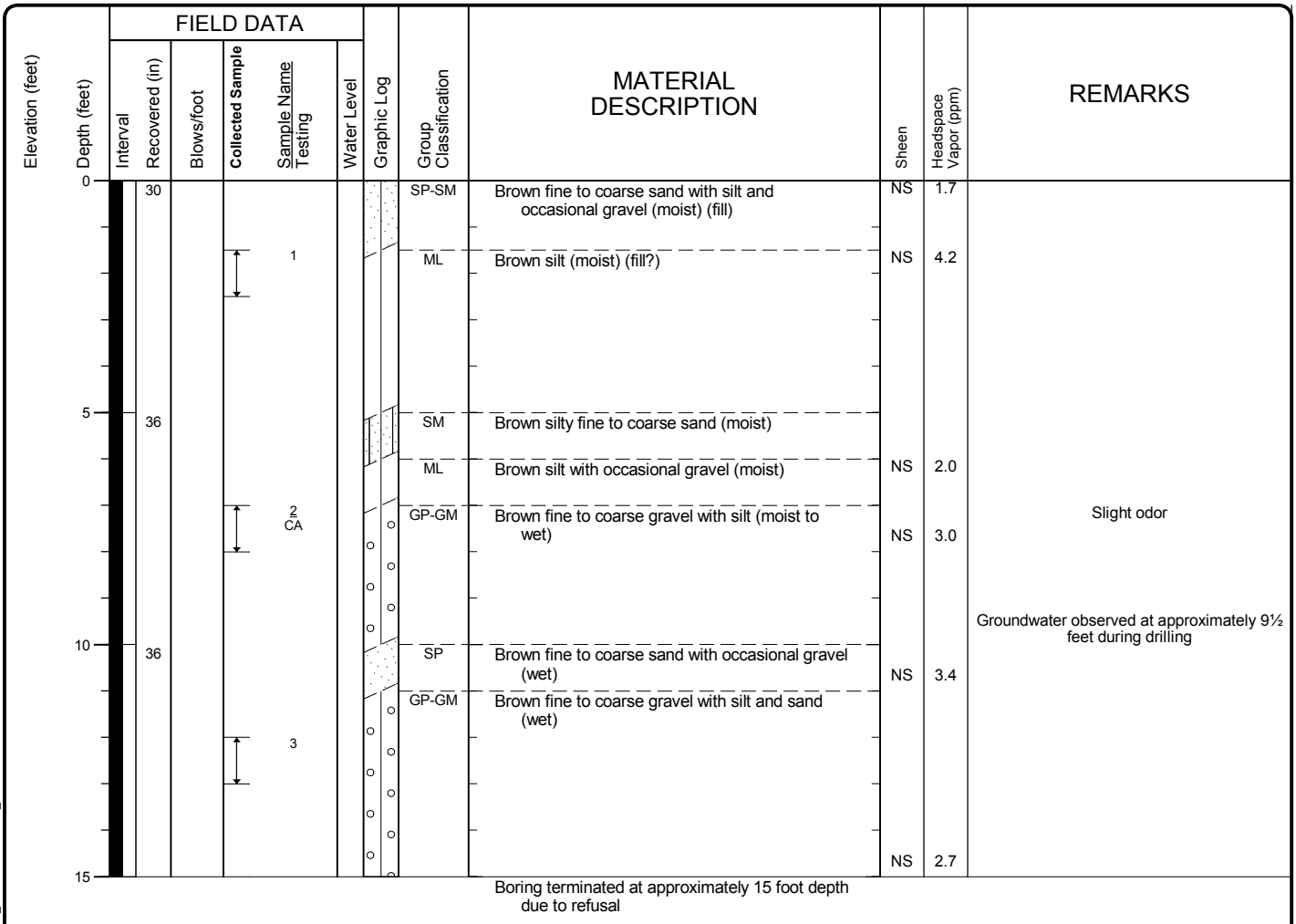
Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-34
Sheet 1 of 1

Drilled	Start 9/10/2013	End 9/10/2013	Total Depth (ft)	15	Logged By	ERH	Driller	Cascade Drilling	Drilling Method	Direct-Push
					Checked By	DRL				

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data		Drilling Equipment	Geoprobe
Latitude	47.52158064210	System Datum	Geographic	Groundwater	
Longitude	-120.47918922200		WGS84	Date Measured	Depth to Water (ft) / Elevation (ft)

Notes:



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-27

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-35
Sheet 1 of 1

Drilled	Start 9/10/2013	End 9/10/2013	Total Depth (ft)	13	Logged By / Checked By	KAH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52140967770 / -120.47939354000				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		42			1			SP-SM	Brown fine to coarse sand with silt (moist) (fill)	NS	<1	
											NS	1.1	
									SP	Brown fine to medium sand with trace silt and gravel (moist)	NS	<1	
	5		48						SP-SM	Brown fine to coarse sand with silt (moist)	NS	<1	
									ML	Brown silt with occasional sand and gravel (moist to wet)	NS	<1	
						2 CA							
										Becomes wet			Groundwater observed at approximately 9 feet during drilling
	10		36						SP	Brown fine to coarse sand with trace silt and occasional gravel (wet)	NS	<1	
						3					NS	3.6	
									GP	Gray fine to coarse gravel with trace sand and silt (wet)			
											NS	<1	
										Boring terminated at approximately 13 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-30

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-36
Sheet 1 of 1

Drilled	Start 9/10/2013	End 9/10/2013	Total Depth (ft)	15	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52120406750 / -120.47939493600		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1			SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist) (fill?)	NS	<1	
									ML	Brown silt with occasional gravel (moist) (fill?)	NS	<1	
	5		48			2 CA			SM	Brown silty fine to coarse sand (moist) (fill?)	NS	<1	
									GP	Light brown fine gravel with trace silt (moist) (fill?)			
									ML	Dark brown silt (moist) (fill?)	NS	<1	
									SP-SM	Fine to coarse sand with silt (moist)			
									GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	1.8	
	10		48							Becomes wet	NS	1.2	Groundwater observed at approximately 9½ feet during drilling
						3					NS	3.0	
	15										NS	4.2	
										Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-31

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-37
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/10/2013	9/10/2013	15	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
	Geographic			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		44						SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist) (fill)	NS	1.0	
											NS	1.5	
						1 CA			GP	White fine to coarse gravel with trace sand and silt (moist)	NS	2.2	
	5		24			2				Becomes brown	NS	1.5	
										Becomes wet	NS	2.1	Groundwater observed at approximately 6 feet during drilling
	10		42								NS	1.3	
											NS	1.4	
						3					NS	1.8	
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-32

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-38
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft)	10	Logged By / Checked By	KAH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52090841990 / -120.47966056900				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1			SP	Brown fine to coarse sand with trace silt (moist) (fill)	NS	2.4	
									GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	2.0	
											NS	2.0	
	5		26			2 CA					NS	1.7	
											NS	1.9	Groundwater observed at approximately 6 feet during drilling
										Becomes wet	NS	2.1	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-33

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-39
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52162 / -120.481166				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36					SP-SM	Brown fine to coarse sand with silt (moist) (fill?)	NS	3.3	
								GP-GM	Brown fine to coarse gravel with silt (moist) (fill?)			
								ML	Brown silt (moist) (fill?)	NS	3.8	
	5		40						Grades with occasional gravel			
								SP	Fine to coarse sand with occasional gravel and trace silt (moist)	NS	3.6	
								GP-GM	Fine to coarse gravel with silt and sand (moist)			
									Becomes wet	NS	3.2	Groundwater observed at approximately 7½ feet during drilling
	10								Boring terminated at approximately 10 foot depth due to refusal			No samples recorded due to no positive results during field screen

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-33A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-40
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/11/2013	9/11/2013	13	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52121982480 / -120.47983717900	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1 CA			SP	Brown fine to coarse sand with trace silt (moist) (fill)	NS	3.5	
									SM	Brown silty fine sand (moist) (fill?)	NS	4.9	
	5		48							Grades to fine to coarse sand with occasional gravel	NS	3.7	
						2 CA			GP	White fine to coarse gravel with sand and trace silt (moist)	NS	4.3	
										Becomes brown (wet)	NS	3.2	Groundwater observed at approximately 8½ feet during drilling
	10		18			3					NS	3.8	
										Boring terminated at approximately 13 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-35

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-41
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft) 10.5	Logged By KAH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude 47.521619 / Longitude -120.481038			System Datum	Geographic WGS84	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:						

Elevation (feet) / Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		30					SP	Brown fine to coarse sand with trace silt (moist) (fill)	NS	1.3	
									NS	1.2	
							GP-GM	Brown fine to coarse gravel with silt and sand (moist)			
5		30							NS	2.1	
							GP	Gray fine to coarse gravel with trace sand and silt (moist) Becomes brown (wet)	NS	1.9	Groundwater observed at approximately 7 feet during drilling
10		6							NS	2.3	
								Boring terminated at approximately 10½ foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

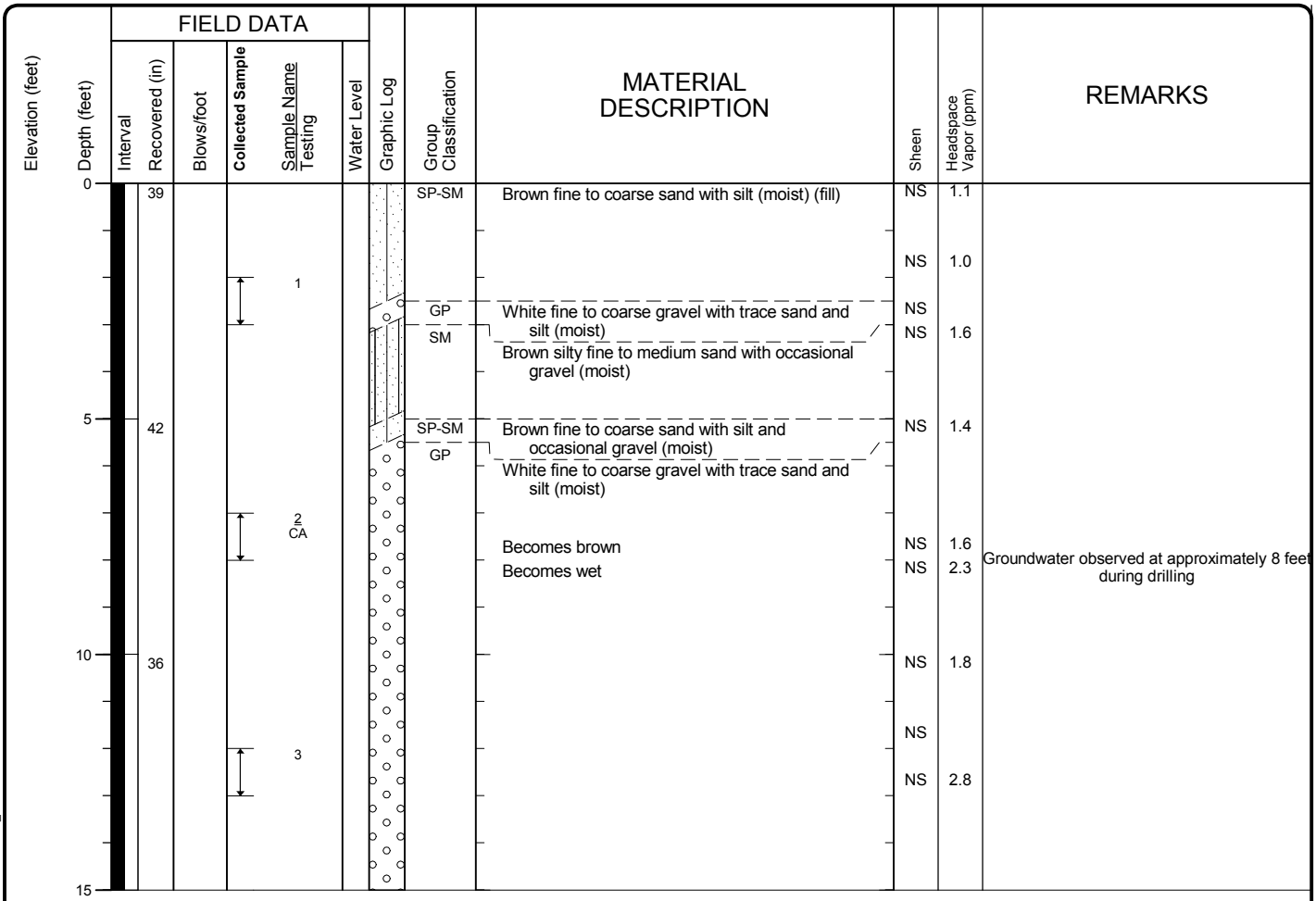
Log of Direct-Push Boring N-DP-35A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-42
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft) 15	Logged By KAH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) / Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude / Longitude	47.52151607150 / -120.47971182100		System Datum	Geographic WGS84	Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:						



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-36

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-43
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	10	RB / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52180308820 / -120.47916565000	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		32						GP	Gray coarse gravel (moist) (fill)	NS	<1	
									SM	Brown silty fine to medium sand with occasional gravel and wood waste (moist) (fill)	NS	<1	
						1			GP	Gray coarse gravel with sand (moist)	NS	<1	
	5		32								NS	<1	
						2 CA				Becomes wet	NS	<1	Groundwater observed at approximately 7 feet during drilling
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-38

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-44
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	10	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52205700860 / -120.47969668500	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		36						GP-GM	Dark gray fine to coarse gravel with silt and occasional sand (moist)	SS		
									Becomes light brown to light gray			
					1 CA			SP	Light brown fine to medium sand with trace silt and gravel (moist)	MS	<1	
								SP-SM	Dark brown fine to medium sand with silt (moist)			
								GP-GM	Light gray to white fine to coarse gravel with silt and sand (moist)			
5		36								NS	<1	
					2				Becomes to brown	NS	1.3	
10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-39

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-45
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/11/2013	9/11/2013	12	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52169622230 / -120.48005110500	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		44						SP	Brown fine to coarse sand with trace silt (moist) (fill?)			
									SM	Brown silty fine to coarse sand (moist) (fill?)			
						1 CA					NS	3.3	
									ML	Brown silt with occasional gravel (moist) (fill?)	NS	3.6	
	5		48						SP	Brown fine to coarse sand with trace silt (moist)	NS	3.0	
						2 CA			GP-GM	Fine to coarse gravel with sand and silt (moist)	NS	3.1	
	10		24										
						3				Becomes wet			Groundwater observed at approximately 11 feet during drilling
										Boring terminated at approximately 12 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-42

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-46
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/11/2013	9/11/2013	12	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52170045440 / -120.47999303900	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		44					SP	Brown fine to coarse sand with trace silt (moist) (fill?)			
							SM	Brown silty fine to coarse sand (moist) (fill)	NS	2.1	
							ML	Brown silt with occasional gravel (moist) (fill?)	NS	2.1	
5		48					SP	Brown fine to coarse sand with trace silt (moist)	NS	3.1	
							GP-GM	Brown fine to coarse gravel with sand and silt	NS	2.2	
10		24						Becomes wet			Groundwater observed at approximately 11 feet during drilling

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-42a

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-47
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52159305630 / -120.48030272300				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48			1 CA			SP-SM	Brown fine to coarse sand with silt (moist) (fill?)	NS	87	
											NS	7.0	
									ML	Brown to gray silt with trace sand (moist) (fill?)	NS	35.1	
	5		48										
									SP	Brown fine to coarse sand with trace silt (moist)	NS	14.7	
									GP-GM	Brown fine to coarse gravel with silt and sand (moist)			
						2 CA					NS	3.9	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-43

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-48
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52159305560 / -120.48035316700				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48					SP-SM	Brown fine to coarse sand with silt (moist) (fill?)	NS	1.7	
										NS	2.5	
								ML	Brown to gray silt with trace sand (moist) (fill?)	NS	1.1	
	5		48					SP	Brown fine to coarse sand with trace silt (moist)	NS	<1	
								GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	<1	
	10								Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-43A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-49
Sheet 1 of 1

Drilled: Start 9/11/2013 End 9/11/2013	Total Depth (ft): 10	Logged By: ERH Checked By: DRL	Driller: Cascade Drilling	Drilling Method: Direct-Push	
Surface Elevation (ft) Vertical Datum: Undetermined		Hammer Data:		Drilling Equipment: Geoprobe	
Latitude: 47.52159414890 Longitude: -120.48024565600		System Datum: Geographic WGS84		Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48					SP-SM	Brown fine to coarse sand with silt (moist) (fill?)	NS	1.3	
								ML	Brown to gray silt with trace sand (moist) (fill?)	NS	<1	
	5		48					SP	Brown fine to coarse sand with trace silt (moist)	NS	<1	
								GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	<1	
	10								Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-43B

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-50
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52141908620 / -120.48029754100		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48			1			SP-SM	Brown fine to coarse sand with silt (moist) (fill?)	NS	3.7	
											NS	1.1	
									ML	Brown silt (moist) (fill?)			
	5		60						SM	Brown silty fine to coarse sand (moist)	NS	4.8	
									GP-GM	Gray fine to coarse gravel with silt and sand (moist)	NS	4.8	
						2 CA					NS	5.4	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-44

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-51
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52141503360 / -120.48027216400		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48						SP-SM	Brown fine to coarse sand with silt (moist) (fill?)	NS	5.2	
									ML	Brown silt (moist) (fill?)	NS	5.3	
	5		60						SM	Brown silty fine to coarse sand (moist)			
									GP-GM	Gray fine to coarse gravel with silt and sand (moist)	NS	3.8	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-44A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-52
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52120690080 / -120.48030552800				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1			SP	Brown fine to coarse sand with occasional silt (moist) (fill?)			
									SM	Brown silty fine to coarse sand (moist) (fill?)	NS	<1	
									ML	Brown silt with occasional fine gravel (moist) (fill?)	NS	<1	
	5		54						SP	Brown fine to coarse sand with trace silt (moist)			
									GP-GM	Gray fine to coarse gravel with silt and sand (moist)	NS	<1	
						2 CA			GP	Becomes dark gray fine to coarse gravel with sand and trace silt (moist)	NS	<1	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-45

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-53
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	9/11/2013	9/11/2013	4	ERH	DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52091124770 / -120.48030369200	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		28			1 CA			GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	4.2	
											NS	4.2	
										Boring terminated at approximately 4 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-47

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-54
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	9/11/2013	9/11/2013	8	KAH	DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52141946030 / -120.48072181200	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1			SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist) (fill)	NS	4.3	
												5.8	
											NS	5.4	
	5		12			2 CA			GP	White fine to coarse gravel with trace silt and sand (moist) Becomes brown	NS	3.6	
										Boring terminated at approximately 8 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-48

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-55
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/11/2013	9/11/2013	5	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52160746550 / -120.48082325500	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36						SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist) (fill)	NS	4.5	
											NS	4.3	
						1 CA			GP	White fine to coarse gravel with trace silt and sand (moist)	NS	4.5	
	5									Boring terminated at approximately 5 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-49

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-56
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/11/2013	9/11/2013	14	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52177760950 / -120.48058307400	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1			SP-SM	Brown fine to coarse sand with silt (moist) (fill)	NS	2.8	
											NS		
										Grades with gravel	NS	2.6	
											NS		
									GP-GM	White fine to coarse gravel with silt and sand (moist)			
	5		24			2 CA					NS	3.6	
											NS	4.2	
	10		24			3				Becomes brown and wet	NS	2.5	Groundwater observed at approximately 10½ feet during drilling
											NS	2.1	
										Boring terminated at approximately 14 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-50

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-57
Sheet 1 of 1

Drilled	Start 9/14/2013	End 9/14/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52212672580 / -120.48026900700		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30						GP-GM	Light brown fine to coarse gravel with silt and trace sand (moist)			
									SP-SM	Becomes dark brown Brown fine to medium sand with silt (moist)	NS	<1	
						1 CA			GP-GM	Light brown fine to coarse gravel with silt and sand (moist)			
	5		36							Becomes white and light brown			
						2			SP	Brown fine to medium sand with occasional gravel (moist to wet)	NS	<1	Groundwater observed at approximately 6½ feet during drilling
									GP-GM	Brown fine to coarse gravel with silt and sand (wet)			
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-51

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-58
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft)	14	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52187308150 / -120.48114759000		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1			SP-SM	Brown fine to coarse sand with silt (moist) (fill?)			
									ML	Brown silt with occasional gravel (moist) (fill?)	NS	<1	
											NS	<1	
	5		30						GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	1.4	
						2 CA					NS	2.3	
										Becomes dark brown and wet			Groundwater observed at approximately 7½ feet during drilling
	10		30								NS	1.2	
											NS	2.3	
						3							
											NS	3.1	
										Boring terminated at approximately 14 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-52

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-59
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	9/11/2013	9/11/2013	4	KAH	DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52162920030 / -120.48120949300	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1 CA			SP-SM	Brown fine to medium sand with silt and gravel (moist) (fill)	NS	5.1	
											NS		
									GP-GM	Light brown fine to coarse gravel with silt and sand (moist)	NS	4.1	
										Boring terminated at approximately 4 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-53

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-60
Sheet 1 of 1

Drilled	Start 9/11/2013	End 9/11/2013	Total Depth (ft) 5	Logged By KAH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude / Longitude	47.52142870940 / -120.48122267400		System Datum	Geographic WGS84	Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:						

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30						SP-SM	Brown fine to coarse sand with silt and gravel (moist) (fill)	NS	4.1	
											NS		
						1 CA			GP	Gray fine to coarse gravel with trace sand and silt (moist)	NS	4.6	
	5									Boring terminated at approximately 5 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring N-DP-54

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-61
Sheet 1 of 1

Drilled	Start 9/9/2013	End 9/9/2013	Total Depth (ft) 7.5	Logged By KAH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude	47.52060613650		System Datum	Geographic WGS84	Groundwater	
Longitude	-120.47888313400				Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:						

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		33						SP-SM	Brown fine to coarse sand with silt and occasional gravel (moist) (fill)	NS	2.6	
									ML	Brownish-gray silt (moist) (fill)	NS	4.8	
									FILL	Brown wood waste (fill)	NS	5.3	
						1			SP-SM	Gray fine to coarse sand with silt (moist)	NS	5.7	
	5		18			2					NS	7.3	
									GP	Gray fine to coarse gravel with sand and trace silt (moist)	NS	5.9	
										Boring terminated at approximately 7½ foot depth due to broken drill rig			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-62
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	11	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52058682130 / -120.47889045100	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36						GP-GM	Brown fine to coarse gravel with silt and trace organic matter (roots) (moist) (fill?)	NS	<1	
									ML	Brown silt with occasional roots (moist) (fill?)			
									GP-GM	Gray fine to coarse gravel with silt and sand (wet) (fill?)			Groundwater observed at approximately 1½ feet during drilling
						1			ML	Brown silt with occasional gravel (wet) (fill?)			
									SP	Gray fine to medium sand with occasional gravel (wet) (fill?)	NS	<1	
	5		36						ML	Brown silt with occasional gravel (wet) (fill?)			
						2			SP	Gray fine to coarse sand with occasional gravel (wet)	NS	<1	
									GP-GM	Fine to coarse gravel with silt and sand (wet)	NS	1.1	
	10		12			3					NS	1.5	
										Boring terminated at approximately 11 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

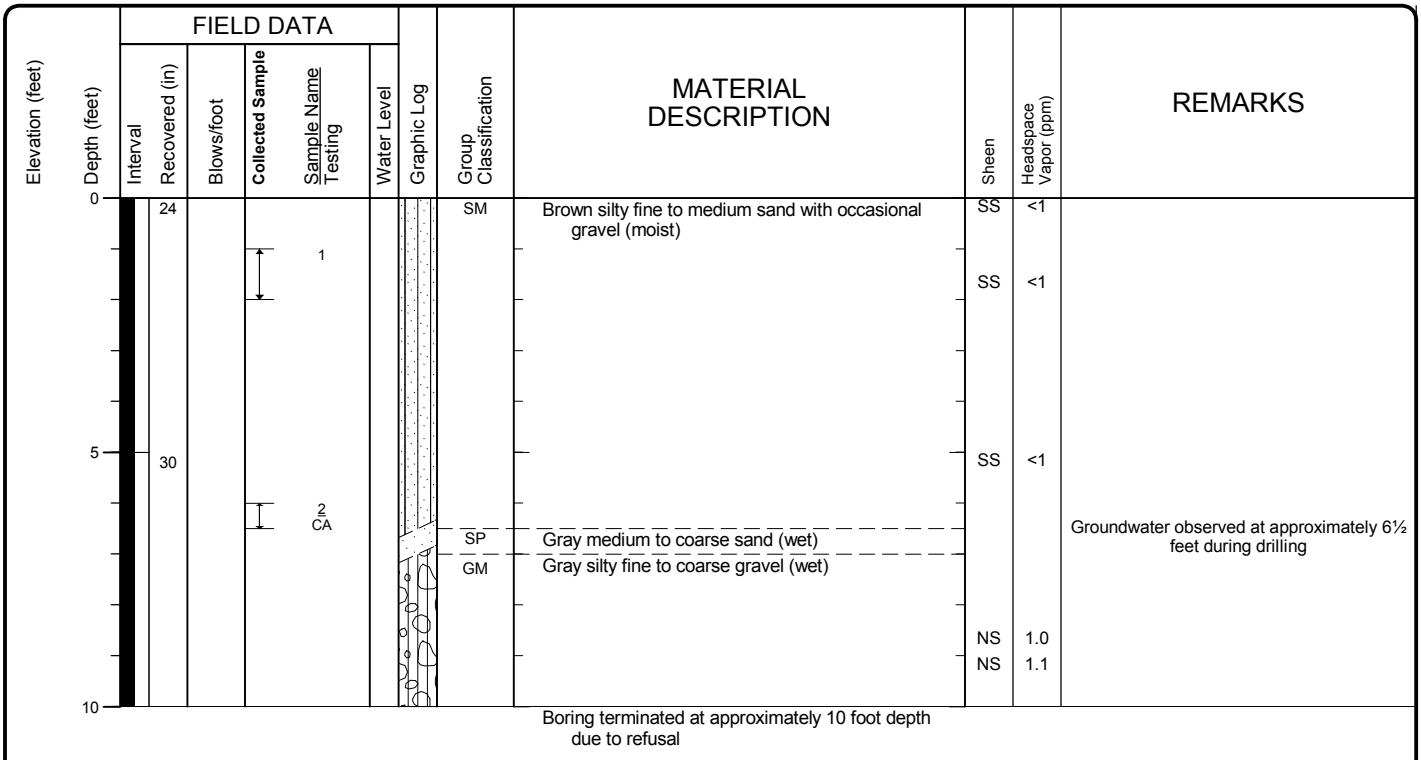
Log of Direct-Push Boring S-DP-1A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-63
Sheet 1 of 1

Drilled	Start 9/14/2013	End 9/14/2013	Total Depth (ft)	10	Logged By / Checked By	RB / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52064870370 / -120.47861280500				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-1B

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-64
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	10	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52046119430 / -120.47900541300	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30						ML	Brown silt with occasional gravel (moist)			
										Becomes grayish-brown	SS		Slight petroleum odor
						1 CA			SP	Grayish-brown fine to coarse sand with occasional gravel (wet)			Groundwater observed at approximately 2 feet during drilling
											SS	19.1	
	5		42								NS	<1	
									GP-GM	Grayish-brown fine to coarse gravel with silt and sand (wet)	NS		
						2					NS	1.0	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-65
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	11	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52061569480 / -120.47921995400	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		24			1 CA			GP-GM	Light brown fine to coarse gravel with silt and sand (moist)			
										Becomes dark brown and wet	NS	2.9	Groundwater observed at approximately 1½ feet during drilling
	5		36			2				Becomes gray	NS	2.2	
											NS	2.3	
	10		6			3					NS	2.2	
										Boring terminated at approximately 11 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-4

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-66
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	9/12/2013	9/12/2013	10	ERH	DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52062840650 / -120.47927529000	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36						GM	Brown silty fine to coarse gravel with sand and roots (moist)	NS	<1	
									ML	Brown silt with occasional gravel (moist)			
									GP-GM	White fine to coarse gravel with silt and sand (moist)	NS	<1	Groundwater observed at approximately 2 feet during drilling
						1			SP-SM	Brown fine to coarse sand with silt (wet)	NS	2.4	
	5		36						SP	Brown fine to coarse sand with trace silt (wet)			
									GP-GM	Brown fine to coarse gravel with silt and sand (wet)	NS	<1	
									SP	Gray fine to coarse sand with trace silt (wet)	NS	<1	
											NS	<1	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-4A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-67
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	8	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52051263940 / -120.47929575100	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		40						GP-GM	Light brown gravel with silt and sand (moist) (fill)			
								ML	Grayish brown silt (moist) (fill)	NS	<1	
									Becomes dark brown with sawdust			
								GP-GM	Gray fine to coarse gravel with silt and sand (moist)			
				●	1 CA					NS	<1	
									Becomes wet			Groundwater observed at approximately 4 feet during drilling
5		36										
										NS	<1	
										NS	<1	
									Boring terminated at approximately 8 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-5

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-68
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	8	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52048102760 / -120.47929781800	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		40						GP-GM	Light brown gravel with silt and sand (moist) (fill)			
								ML	Grayish brown silt (moist) (fill) Becomes dark brown with sawdust			
								GP-GM	Gray fine to coarse gravel with silt and sand (moist)		1.3	
										NS	<1	
									Becomes wet			Groundwater observed at approximately 4 feet during drilling
5		36									1.8	
					1						2.6	
									Boring terminated at approximately 8 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-5A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-69
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	9	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52060885670 / -120.47945791700	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1 CA			SP-SM	Light to dark gray fine to coarse sand with silt and occasional gravel (moist) (fill?)			Petroleum odor
									ML	Dark brown silt with trace sand (moist) (fill?)	MS	<1	
									GP-GM	Gray to brown fine to coarse gravel with silt and sand (moist)	NS	<1	
										Becomes wet			Groundwater observed at approximately 4 feet during drilling
	5		40								NS	<1	
						2					NS	<1	
										Boring terminated at approximately 9 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-7

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-70
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	9	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52051326980 / -120.47949810300	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1			GP-GM	Brown fine to coarse gravel with silt and sand (moist)			Groundwater observed at approximately 1 foot during drilling
										Becomes wet	NS	<1	
	5		30									<1	
						2 CA					NS	<1	
										Boring terminated at approximately 9 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-8

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-71
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	10	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52036600040 / -120.47943997900	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48						GM	Light brown silty fine to coarse gravel (moist) (fill)	NS	<1	
											NS	<1	
									SP-SM	Light reddish-brown fine to coarse sand with silt (moist) (fill)	NS	<1	
									ML				
						1			FILL	Medium to dark brown silt with occasional gravel (moist) (fill)			
										Red to brown sawdust (moist) (fill)			
	5		48						SP-SM	Brown fine to medium sand with silt (wet)	NS		Groundwater observed at approximately 4½ feet during drilling
									GP-GM	Gray fine to coarse gravel with silt and sand (wet)			
						2 CA					NS	<1	
											NS	<1	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-9

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-72
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	10	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52026593720 / -120.47946001500	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1 CA			GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill)	NS	1.5	
										Becomes gray			
									SM	Gray silty fine sand with sawdust (moist) (fill)	SS	2.0	
									SP-SM	Brown fine to medium sand with silt, gravel and wood fragments (moist) (fill)	NS	1.8	
	5		36							Becomes wet	SS	1.6	Groundwater observed at approximately 5 feet during drilling
									ML	Gray silt with sand (wet) (fill?)	NS	1.6	
									GP	Gray fine to coarse gravel with trace sand and silt (medium dense, wet)	NS		
						2					NS	1.8	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-10

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-73
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	9/12/2013	9/12/2013	8	KAH	DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52013752500 / -120.47918005400	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		18			1			GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	1.8	Groundwater observed at approximately ½ foot during drilling
									SM	Brown silty fine to medium sand with gravel (wet)	NS	1.7	
									GP	Brown fine to coarse gravel with trace sand and silt (wet)			
	5		18			2 CA					NS		
											NS	1.7	
										Boring terminated at approximately 8 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-11

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-74
Sheet 1 of 1

Drilled	Start 9/12/2013	End 9/12/2013	Total Depth (ft)	12	Logged By / Checked By	KAH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52006935530 / -120.47943096600				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										

Elevation (feet) / Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0								GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill?)	NS	1.8	
		30			1 CA			SM	Brown silty fine sand (moist)	NS	6.7	Groundwater observed at approximately 1½ feet during drilling
									Becomes wet			
								GP	Brown fine to coarse gravel with trace sand and silt (wet)	NS		
5		30								NS	1.8	
					2					NS		
										NS	1.7	
10		24								NS	<1	
					3					NS	1.0	
									Boring terminated at approximately 12 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-13

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-75
Sheet 1 of 1

Drilled	Start 9/12/2013	End 9/12/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52023975330 / -120.47970231400				System Datum	Geographic WGS84			Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:										

Elevation (feet) / Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		30			1 CA			SP-SM	Dark brown sand with silt and occasional gravel (moist) (fill?)			
								ML	Dark brown silt (moist) (fill?)	SS	<1	Petroleum odor
									Becomes wet			Groundwater observed at approximately 3½ feet during drilling
5		36			2					NS	<1	
								GP	Gray fine to coarse gravel with sand and trace silt (wet)		<1	
10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-14

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-76
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	10	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52043936370 / -120.47963777800	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		36						GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill)	NS	1.5	
					1 CA			ML	Gray silt with wood waste (moist) (fill)	NS	2.1	
										NS	2.4	
								GP-GM	Gray fine to coarse gravel with silt and sand (moist)			
									Becomes wet			Groundwater observed at approximately 4 feet during drilling
5		40								NS	2.3	
										NS	1.8	
					2					NS	<1	
10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-15

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-77
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	10	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52060118520 / -120.47963668000	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		24			1			GP	Brown fine to coarse gravel with sand and trace silt (moist)	NS	<1	
									Becomes brown and wet			Groundwater observed at approximately 1 foot during drilling
										NS	<1	
									Becomes gray			
5		12			2 CA				Becomes brown	NS	<1	
										NS		
10												

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-16

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-78
Sheet 1 of 1

Drilled	Start 9/12/2013	End 9/12/2013	Total Depth (ft)	10	Logged By / Checked By	KAH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52043533510 / -120.47987131200		System Datum	Geographic WGS84			Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1 CA			GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill)	NS	3.8	
										Becomes gray	NS		
									FILL	Wood waste (fill)			
									GP-GM	Brown fine to coarse gravel with silt, sand and occasional organic matter (wood) (wet) (fill)	NS	3.9	Groundwater observed at approximately 2 feet during drilling
	5		30			2				Grades to gray fine to coarse gravel with silt and sand (wet)	NS	4.9	
											NS		
									SP	Gray fine to medium sand with occasional silt and gravel (wet)	NS	4.2	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-18

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-79
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	4	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52032053310 / -120.47998111400	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		40						GM	Light brown silty fine to coarse gravel (moist) (fill?)	NS	<1	
								GP-GM	White fine to coarse gravel with silt and sand (moist) (fill?)			
					1			GM	Dark gray silty fine to coarse gravel (moist) (fill?)	NS	<1	Petroleum odor
								GP	Gray fine to coarse gravel with trace silt and sand (moist) (fill?)			
								ML	Gray silt (moist) (fill?)			
									Boring terminated at approximately 4 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-20

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-80
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	10	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.520369 / -120.479991	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		40						GM	Light brown silty fine to coarse gravel (moist) (fill)	NS	<1	
									GP-GM	White fine to coarse gravel with silt and sand (moist) (fill)			
									GM	Dark gray silty fine to coarse gravel (moist) (fill)	NS	<1	
						1 CA			GP	Gray fine to coarse gravel with trace silt and sand (moist) (fill)	NS	7.6	Petroleum odor
									ML	Gray silt (moist) (fill)			
									GM	Light brown silty fine to coarse gravel (moist) (fill)			
	5		48						FILL	Dark brown wood waste with trace silt (moist) (fill)	NS	<1	
						2			ML	Dark gray silt (moist) (fill?)	NS	<1	
									GP-GM	Gray fine to coarse gravel with silt and sand (wet)	NS	1.6	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

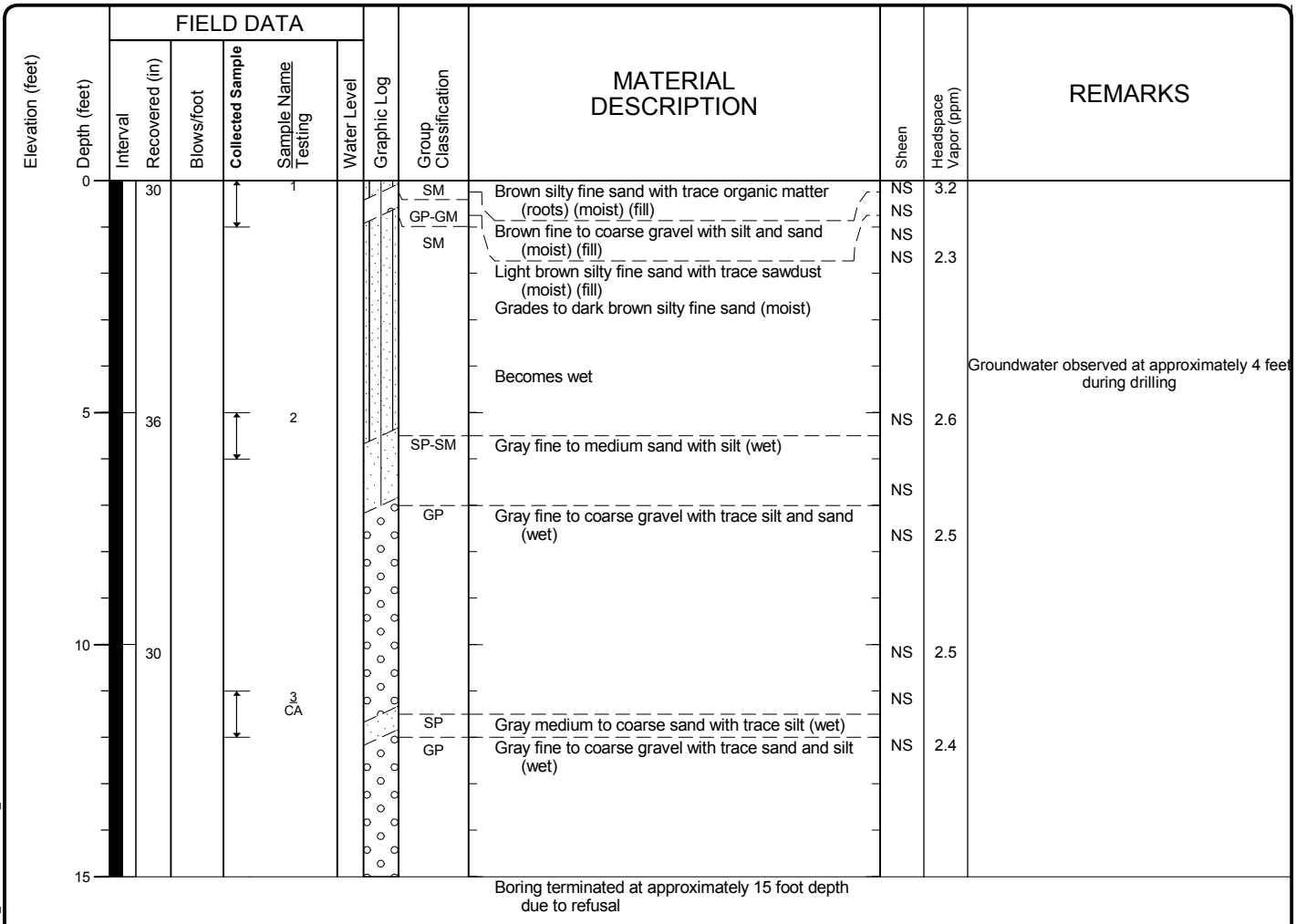
Log of Direct-Push Boring S-DP-20A

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-81
Sheet 1 of 1

Drilled	Start 9/12/2013	End 9/12/2013	Total Depth (ft) 15	Logged By KAH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) / Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude / Longitude	47.51994101650 / -120.47937486200		System Datum	Geographic WGS84	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:						



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-21

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-82
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft) 9	Logged By KAH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude	47.52005527380		System Datum	Geographic WGS84	Groundwater	
Longitude	-120.47973405500				Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:						

Elevation (feet) / Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		14			1			GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill?)	SS	<1	
										NS	<1	
								SM	Brown silty fine sand (moist)	NS	<1	
								GP-GM	Brown fine to coarse gravel with silt and sand (moist)			
5		24							Becomes wet	NS	<1	Groundwater observed at approximately 5 feet during drilling
					2 CA					NS	<1	
									Boring terminated at approximately 9 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-22

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-83
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By	KAH	Driller	Cascade Drilling	Drilling Method	Direct-Push
					Checked By	DRL				

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data		Drilling Equipment	Geoprobe
Latitude	47.51982769970	System Datum	Geographic WGS84	Groundwater	
Longitude	-120.47981020700			Date Measured	Depth to Water (ft) / Elevation (ft)

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		36						SP-SM	Brown fine to medium sand with silt, occasional gravel and organic matter (moist)	NS	<1	
								GP	Light brown fine to coarse gravel with trace sand and silt (moist)	NS		
					1 CA				Becomes white Becomes light brown Becomes brown	NS	<1	
5		42							Becomes wet			Groundwater observed at approximately 4½ feet during drilling
					2					NS	<1	
										NS	<1	
10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

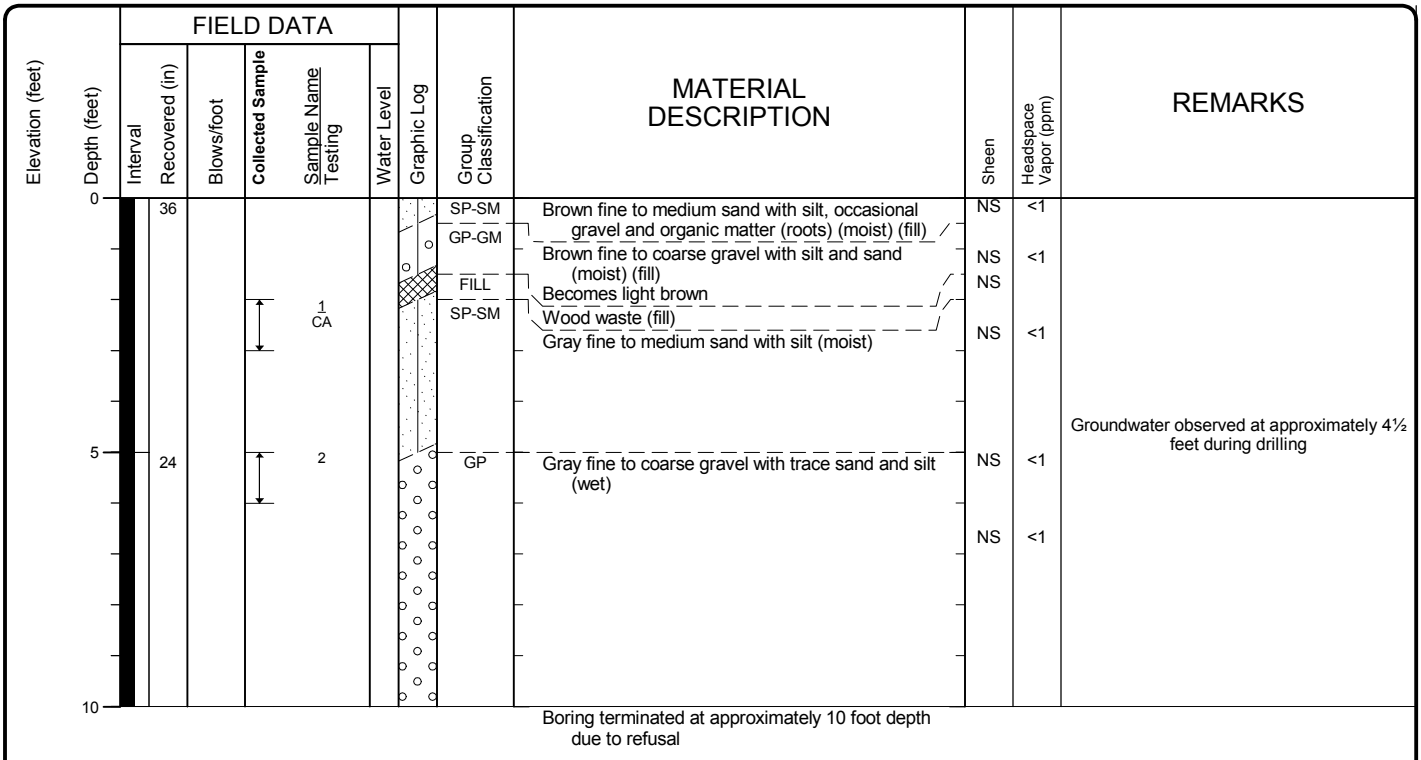
Log of Direct-Push Boring S-DP-23

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-84
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By / Checked By	KAH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.51982659880 / -120.47940175000		System Datum	Geographic WGS84			Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-24

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-85
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	9/13/2013	9/13/2013	10	KAH	DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51965668740 / -120.47982279400	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		24			1			SP-SM	Brown fine to medium sand with silt and occasional organic matter (roots) (moist)	NS	<1	
									GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	<1	
										Becomes white			
									SM	Brown silty fine sand (moist)	NS	<1	
	5		36			2 CA				Becomes wet	NS	<1	Groundwater observed at approximately 5 feet during drilling
									GP	Brown fine to coarse gravel with trace sand and silt (wet)	NS	<1	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-25

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-86
Sheet 1 of 1

Drilled Start	Drilled End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	9	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52010393950 / -120.48010794300	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		24			1 CA			SP-SM	Brown fine to medium sand with silt and occasional gravel (moist)	NS	1.1	
									GP-GM	Light brown fine to coarse gravel with silt and sand (moist)	NS	1.6	
										Becomes wet Becomes brown			Groundwater observed at approximately 4 feet during drilling
	5		36								NS	<1	
						2					NS	1.7	
										Boring terminated at approximately 9 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-26

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-87
Sheet 1 of 1

Drilled: Start 9/12/2013 End 9/12/2013	Total Depth (ft): 12.5	Logged By: KAH Checked By: DRL	Driller: Cascade Drilling	Drilling Method: Direct-Push	
Surface Elevation (ft) Vertical Datum: Undetermined		Hammer Data:		Drilling Equipment: Geoprobe	
Latitude: 47.52025480710 Longitude: -120.48008906500		System Datum: Geographic WGS84		Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:					

Elevation (feet) / Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		48			1 CA			GP	Gray fine to coarse gravel with trace silt and sand (moist) (fill?)	NS	4.4	Groundwater observed at approximately 5½ feet during drilling
										NS		
								GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill?)	NS	4.5	
										NS	3.5	
								SM	Brown silty fine sand (moist) (fill?)			
5		36			2			GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill?)	NS	3.0	
									Becomes wet			
								SM	Brown silty fine sand (wet) (fill?)	NS		
								GP-GM	Brown fine to coarse gravel with silt and sand (wet)	NS	0.5	
10		12			3					NS	0.4	
										NS		
									Boring terminated at approximately 12½ foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-27

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-88
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	7	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52039614470 / -120.48012704200	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48			1			SP-SM	Brown fine to medium sand with silt and occasional gravel (moist) (fill)	NS	1.6	
											NS		
									FILL	Asphalt (fill)		1.8	
						2 CA			SM	Gray fine to medium sand with silt (moist) (fill?)	SS	1.4	
	5		18			3			GP	Gray fine to coarse gravel with trace silt and sand (wet)	NS	1.1	Groundwater observed at approximately 4½ feet during drilling
										Boring terminated at approximately 7 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-28

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-89
Sheet 1 of 1

Drilled	Start 9/12/2013	End 9/12/2013	Total Depth (ft)	10	Logged By / Checked By	KAH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52053596680 / -120.48007854300				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48						GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill?)	NS	1.2	
										Becomes dark brown	NS	1.5	
									SP-SM	Gray fine to medium sand with silt (moist)			
						1					NS	1.1	
									GP	White fine to coarse gravel with trace sand and silt (moist)			
	5		48							Becomes wet	NS	1.3	Groundwater observed at approximately 5 feet during drilling
											NS		
						2 CA					NS	1.6	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-29

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-90
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	10	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52061455690 / -120.48030683900	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		24			1 CA			GP-GM	Dark brown fine to coarse gravel with silt and sand (moist) (fill?)	NS	1.5	
										Becomes white to gray			
	5		40			2			ML	Dark brown silt with occasional gravel (moist)			
									GP-GM	Brown fine to coarse gravel with silt and sand (moist)			Groundwater observed at approximately 6 feet during drilling
										Becomes gray and wet			
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-30

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-91
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	10	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52030829640 / -120.48031594000	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		40						GP-GM	Light brown fine to coarse gravel with silt (moist) (fill?)	NS	1.2	
											NS	1.4	
									ML	Brownish-gray silt (moist) (fill?)	NS	1.3	
					↕	1 CA				Becomes wet			Groundwater observed at approximately 4 feet during drilling
	5		18		↕	2			GP-GM	Gray fine to coarse gravel with silt and sand (wet)	NS	1.4	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-32

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-92
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/12/2013	9/12/2013	9	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51981784290 / -120.48035118600	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		36			1 CA			GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	<1	
										NS	<1	
									Becomes gray (moist)			
									Becomes brown (moist)	NS		
									Becomes wet			Groundwater observed at approximately 4 feet during drilling
5		24			2				Grayish-brown fine to coarse gravel with silt and sand (wet)	NS	1.0	
										NS		
									Boring terminated at approximately 9 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-35

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-93
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By / Checked By	KAH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.51960535380 / -120.48009997200				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1 CA			GP	Brown fine to coarse gravel with trace sand and silt (medium dense, moist) (fill)	NS	<1	
											NS	<1	
										Grades to dark brown with wood fragments			
									SP-SM	Brown fine to medium sand with silt (medium dense, moist)	NS	1.0	
	5		36						GP	Brown fine to coarse gravel with trace sand and silt (wet)	NS	<1	Groundwater observed at approximately 4½ feet during drilling
						2					NS	<1	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-37

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-94
Sheet 1 of 1

Drilled	Start 9/12/2013	End 9/12/2013	Total Depth (ft) 10	Logged By KAH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude	47.51967102200		System Datum	Geographic WGS84	Groundwater	
Longitude	-120.48038950800				Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:						

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		36						GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill)	SS	1.4	
										SS		
					1 CA			SM	Brown silty fine sand with trace organic matter (wood) (moist) (fill)	NS	1.6	
									Becomes wet			Groundwater observed at approximately 4 feet during drilling
5		36						GP	Brown fine to coarse gravel with trace sand and silt (wet)	NS	1.6	
					2					NS		
										NS	1.3	
10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

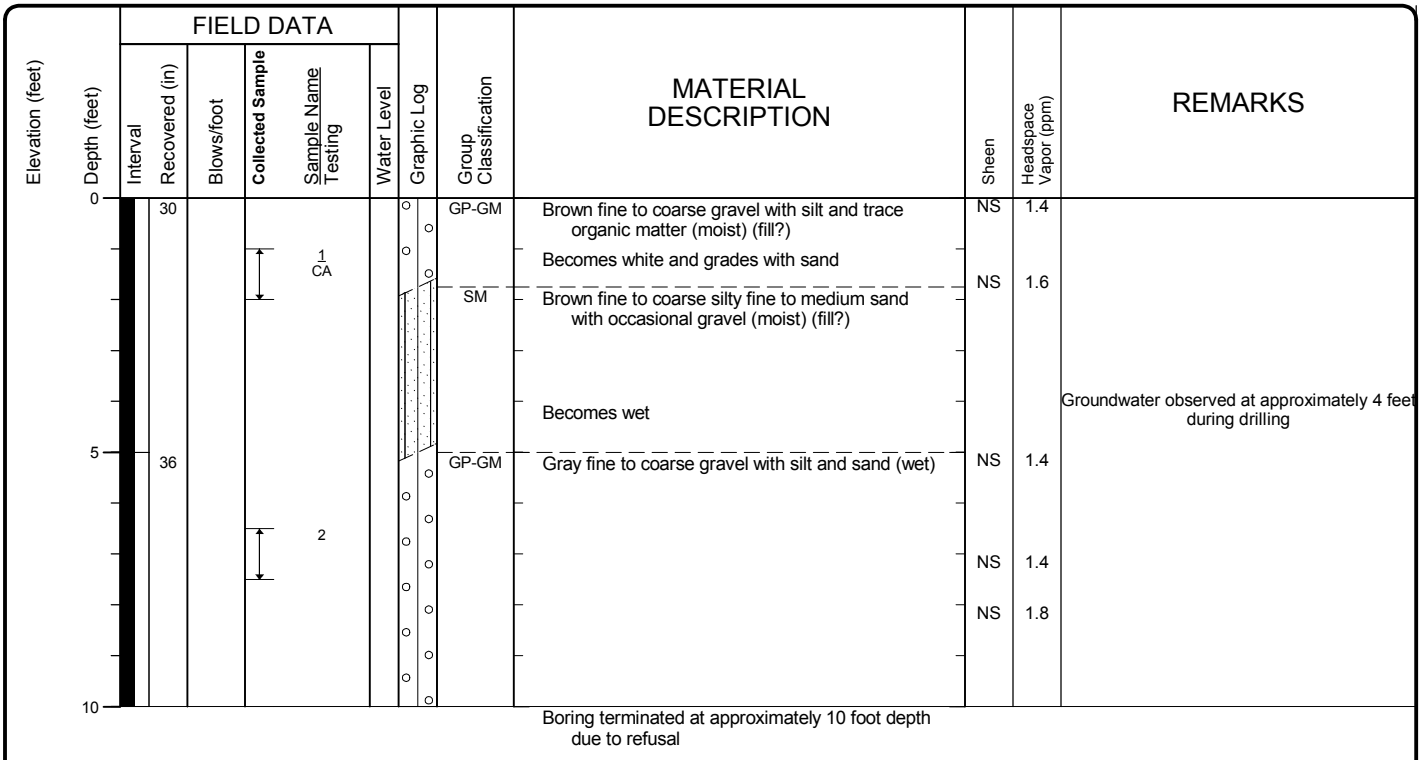
Log of Direct-Push Boring S-DP-39

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-95
Sheet 1 of 1

Drilled	Start 9/12/2013	End 9/12/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.51985099040 / -120.48054031800		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-40

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-96
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	20	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52012168700 / -120.48055474300				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)

Notes:

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36			1			SP	Light brown fine to coarse sand with occasional silt (moist) (fill?)			
									ML	Dark brown silt with roots and occasional gravel (moist) (fill?)			
									GM	Brown silty fine to coarse gravel (moist) (fill?)	NS	1.3	
	5		30			2 CA			SP	Brown fine to coarse sand with occasional gravel (wet)	NS	2.5	Groundwater observed at approximately 4½ feet during drilling
									GP	Brown fine to coarse gravel with sand (wet)			
	10		60						SP	Brown fine to coarse sand with occasional gravel (wet)	NS		
						3			GP-GM	Brown fine to coarse gravel with silt and sand (wet)	NS	<1	
	15		60										
	20					4 CA					NS	<1	

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-42

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-97
Sheet 1 of 1

Drilled	Start 9/12/2013	End 9/12/2013	Total Depth (ft) 10	Logged By ERH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) / Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude / Longitude	47.51969357290 / -120.48081882600		System Datum	Geographic WGS84	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:						

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		48						ML	Dark brown silt with occasional gravel (moist) (fill?)	NS	1.1	
								GP-GM	Gray fine to coarse gravel with silt and sand (moist) (fill?)	NS	2.5	
								ML	Dark brown silt with occasional sand (moist) (fill?)	NS	1.6	
								GP	Gray fine to coarse gravel with sand (moist) (fill?)			
					1 CA			SP	Reddish-brown fine to coarse sand with occasional gravel (moist) (fill?)	NS	1.2	
5		30			2			ML	Brownish-gray silt with occasional gravel (wet) (fill?)	NS	1.3	Groundwater observed at approximately 5 feet during drilling
								GP-GM	Gray fine to coarse gravel with silt and sand (wet)	NS	1.2	
10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

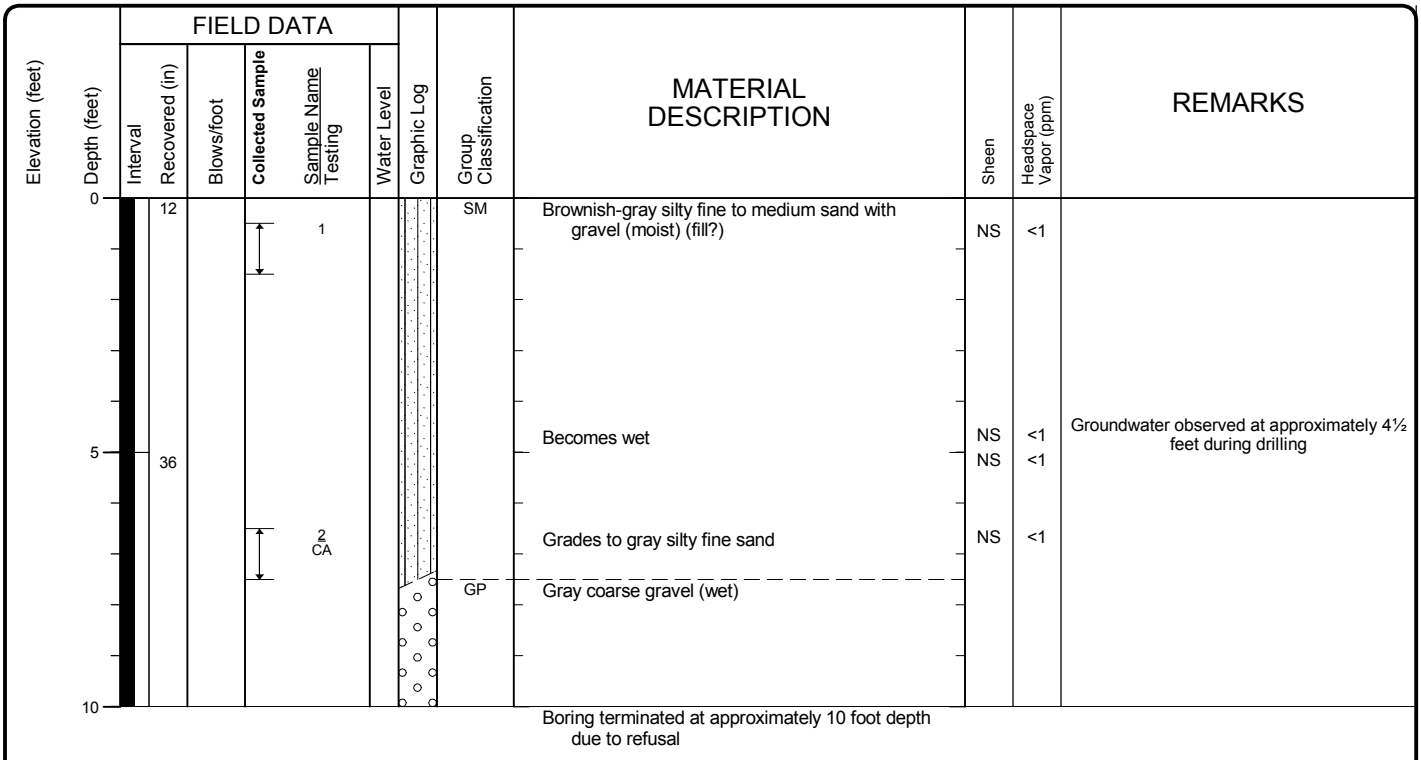
Log of Direct-Push Boring S-DP-50

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-98
Sheet 1 of 1

Drilled	Start 9/14/2013	End 9/14/2013	Total Depth (ft)	10	Logged By / Checked By	RB / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.51941454110 / -120.48034728100				System Datum	Geographic WGS84			Groundwater	Date Measured / Depth to Water (ft) / Elevation (ft)
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-52

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-99
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By / Checked By	KAH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.51926743170 / -120.48018106100		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36						SP-SM	Brown fine to medium sand with silt, gravel and organic matter (moist) (fill)	NS	<1	
											NS		
						1			FILL	Wood waste (fill)			
									SP-SM	Brown fine to medium sand with silt, gravel and organic matter (wood) (moist) (fill)	NS	<1	
	5		48								NS	<1	
						2 CA				Grades to gray fine to medium sand with silt (moist)	NS	<1	
									GP-GM	Brown fine to coarse gravel with silt and sand (wet)	NS	<1	Groundwater observed at approximately 8 feet during drilling
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-53

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-100
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	15	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51897992360 / -120.48047810200	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		18			1			ML	Brown silt with sawdust and occasional gravel (moist) (fill)	NS	<1	
	5		45			2			SP-SM	Fine gray sand with silt (moist) (fill)	NS	<1	
									GP-GM	Gray fine to coarse gravel with silt and sand (moist) (fill)			
										Becomes wet			Groundwater observed at approximately 9 feet during drilling
	10		40			3			SP-SM	Grayish-brown fine sand with silt (wet) (fill)			
									GP-GM	Gray fine to coarse gravel with sand, silt and wood fragments (wet) (fill)	NS	<1	
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-54

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-101
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	9	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51916311940 / -120.48049024900	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1 CA			FILL	Brown sawdust (moist) (fill)	NS	3.8	
									GM	Brown silty fine to coarse gravel (moist) (fill)		4.1	
									FILL	Large wood fragments (moist) (fill)			
											NS		
										Becomes wet			Groundwater observed at approximately 4½ feet during drilling
	5		12			2				Wood fragments and brown fine to coarse gravel with silt and sand (wet)	NS	6.0	
										Boring terminated at approximately 9 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-55

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-102
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	13	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51915973710 / -120.48032798900	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		18			1			FILL	Reddish-brown silt with sawdust and occasional fine gravel (moist) (fill)	NS	<1	
	5		60							Reddish-brown sawdust with occasional fine gravel (moist)			
						2					NS	<1	
	10		36			3 CA			ML	Gray silt with occasional wood waste (moist to wet) (fill)	NS	<1	Groundwater observed at approximately 10½ feet during drilling
									SP	Gray fine to coarse sand (wet)			
									GP-GM	Gray fine to coarse gravel with silt and sand (wet)			
										Boring terminated at approximately 13 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-55A

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-103
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft) 9	Logged By ERH / Checked By DRL	Driller Cascade Drilling	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data		Drilling Equipment	Geoprobe
Latitude / Longitude	47.52065005180 / -120.48113536600		System Datum	Geographic WGS84	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:						

Elevation (feet) / Depth (feet)	FIELD DATA: Interval / Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0	48		1 CA			ML	Light brown silt with occasional gravel (moist) (fill)			
						GM	Gray silty fine to coarse gravel (moist) (fill)	SS	6.8	
						ML	Dark brown silt with sawdust (moist) (fill)			
						ML	Gray silt (moist) (fill?)	NS	4.5	
5	30		2			SM	Gray silty fine sand (moist) (fill?)	NS	2.5	
						GM	Gray silty fine to coarse gravel (moist)			Groundwater observed at approximately 6½ feet during drilling
						GP-GM	Gray fine to coarse gravel with silt and sand (wet)	NS	2.0	
							Boring terminated at approximately 9 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-63

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-104
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By	RB	Checked By	DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe		
Latitude	47.52031275630				System Datum	Geographic			Groundwater			
Longitude	-120.48113938000					WGS84			Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:												

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		55						SM	Brown silty fine to medium sand (moist) (fill)	NS	2	
									GM	Gray silty gravel with sand (moist) (fill)	NS	<1	
									FILL	Black wood fragments with gravel and sand (moist) (fill)	NS	1.8	Faint cedar odor
									SM	Gray silty fine to medium sand with gravel (moist) (fill?)	NS	4	
	5		33			1 CA							
						2							
									GM	Gray silty medium to coarse gravel (moist) Becomes wet	NS	2.4	Groundwater observed at approximately 8 feet during drilling
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

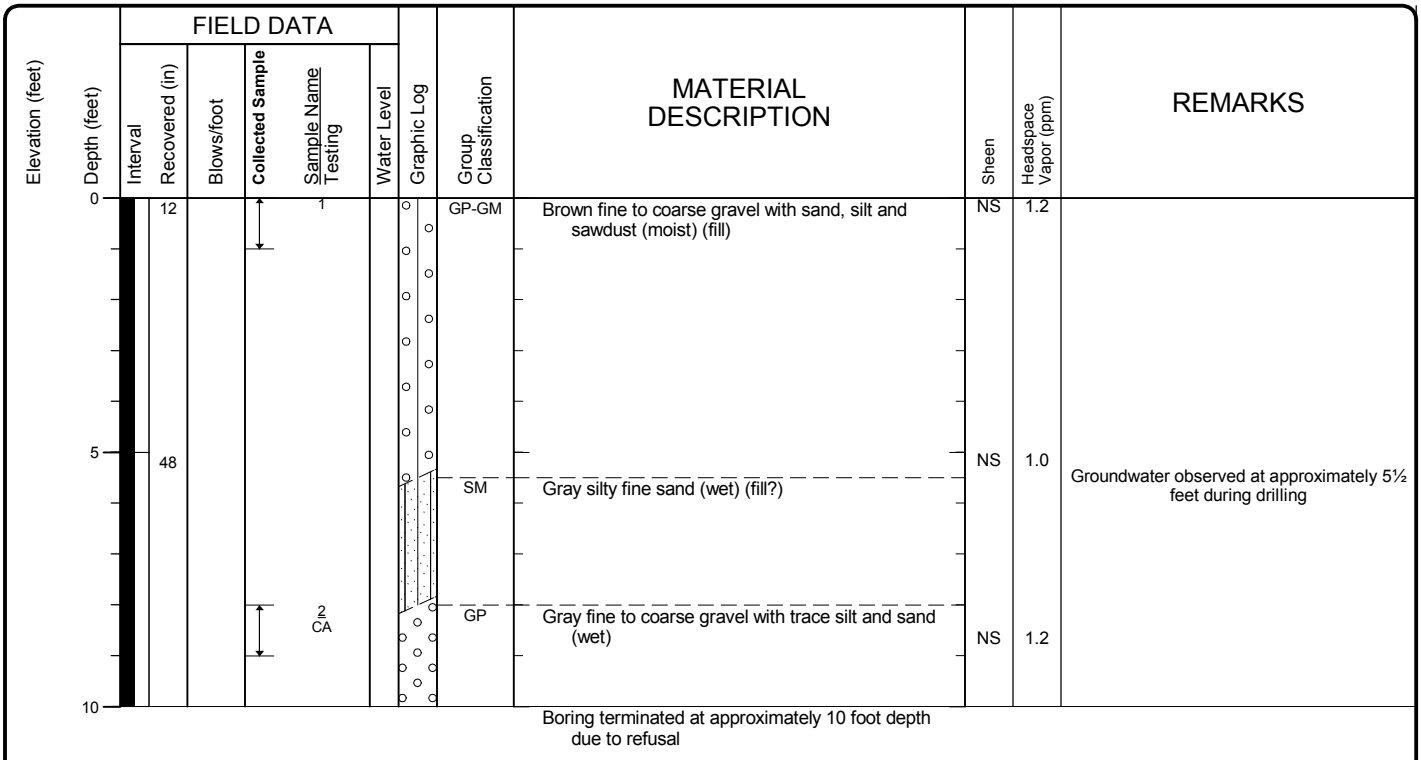
Log of Direct-Push Boring S-DP-65

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-105
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By	KAH	Checked By	DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe		
Latitude	47.51927301890				System Datum	Geographic			Groundwater			
Longitude	-120.48102716800					WGS84			Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:												



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-68

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-106
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	15	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51883854910 / -120.48093293800	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1			ML	Brown silt with wood and occasional gravel (moist) (fill)			
											NS	1.2	
									FILL	Wood fragments with trace silt (moist) (fill)			
	5		48							Brown sawdust with occasional gravel (moist)			
										Becomes dark brown sawdust with silt (moist)	NS	1.9	
						2							
	10		48										
						3 CA			SP	Gray fine to medium sand with trace silt (moist) Becomes wet	NS	2.1	Groundwater observed at approximately 12½ feet during drilling
									GP	Brown fine to coarse gravel with sand and trace silt (wet)			
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-70

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-107
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	9/13/2013	9/13/2013	10	ERH	DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51953557490 / -120.48131185200	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48						GM	Brown silty fine to coarse gravel (moist) (fill)	NS	<1	
									FILL	Reddish-brown sawdust with silt (moist) (fill)			
									GP-GM	Light brown fine to coarse gravel with silt and sand (moist) (fill?)	NS	1.0	
									ML	Grayish-brown silt (moist) (fill?)			
						1					NS	1.2	
	5		60								NS		
						2 CA							
									GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	1.8	
						3				Becomes wet	NS	2.2	Groundwater observed between approximately 8½ to 9 feet during drilling
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

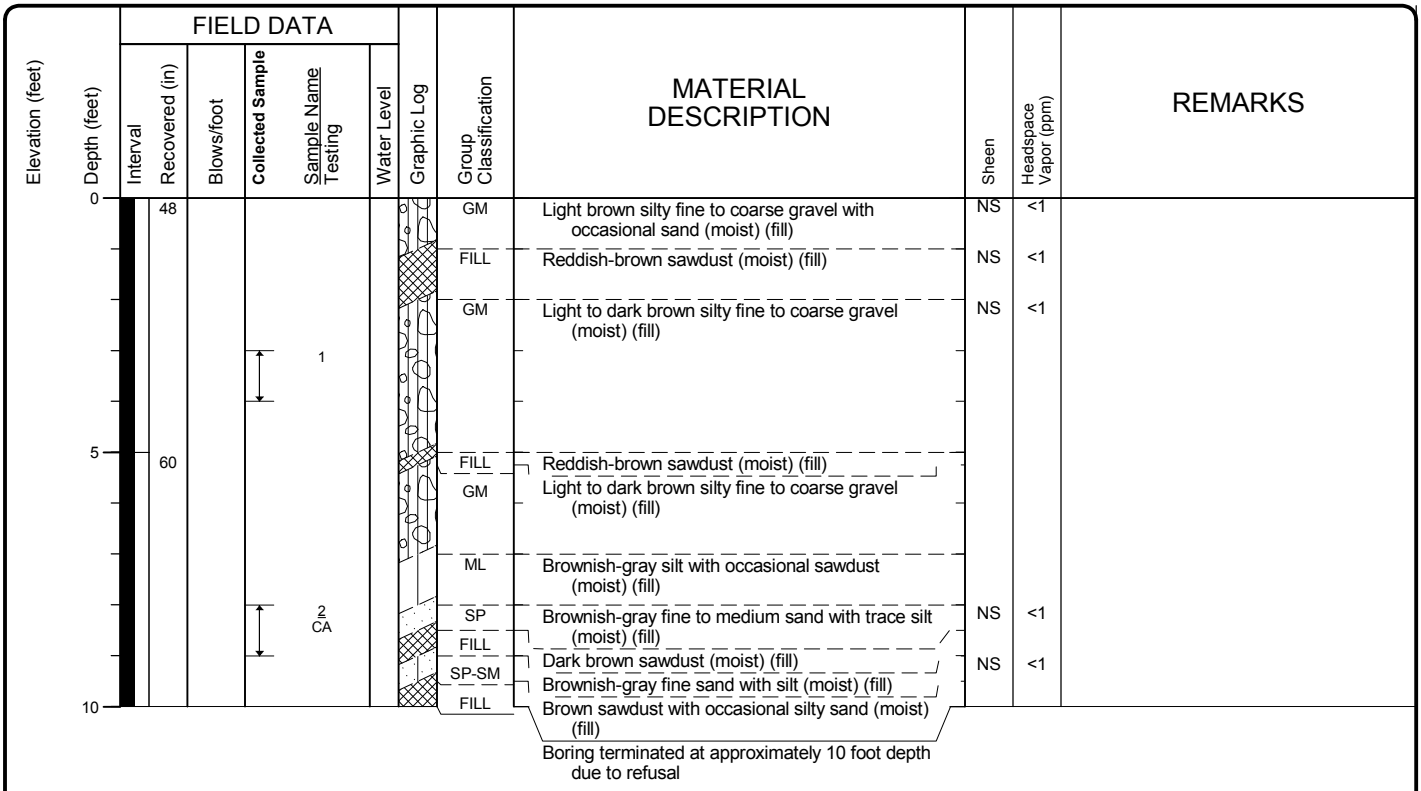
Log of Direct-Push Boring S-DP-72

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-108
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.51983356220 / -120.48132389200				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-73

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-109
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	6	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52038218110 / -120.48142558200	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48			1			ML	Light brown silt (moist) (fill?)	NS	<1	
									GP-GM	Gray fine to coarse gravel with silt and sand (moist)	NS	<1	
	5					2					NS	<1	
										Boring terminated at approximately 6 foot depth due to refusal Refusal at 5 and 6 foot depths on subsequent attempts			

Notes: See Figure A-1 for explanation of symbols.

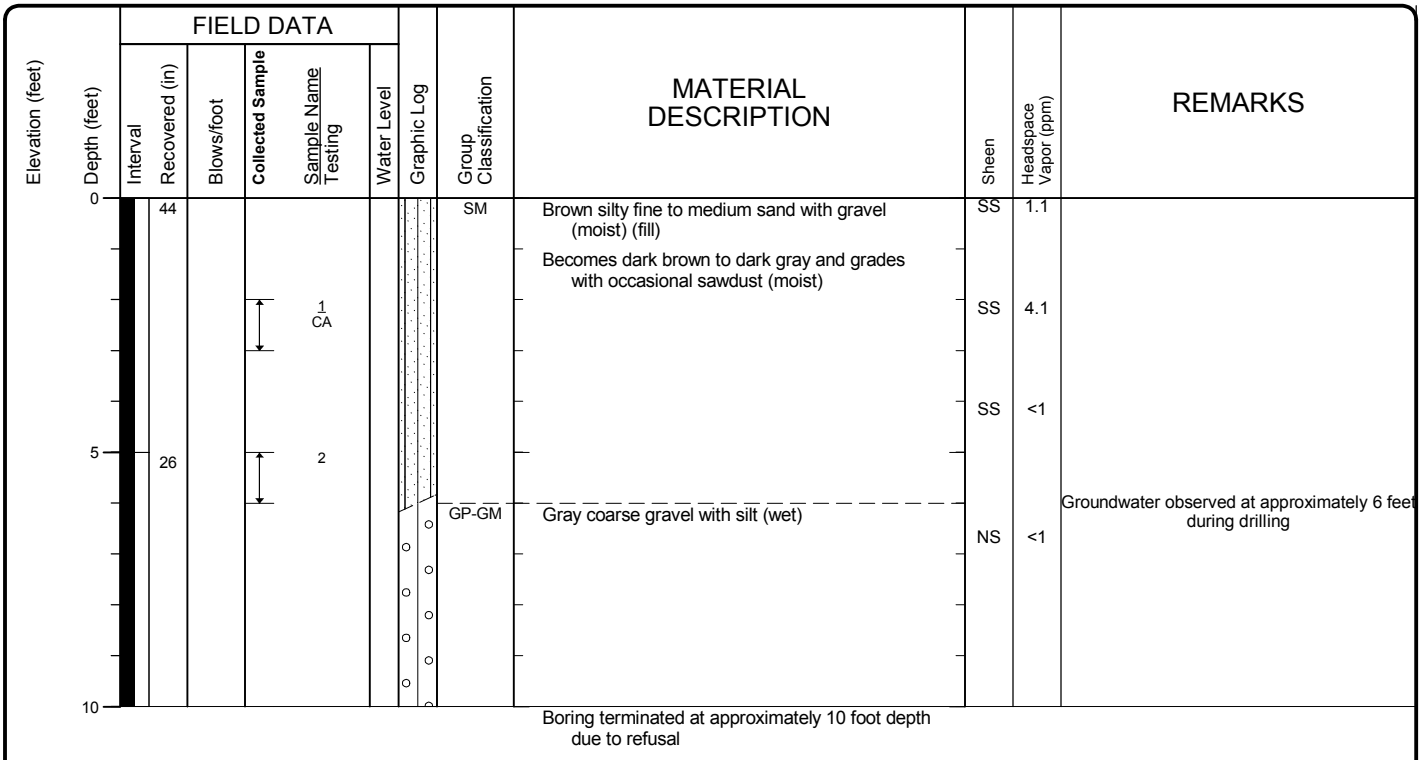
Log of Direct-Push Boring S-DP-75

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-110
Sheet 1 of 1

Drilled	Start 9/14/2013	End 9/14/2013	Total Depth (ft)	10	Logged By / Checked By	RB / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.52031085480 / -120.48132915700				System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft) / Elevation (ft)
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-75A

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-111
Sheet 1 of 1

Drilled	Start 9/14/2013	End 9/14/2013	Total Depth (ft)	10	Logged By / Checked By	RB / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52068005670 / -120.48141870400		System Datum	Geographic WGS84			Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36						SM	Brown silty fine to medium sand with occasional gravel (moist) (fill)	NS	<1	
									GP	Gray coarse gravel (moist) (fill)	NS	<1	
						1			SM	Dark gray silty fine to medium sand with occasional gravel (moist) (fill)	SS	<1	
	5		32			2 CA			SM	Gray silty fine to medium sand with silt lenses and wood fragments (moist) (fill)	NS	<1	Groundwater observed at approximately 6 feet during drilling
									GP	Gray coarse gravel with sand (wet)	NS	<1	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-76

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-112
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	10	RB / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52066149140 / -120.48186213300	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		46			1 CA			SM	Brown silty fine to medium sand with occasional gravel and sawdust (moist) (fill)	NS	11.0	
									GP	Gray medium to coarse gravel (moist) (fill)	NS	1.9	
									SM	Dark gray silty fine sand with sawdust (moist) (fill)	NS	2	
	5		24			2			GM	Gray silty fine to coarse gravel with sand (wet)	NS	3	Groundwater observed at approximately 5½ feet during drilling
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

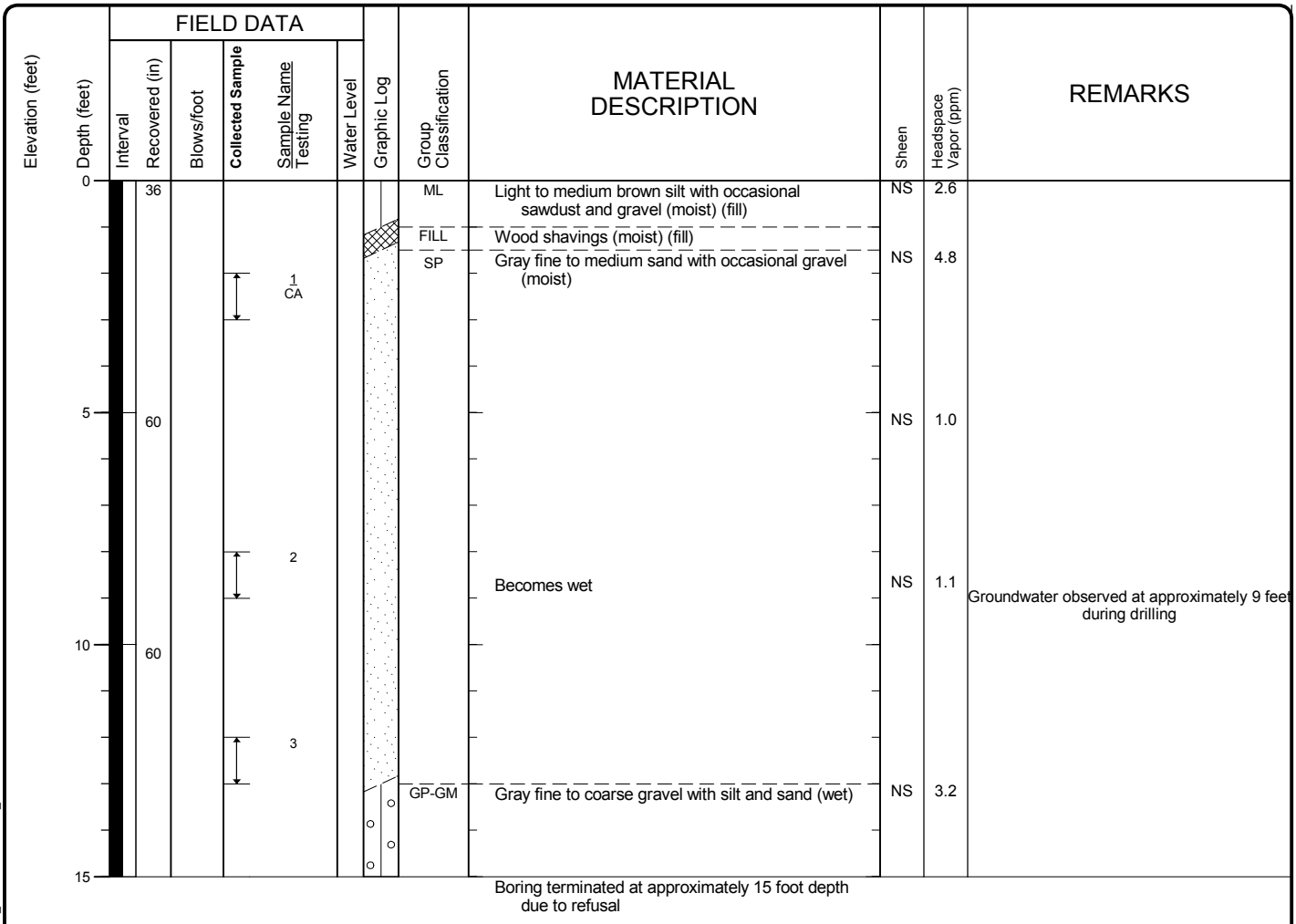
Log of Direct-Push Boring S-DP-78

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-113
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	15	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.52011406890 / -120.48183912500		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-80

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-114
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	10	RB / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) / Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51973939400 / -120.48162716600	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30						SM	Brown silty fine to medium sand (moist) (fill)	NS	<1	
						1 CA				Becomes gray and grades with occasional sawdust (moist)	SS	11	
	5		60							Grades to gray silty fine to medium sand (moist)	SS	1.4	
										Becomes wet			Groundwater observed at approximately 7 feet during drilling
											NS	<1	
									GP	Gray coarse gravel with sand (wet)	NS	<1	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

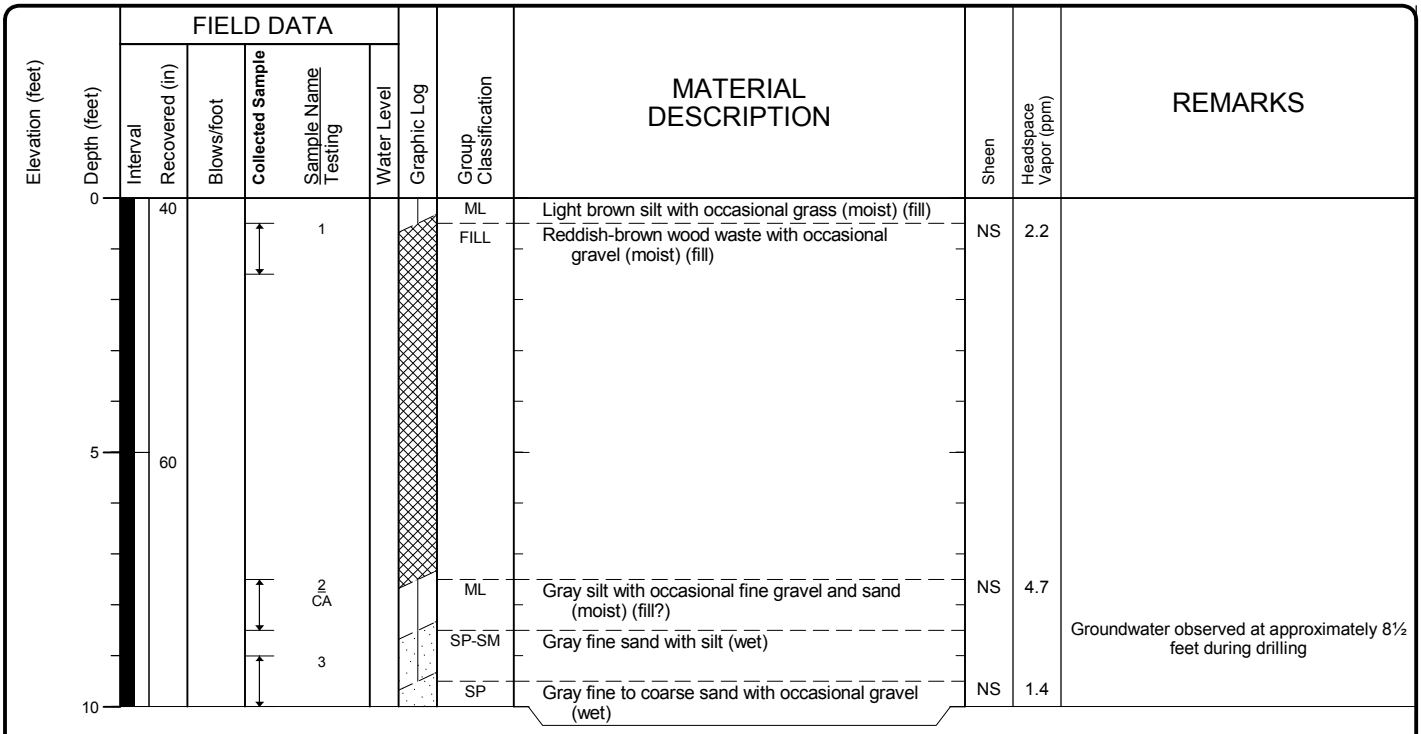
Log of Direct-Push Boring S-DP-81

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-115
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.51939116750 / -120.48194132800		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-82

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

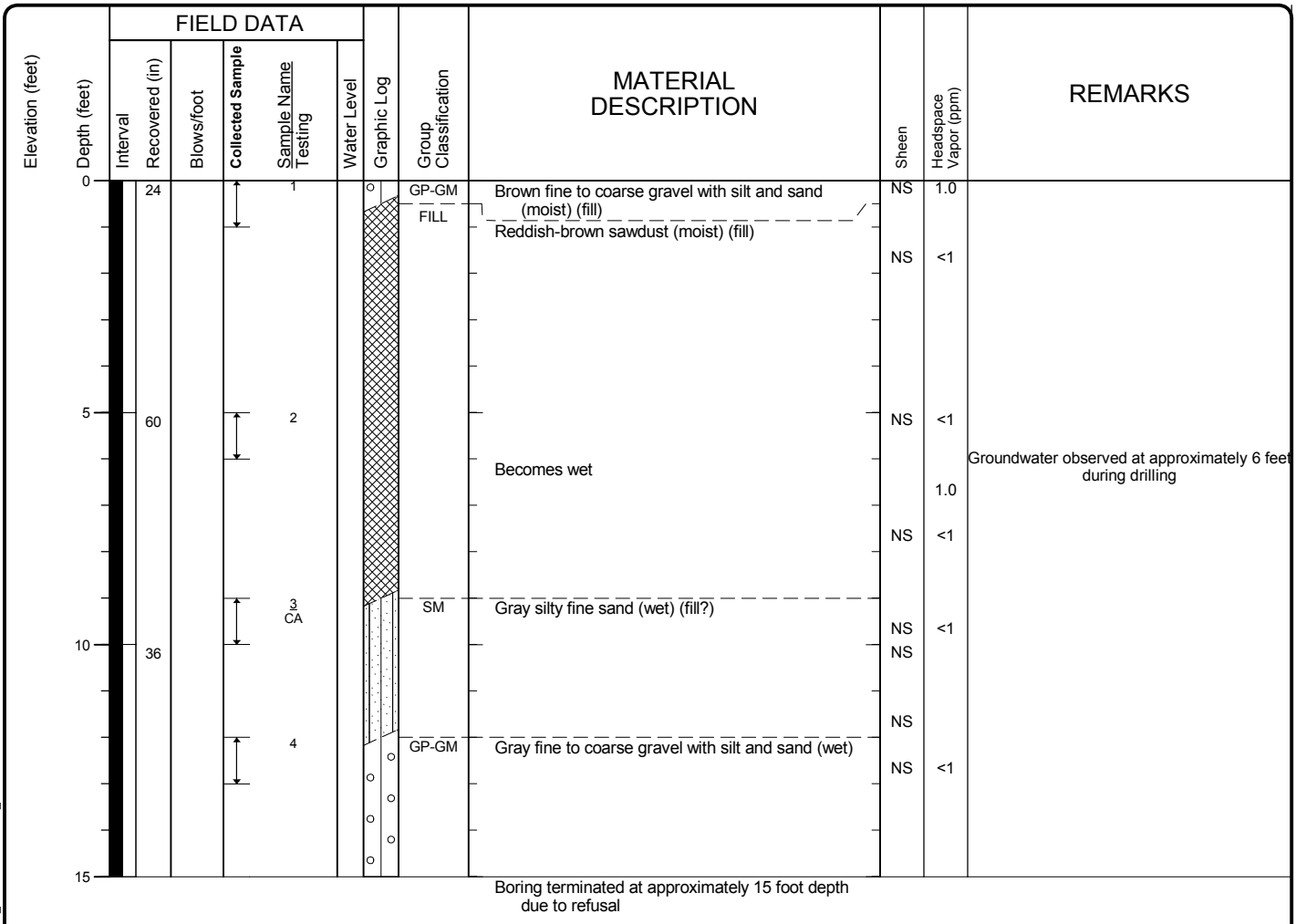
Figure A-116
Sheet 1 of 1

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	9/13/2013	9/13/2013	15	KAH	DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51898862190 / -120.48174835000	Geographic WGS84			

Notes:



Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-83

GeoEngineers

Project:	Former Cashmere Mill Site, Data Gap Assessment
Project Location:	Cashmere, Washington
Project Number:	18593-001-02

Figure A-117
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	15	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51923572410 / -120.48223569600	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		40			1			ML	Light brown silt with roots (moist) (fill)	NS	2.8	
									FILL	Dark brown wood fragments with trace silt (moist) (fill)			
	5		40										
						2 CA			SP	Gray fine to coarse sand with trace silt (moist)			
											NS	2.0	
									GP-GM	Grayish-brown fine to coarse gravel with silt and sand (moist)			
										Becomes wet			Groundwater observed at approximately 9 feet during drilling
	10		30			3 CA				Becomes brown			
											NS	0.0	
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-84

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-118
Sheet 1 of 1

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By / Checked By	ERH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined		Hammer Data				Drilling Equipment	Geoprobe		
Latitude / Longitude	47.51983606730 / -120.48213328700		System Datum	Geographic WGS84			Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		24			1			ML	Reddish-brown silt with occasional grass (moist) (fill)	NS	5.4	
									FILL	Becomes dark brown with occasional gravel and sand			
										Reddish-brown wood fragments (moist) (fill)			
	5		48						ML	Dark brown silt with occasional sawdust (moist) (fill)	NS	3.4	
									GP-GM	Gray fine to coarse gravel with silt and sand (moist) (fill?)			
						2 CA			ML	Brownish-gray silt (moist) (fill?)	NS	2.8	Groundwater observed at approximately 8 feet during drilling
										Becomes wet			
									GP-GM	Gray fine to coarse gravel with silt and sand (wet)			
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-85

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-119
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	6.5	KAH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52038020790 / -120.48232635400	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		54						GP-GM	Brown fine to coarse gravel with silt and sand (moist)	NS	1.5	
										Becomes gray	NS	1.3	
										Becomes yellow			
										Becomes gray	NS		
						1 CA					NS	1.3	
	5		6			2				Becomes wet	SS	2.0	Groundwater observed at approximately 5 foot depth
										Boring terminated at approximately 6½ foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-86

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-120
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	8	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52067726000 / -120.48234402800	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30			1			ML	Reddish-brown silt with occasional fine gravel and grass (moist) (fill?)	NS	<1	Groundwater observed at approximately 1½ feet during drilling
									GP-GM	Brown to gray fine to coarse gravel with silt and sand (moist)	NS	<1	
									SP-SM	Gray fine to medium sand with silt (wet) (fill?)	NS	<1	
	5		24			2 CA					NS	<1	
									GP-GM	Brown fine to coarse gravel with silt and sand (wet)			
										Boring terminated at approximately 8 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-87

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-121
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	10	RB / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52092478950 / -120.48235360400	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36						SM	Brown silty fine to medium sand with occasional gravel (moist) (fill)	NS	<1	
										Grades to dark gray and black silty fine to medium sand with charred wood fragments (moist) (fill)	NS	<1	
	5		36			1 CA					SS	<1	
						2			SP	Gray fine to medium sand with occasional gravel (moist)	SS	<1	
										Becomes wet			Groundwater observed at approximately 8½ feet during drilling
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-88

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-122
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	10	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52065560430 / -120.48272921300	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		24			1			ML	Reddish-brown silt with occasional sawdust and gravel (moist) (fill)	NS	<1	
	5		36			2 CA			SP	Gray fine to medium sand (moist)	NS	<1	Groundwater observed at approximately 5½ feet during drilling
									SP-SM	Gray fine to medium sand with silt and occasional gravel (wet)			
									GP-GM	Gray fine to coarse gravel with silt and sand (wet)			
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-93

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-123
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	10	RB / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52038145760 / -120.48273105600	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		43						SM	Brown silty fine to medium sand with occasional gravel and sawdust (moist) (fill)	NS	<1	
						1				Becomes dark gray and grades with occasional wood fragments (moist)	NS	<1	
	5		40			2 CA				Grades to gray silty fine to medium sand (wet)	SS	<1	Groundwater observed at approximately 6 feet during drilling
											NS	<1	
									GP	Gray coarse gravel with sand (wet)	NS	<1	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-94

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-124
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	10	RB / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52010731100 / -120.48273290000	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		60						SM	Brown silty fine to medium sand with occasional gravel (moist) (fill)	NS	1.1	
								FILL	Brown sawdust and wood fragments (less than or equal to 10 mm) (moist) (fill)	NS	1.9	
					1 CA			SM	Dark gray to gray silty fine to medium sand with wood fragments (moist) (fill)	NS	14	
									Grades with occasional gravel (moist)	SS	1.4	
5		36						FILL	Brown sawdust and wood fragments (less than or equal to 20 mm) (moist) (fill)	NS	1.1	
								SM	Brown silty fine to medium sand (moist) (fill?)	NS	<1	
					2				Becomes gray	NS	<1	
								ML	Dark brown silt with sand (moist) (fill?)	NS	<1	
								SM	Gray silty fine to medium sand with occasional gravel (moist) (fill)	NS	<1	
10												

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-95

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-125

Drilled	Start 9/13/2013	End 9/13/2013	Total Depth (ft)	10	Logged By / Checked By	KAH / DRL	Driller	Cascade Drilling	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe
Latitude / Longitude	47.51983731680 / -120.48253798400				System Datum	Geographic WGS84			Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30						GP-GM	Brown fine to coarse gravel with silt and sand (moist) (fill)	NS	1.5	
									FILL				
									GP-GM	Brown sawdust with silt and sand (moist) (fill)	NS		
						1				Gray fine to coarse gravel with silt and sand (moist) (fill?)	NS	1.9	
	5		36							Becomes wet	NS	1.7	Groundwater observed at approximately 5 feet during drilling
									SM	Gray silty fine to medium sand (wet) (fill?)			
						2 CA					NS		
											NS	1.6	
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-96

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-126
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	15	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51954426300 / -120.48258211200	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		40						ML	Light brown silt with grass (moist) (fill)	NS		
									ML	Brown silt with sawdust (moist) (fill)			
						1 CA			GP-GM	Gray fine to coarse gravel with silt (moist) (fill)	NS	20.6	
									FILL	Dark brown wood fragments (moist) (fill)			
	5		60								NS	5.5	
						2 CA			ML	Gray silt (moist) (fill?)			
									SP	Gray fine to medium sand (moist)			
	10		60							Becomes wet	NS	3.0	Groundwater observed at approximately 10 feet during drilling
											NS	27	
						3					NS	2.4	
									GP-GM	Gray fine to coarse gravel with silt and sand (wet)			
	15									Boring terminated at approximately 15 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-97

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-127
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/13/2013	9/13/2013	6	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.51982928630 / -120.48302003100	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48			1 CA			ML	Light brown silt with occasional grass (moist) (fill)	SS	<1	
									SP	Gray fine to medium sand with occasional silt (moist) (fill)	SS	<1	
									FILL	Brown wood fragments and sawdust (moist) (fill)	MS	<1	
	5		12			2			GP-GM	Fine to coarse gravel with silt and sand (moist)	NS	<1	
										Boring terminated at approximately 6 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-98

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-128
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	10	ERH / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52010393030 / -120.48317978800	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48						ML	Light brown silt with occasional sand and grass (moist) (fill)	NS	3.8	
									GP-GM	Light brown to white gravel with silt and sand (moist) (fill)	NS		
									ML		NS	3.4	
									ML	Dark brown silt with brown to red wood fragments (moist) (fill)	NS		
						1 CA			FILL	Gray silt with occasional fine to coarse sand (moist) (fill)			
										Brownish-red sawdust and wood fragments (moist) (fill)			
	5		48							Reddish-brown wood fragments (moist)	NS	2.7	
									ML	Gray silt (moist) (fill?)	NS	2.4	
						2			GP	Gray fine to coarse gravel with sand (wet)			Groundwater observed at approximately 9 feet during drilling
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-99

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-129
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	10	RB / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52034654460 / -120.48314425200	Geographic WGS84			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		18			1			SM	Brown silty fine to medium sand with occasional cobbles (moist) (fill)	NS	<1	
	5		60			2 CA				Grades with occasional wood fragments (moist)	SS	<1	
										Grades to silty fine to medium sand (moist)	NS	<1	
										Becomes wet Cobbles encountered	NS	<1	Groundwater observed at approximately 8 feet during drilling
	10									Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-100

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-130
Sheet 1 of 1

Drilled Start	End	Total Depth (ft)	Logged By / Checked By	Driller	Drilling Method
9/14/2013	9/14/2013	10	RB / DRL	Cascade Drilling	Direct-Push

Surface Elevation (ft) / Vertical Datum	Hammer Data	Drilling Equipment
Undetermined		Geoprobe

Latitude / Longitude	System Datum	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)
47.52093032260 / -120.48304796800	Geographic WGS84			

Notes:

Elevation (feet) / Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0		36					SM	Brown silty fine to medium sand (moist) (fill)	NS	<1	
								Becomes dark brown and grades with wood fragments (moist)	SS	<1	
				1 CA							
5		36									
				2					NS	<1	
							SP	Gray fine to medium sand (wet)			Groundwater observed at approximately 7½ feet during drilling
							GP	Gray coarse gravel (wet)			
10									NS	<1	
								Boring terminated at approximately 10 foot depth due to refusal			

Notes: See Figure A-1 for explanation of symbols.

Log of Direct-Push Boring S-DP-101

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-131
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 6.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SP-SM		Light brown fine to coarse sand with silt (moist) (fill)			
1								
2			GM		Dark brown silty fine to coarse gravel with trace roots (moist) (fill)			
3			GP		Tan to orange fine to coarse gravel with sand and trace silt (moist) (fill)			
4								
5			GM		Gray silty fine to coarse gravel and cobbles (moist) (fill)			
6	NDP8-TP1(6) CA		Fill		Dark brown wood pieces	MS	150	

Test pit completed at approximate 6½ foot depth
Moderate groundwater seepage observed at approximate 6½ foot depth
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit NDP8-TP1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-132
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 6.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GP		Pea gravel (fill)			
			GM		Brown silty fine to coarse gravel with sand (moist) (fill)			
1								
2								
3								
4			Fill		Dark brown woody waste (roots and wood shavings) (moist) (fill)			
			GM		Blue-gray silty fine to coarse gravel with sand (moist) (fill?)			
5	NDP8-TP2(6) CA					SS	<1	
6					Test pit completed at approximate 6 foot depth No groundwater seepage observed Minor caving observed at approximate 5 foot depth			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit NDP8-TP2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-133

Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 7.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					GP		Pea gravel (fill)			
					GM		Brown silty fine to coarse sand with occasional gravel and cobbles (moist) (fill)			
	1									
	2									
	3									
	4				Fill		Dark brown wood chips and roots (moist) (fill)			
	5									
			NDP8-TP3(6) CA					SS	134	Strong petroleum odor
	6									Groundwater observed at 6.5 feet
	7						Test pit completed at approximate 7 foot depth Slight groundwater seepage observed at approximate 6½ foot depth No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit NDP8-TP3

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-134

Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 5.5

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					SP-SM		Light brown fine to coarse sand with silt and occasional fine to coarse gravel (moist) (fill)			
	1									
	2									
	3									
	4				Fill		Dark brown to brown wood with roots, limbs and silt (fill)			
	5	X	NDP8-TP4(5.5) CA		ML		Abandoned pipe encountered at 5 foot depth Blue-gray silt (moist)	NS	27.2	
							Test pit completed at approximate 5½ foot depth No groundwater seepage observed Moderate caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit NDP8-TP4

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-135

Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 6.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SP-SM		Light brown fine to coarse sand with silt (moist) (fill)			
1			GM		Dark brown silty fine to coarse gravel with cobbles (moist) (fill)			
2								
3			Fill		Dark brown roots and wood shavings (moist) (fill)			
			GM		Grayish brown silty fine to coarse gravel with cobbles (moist)			
4								
5								
6	NDP8-TP3(6.5) CA					SS	87.6	

Test pit completed at approximate 6½ foot depth
No groundwater seepage observed
Minor caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit NDP8-TP5

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-136
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 2.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GP-GM		Brown fine to coarse gravel with silt (moist) (fill)			
1								
2	SDP14-TP1(2) CA				Occasional lenses of gray fine to coarse sand with occasional gravel and wood waste	SS	6.0	
					Test pit completed at approximate 2 foot depth No groundwater seepage observed No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP14-TP1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-137

Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 2.5

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
	1				GP-GM		Brown fine to coarse gravel with silt (moist) (fill)			
	2		SDP14-TP1(2) CA					NS	2.5	

Test pit completed at approximate 2½ foot depth
No groundwater seepage
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP14-TP2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-138
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 2.5

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					ML		Brown silt with occasional gravel and cobbles and trace sand and organic matter (bark and roots) (moist) (fill)			
	1				GP		Brown fine to coarse gravel with cobbles and trace sand and silt (moist) (fill)			
	2	X	SDP75A-TP1(2.5) CA		ML		Brown silt with occasional gravel (moist) (fill?)	MS	17.5	

Test pit completed at approximate 2½ foot depth
No groundwater seepage observed
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP75A-TP1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-139
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GP-GM		Brown fine to coarse gravel with silt and cobbles (moist) (fill)			
1								
2								
3	SDP75A-TP1a(3) CA		SM		Dark brown silty fine to coarse sand with wood chips and shavings (moist) (fill)	SS	64.2	

Test pit completed at approximate 3 foot depth
No groundwater seepage observed
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP75A-TP1a

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-140
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 2.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
			ML		Brown silt with sand and roots and occasional gravel (moist) (fill)			
			SP-SM		Tan fine to coarse sand with silt and occasional gravel (moist)			
1			GP-GM		Brown fine to coarse gravel with silt and trace sand (moist)			
	SDP75A-TP1b(2) CA					NS	90.8	
2			GP		Dark brown fine to coarse gravel and cobbles with sand and trace silt (moist)			
					Test pit completed at approximate 2½ foot depth No groundwater seepage No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP75A-TP1b

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-141

Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
			ML		Light brown silt with occasional gravel (moist) (fill)			
1			GP-GM		Light brown fine to coarse gravel with cobbles and boulders, silt and trace wood (moist) (fill)			
2			GP		Light brown to dark brown fine to coarse gravel with sand, trace silt and wood waste (roots, shavings) (moist) (fill)			
3	SDP75A-TP2(3) CA					MS	66	

Test pit completed at approximate 3 foot depth
No groundwater seepage observed
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP75A-TP2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GM		Brown silty fine to coarse gravel with roots (moist) (fill)			
1								
	SDP75A-TP2a(2) CA					MS	170	
2			SM		Dark brown silty fine to coarse sand with occasional gravel and wood waste (moist) (fill)			
			GP		Gray fine to coarse gravel and cobbles with sand and trace silt (moist)			
3								

Test pit completed at approximate 3 foot depth
No groundwater seepage observed
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP75A-TP2a

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-143
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 2.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
1			ML		Brown silt with occasional gravel and roots (moist)			
2	SDP75A-TP3(2.5) CA		GP		Brown fine to coarse gravel and cobbles with trace sand and silt (moist)	MS	106	
			GP-GM		Brown fine to coarse gravel with silt (moist)			

Test pit completed at approximate 2½ foot depth
No groundwater seepage observed
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP75A-TP3

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-144
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GP-GM		Dark brown fine to coarse gravel and cobbles with sand and silt (moist)			
1								
2	SDP75A-TP3a(2.5) CA					NS	39.0	
3								

Test pit completed at approximate 3 foot depth
No groundwater seepage observed
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP75A-TP3a

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-145
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 2.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
1			ML		Brown silt with gravel, cobbles and trace sand (moist)			
2	SDP75A-TP4(2) CA		Cobbles		Cobbles with trace sand and silt	NS	137.8	

Test pit completed at approximate 2 foot depth
No groundwater seepage observed
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP75A-TP4

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-146
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
			GP-GM		Light brown fine to coarse gravel with silt and sand (moist) (fill)			
1			GP		Light brown fine to coarse gravel and cobbles with sand and silt and trace wood waste (moist) (fill)			
2					Becomes gray			
	SDP75A-TP5(3) CA					SS	89.5	
3					Test pit completed at approximate 3 foot depth No groundwater seepage observed No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP75A-TP5

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-147

Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GM		Brown fine to coarse silty gravel with wood waste (moist) (fill)			
1								
	SDP81-TP1(2) CA				Becomes gray	SS	5.0	
2								
			Fill		Dark reddish-brown wood shavings (moist)			
3								

Test pit completed at approximate 3 foot depth
No groundwater seepage observed
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP81-TP1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-148
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
			SM		Brown silty fine to coarse sand with occasional gravel and roots (moist) (fill)			
1			ML		Dark brown silt with occasional gravel, cobbles and boulders (moist) (fill?)			
2	SDP81-TP2(2) CA					SS	7.7	
3					Test pit completed at approximate 3 foot depth No groundwater seepage observed No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP81-TP2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-149

Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			ML		Light brown silt with occasional gravel (moist) (fill)			
1								
2	SDP81-TP3(2) CA		Fill		Reddish-brown wood shavings (moist)	NS	43.0	
					Becomes dark brown			
3					Test pit completed at approximate 3 foot depth No groundwater seepage observed No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP81-TP3

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GM		Light brown silty fine to coarse gravel with cobbles (moist) (fill)			
1								
	SDP81-TP4(2) CA					NS	8.9	
2								
			Fill		Dark brown to black wood shavings with silt (moist)			
3								

Test pit completed at approximate 3 foot depth
No groundwater seepage observed
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP81-TP4

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-151
Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 5.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GM		Light brown silty fine to coarse gravel with roots (moist) (fill)			
1								
2								
3	SDP88-TP1(3.5) CA		GP-GM		Dark brown fine to coarse gravel with silt and sand (moist) (fill)	NS	6.8	
4			Fill		Dark brown wood waste with silt (moist) (fill)			
5					Test pit completed at approximate 5 foot depth Moderate groundwater seepage observed at approximately 5 foot depth No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP88-TP1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 4.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GM		Light brown silty fine to coarse gravel with roots (moist) (fill)			
1								
2								
2.5	SDP88-TP2(3) CA		Fill		Dark brown wood waste with silt (moist) (fill)	NS	4.2	
3								
4					Test pit completed at approximate 4 foot depth Moderate groundwater seepage observed at approximately 4 foot depth No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP88-TP2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 4.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GP-GM		Light brown fine to coarse gravel and cobbles with silt (moist) (fill)			
1								
2					Becomes dark brown and grades with wood chips and shavings			
3								
3			SP		Gray fine to coarse sand (moist)			
4	SDP88-TP3(4) CA					NS	4.3	

Test pit completed at approximate 4 foot depth
Slight groundwater seepage observed at approximately 4 foot depth
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP88-TP3

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 4.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			GM		Light brown silty fine to coarse gravel with cobbles and trace wood shavings (moist) (fill)			
1								
2					Becomes dark brown with increased wood waste content			
3	SDP88-TP4(3) CA					NS	13.0	
4					Test pit completed at approximate 4 foot depth No groundwater seepage observed No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP88-TP4

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
			ML		Dark brown silt with occasional gravel, cobbles and roots (moist) (fill?)			
1			SP-SM		Gray fine to medium sand with silt and occasional gravel (moist)			
2			SP		Gray fine to coarse sand with occasional gravel and trace silt (moist)			
3	SDP101-TP1(3) CA		GP		Gray fine to coarse gravel with sand and trace silt (moist)	NS	7.1	
					Test pit completed at approximate 3½ foot depth No groundwater seepage observed No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP101-TP1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-156

Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			ML		Brown silt with occasional fine to coarse gravel (moist)			
1			SP		Gray fine to medium sand with trace silt (moist)			
2			GP		Gray fine to coarse gravel with cobbles and sand (moist)			
3	SDP101-TP2(3.5) CA					SS	3.3	

Test pit completed at approximate 3½ foot depth
Slight groundwater seepage observed at approximately 3½ foot depth
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP101-TP2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 4.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			ML		Dark brown silt with occasional gravel (moist)			
1								
2			SP		Gray fine to medium sand with trace silt and occasional gravel (moist)			
3	SDP101-TP3(3) CA					NS	3.0	
			GP		Gray fine to coarse gravel and cobbles with sand and trace silt (wet)			
4								

Test pit completed at approximate 4 foot depth
Rapid groundwater seepage observed at approximately 3 foot depth
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP101-TP3

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 11/12/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 4.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			ML		Dark brown silt with occasional roots (moist) (fill?)			
1								
2								
2.5	SDP101-TP4(3) CA					SS	10.0	
3			GP		Brown to gray fine to coarse gravel with sand, cobbles and boulders and trace silt (moist to wet)			
4					Test pit completed at approximate 4 foot depth Moderate groundwater seepage observed at approximately 3 foot depth No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP101-TP4

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 11/13/2013 Logged By: ERH

Equipment: 340D Mini Excavator Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SM		Dark brown silty fine to coarse sand with occasional gravel (moist) (fill?)			
1			SP-SM		Gray fine to medium sand with silt and occasional roots (moist)			
2	SDP101-TP5(2.5) CA					NS	63.0	
3					Test pit completed at approximate 3 foot depth Moderate groundwater seepage observed at approximately 3 foot depth No caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP101-TP5

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-160

Sheet 1 of 1

Date Excavated: 12/20/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 6.3

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
			ML		Light brown silt with gravel and cobbles (dry) (fill)			
1	TP-B1 (1-2) CA					NS	<1	
2								
3			Fill		Black bark and wood waste with cobbles (moist) (fill)			
4	TP-B1 (4-5) CA					SS	<1	Slight petroleum odor
5			SM		Gray silty fine sand (moist to wet)			
6								

Test pit completed at approximately 6¼ foot depth
Slight groundwater seepage observed at approximately 5½ foot depth
Minor caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B1

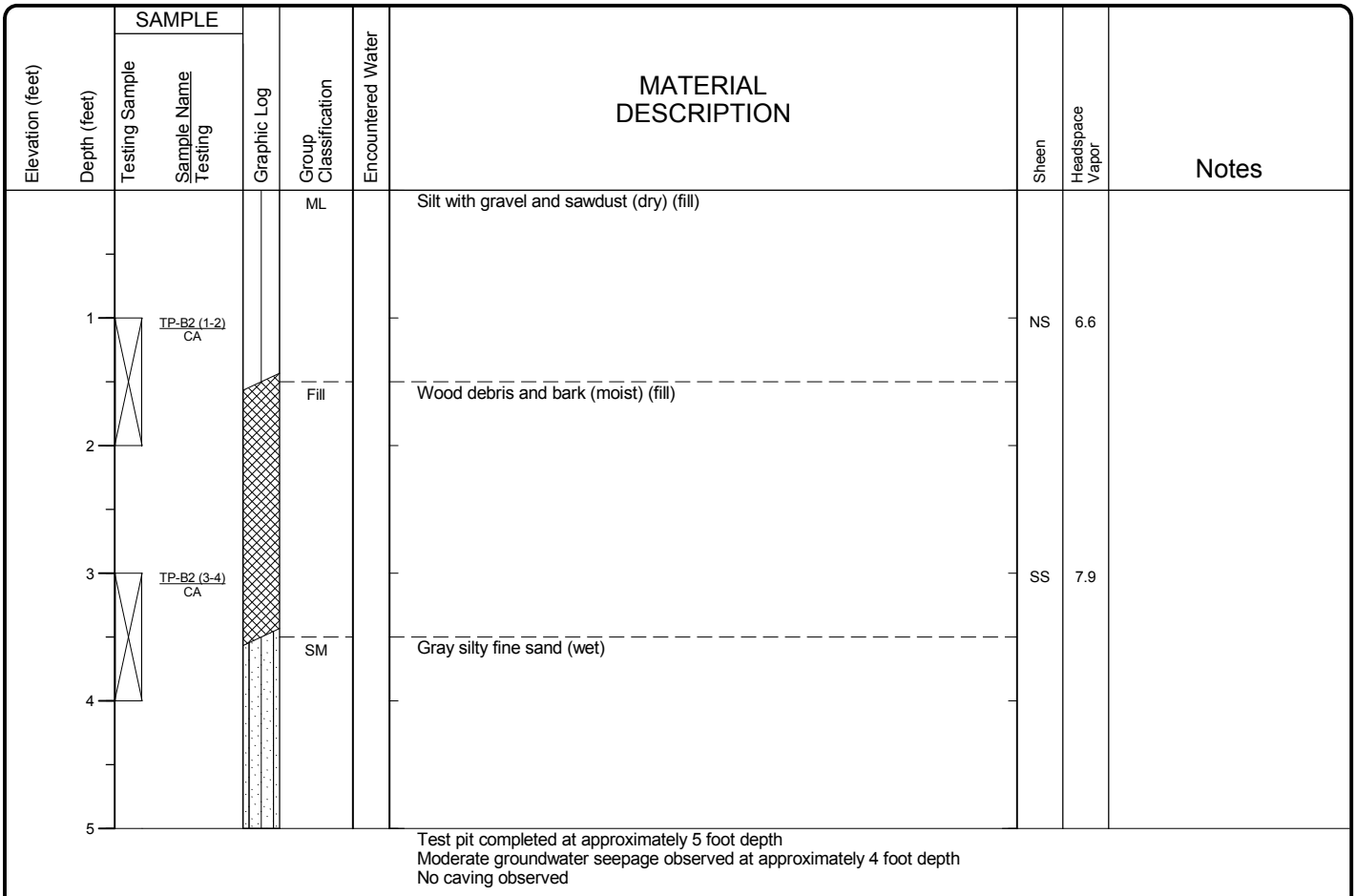
GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-161
Sheet 1 of 1

Date Excavated: 12/20/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 5.0



Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-162

Sheet 1 of 1

Date Excavated: 12/19/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 5.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SM		Light brown silty sand with gravel and cobbles (moist) (fill)			
1	TP-B3 (1-2) CA					SS	24.3	
2			Fill		Brown to black wood debris & bark (moist) (fill)			
3	TP-B3 (3-4) CA					SS	24.7	
4			SM		Gray silty fine sand (moist)			
5								

Test pit completed at approximately 5½ foot depth
Slight groundwater seepage observed at approximately 4½ foot depth
Minor caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B3

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 12/20/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 5.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			ML		Light brown silt with cobbles, gravel and debris (bricks) (dry) (fill)			
1	TP-B4 (1-2) CA					NS	<1	
2			Fill		Wood waste (dry) (fill)			
3	TP-B4 (3-4) CA					SS	<1	
4			SM		Light gray silty fine sand (moist to wet)			
5					Test pit completed at approximately 5 foot depth Slight groundwater seepage observed at approximately 4½ foot depth Minor caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B4

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-164

Sheet 1 of 1

Date Excavated: 12/20/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 4.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			ML		Silt with gravel, cobbles and wood waste (moist) (fill)			
1	TP-B5 (1-2) CA					NS	<1	
2			SM		Light gray silty fine sand (moist to wet)			
3	TP-B5 (3-4) CA					SS	<1	
4					Test pit completed at approximately 4 foot depth Slight groundwater seepage observed at approximately 3½ foot depth Minor caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B5

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-165

Sheet 1 of 1

Date Excavated: 12/20/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 4.5

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					ML		Silt with cobbles, gravel and wood debris (dry) (fill)			
	1		TP-B6 (1-2) CA					NS	<1	
					GP		Light brown gravel with sand (moist) (fill)			
	2									
	3		TP-B6 (3-4) CA		GP		Light gray gravel with sand (wet)	SS	<1	
	4									
							Test pit completed at approximately 4½ foot depth Slight groundwater seepage observed at approximately 4 foot depth Minor caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B6

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-166

Sheet 1 of 1

Date Excavated: 12/20/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 5.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			ML		Brown silt with sand, wood debris and cobbles (moist) (fill)			
1	TP-B7 (1-2) CA					SS	<1	
2								
3			SM		Light gray silty fine sand (moist to wet)			
4	TP-B7 (4-5) CA					SS	<1	
5					Test pit completed at approximately 5 foot depth Slight groundwater seepage observed at approximately 5 foot depth Minor caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B7

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-167

Sheet 1 of 1

Date Excavated: 12/20/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 5.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			ML		Light brown silt with gravel, cobbles and wood waste (dry) (fill)			
1	TP-B8 (1-2) CA					SS	<1	
2			SM		Gray silty fine sand (moist to wet)			
3								
4	TP-B8 (4-5) CA					SS	<1	
5					Test pit completed at approximately 5 foot depth Slight groundwater seepage observed at approximately 4½ foot depth Minor caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B8

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 12/19/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 4.5

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					SM		Brown silty sand with gravel and wood debris (moist) (fill)			
	1		TP-B9 (1-2) CA					NS	11.5	
					SM		Gray silty fine sand (moist)			
	2									
	3		TP-B9 (3-4) CA					SS	9.8	Slight petroleum odor
	4									

Test pit completed at approximately 4½ foot depth
Slight groundwater seepage observed at approximately 4 foot depth
Minor caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B9

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-169
Sheet 1 of 1

Date Excavated: 12/19/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 4.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
0			SM		Light brown silty sand with gravel, cobbles and wood debris (moist) (fill)			
1	TP-B10 (1-2) CA							White conduit encountered at approximately 1 foot depth
2			GP		Gray gravel with sand (moist) (fill)			
			ML		Brown sandy silt (moist) (fill?)			
3	TP-B10 (3-4) CA					SS	21	Slight petroleum odor
			SM		Gray silty fine sand with gravel (moist to wet)			
4								

Test pit completed at approximately 4½ foot depth
Slight groundwater seepage observed at approximately 3½ foot depth
No caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B10

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

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Sheet 1 of 1

Date Excavated: 12/19/2013 Logged By: JRS

Equipment: CAT 420E Backhoe Total Depth (ft) 4.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
			ML		Brown silt with sand, cobbles and wood debris (moist) (fill)			
1	TP-B11 (1-2) CA						20.2	
2								
3	TP-B11 (3-4) CA		SP		Light brown medium coarse sand with gravel and cobbles (moist to wet)	SS	184	Slight petroleum odor
4								

Test pit completed at approximately 4½ foot depth
Slight groundwater seepage observed at approximately 4 foot depth
Minor caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit TP-B11

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-171
Sheet 1 of 1

Date Excavated: 12/19/2013 Logged By: JRS

Equipment: Total Depth (ft) 3.0

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
			SM		Brown gravelly silt (moist) (fill)			
1	SDP87-TP1 (1-2) CA		SP		Gray fine sand (moist)	SS	4.7	
2	SDP87-TP1 (2-3) CA		SP		Gray medium to coarse sand with gravel and cobbles (moist)	SS	3.1	
3					Test pit completed at approximately 3 foot depth Slight groundwater seepage observed at approximately 2½ foot depth Minor caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP87-TP1

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-172

Sheet 1 of 1

Date Excavated: 12/19/2013 Logged By: JRS

Equipment: Total Depth (ft) 3.5

Elevation (feet) / Depth (feet)	SAMPLE: Testing Sample / Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
			ML		Brown sandy silt with roots (moist)			
			SP		Gray fine sand with gravel and cobbles (moist to wet)			
1	SDP87-TP2 (1-2) CA					SS	21.5	Slight petroleum odor
2	SDP87-TP2 (2-3) CA					SS	22.6	Slight petroleum odor
3								

Test pit completed at approximately 3½ foot depth
Slight groundwater seepage observed at approximately 3 foot depth
Minor caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP87-TP2

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-173
Sheet 1 of 1

Date Excavated: 12/20/2013 Logged By: JRS

Equipment: Total Depth (ft) 3.5

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					ML		Brown silt with gravel, cobbles and wood debris (moist) (fill)			
	1		SDP87-TP3 (1-2) CA		ML		Dark brown silt and trace wood waste (moist) (fill)	NS	6.6	
	2		SDP87-TP3 (2-3) CA		GP		Gray gravel with sand and cobbles (moist to wet)	SS	6.1	
	3									

Test pit completed at approximately 3½ foot depth
Slight groundwater seepage observed at approximately 3 foot depth
Minor caving observed

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP87-TP3

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment
Project Location: Cashmere, Washington
Project Number: 18593-001-02

Figure A-174
Sheet 1 of 1

Date Excavated: 12/19/2013 Logged By: JRS

Equipment: Total Depth (ft) 4.0

Elevation (feet)	Depth (feet)	SAMPLE: Testing Sample	SAMPLE: Sample Name Testing	Graphic Log	Group Classification	Encountered Water	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	Notes
					ML		Brown silt with sand, gravel, cobbles and wood waste (moist) (fill)			
	1		SDP87-TP4 (1-2) CA		SP		Gray fine sand (moist) (fill)	SS	3.2	
	2		SDP87-TP4 (2-3) CA		GP		Gray gravel with sand and cobbles (moist to wet)	SS	10.8	
	3									
	4						Test pit completed at approximately 4 foot depth Slight groundwater seepage observed at approximately 3 foot depth Minor caving observed			

Notes: See Figure A-1 for explanation of symbols.

Log of Test Pit SDP87-TP4

GeoEngineers

Project: Former Cashmere Mill Site, Data Gap Assessment

Project Location: Cashmere, Washington

Project Number: 18593-001-02

Figure A-175

Sheet 1 of 1

APPENDIX B
Field Procedures

APPENDIX B
FIELD PROCEDURES

Field Explorations

Prior to completion of the explorations, GeoEngineers contacted the One-Call Utility Notification Center in accordance with Washington State law. In addition, GeoEngineers subcontracted a private utility locator to locate underground utilities at the site. Following clearance of utilities, subsurface soil conditions at the site were explored between September 2013 and December 2013 by:

- Advancing 120 direct-push borings and collecting soil samples;
- Drilling 10 exploratory borings using hollow-stem auger and air-rotary drill rigs and installing nine new monitoring wells from which soil and groundwater samples were collected; and
- Excavating 44 test pits from which soil samples were collected.

The approximate exploration locations are shown in Figures 2 through 5.

Soil Sampling from Explorations

Soil borings were completed using direct-push, hollow-stem auger (HSA) or air-rotary drilling techniques by a licensed driller. For HSA and air-rotary drilling methods, subsurface soil samples were obtained using standard penetration test (SPT) samplers. The direct-push drilling samples were obtained continuously using 5-foot-long, 1-inch-diameter acrylic sleeves. Grab soil samples were collected from test pit sidewalls or from the excavator or backhoe bucket.

Each exploration was continuously monitored by a geologist or engineer from our firm who observed and classified the soil encountered, and prepared a detailed log of each boring. Soil encountered in the explorations was classified in the field in general accordance with ASTM International (ASTM) D-2488, the Standard Practice for Classification of Soils, Visual-Manual Procedure, which is summarized in Figure A-1. Logs of the monitoring wells are presented in Figures A-2 through A-10. The log of air-rotary boring AR-1 is presented in Figure A-11. Logs of the direct-push borings are provided in Figures A-12 through A-131. Logs of test pits are presented in Figures A-132 through A-175.

Preservation of VOC samples was completed in accordance with Ecology Memo 5, document number 04-09-087. Sample containers were labeled and placed into an ice chest containing ice/ice packs. Soil samples for VOCs analyses were obtained consistent with EPA Method 5035A. Chain-of-custody procedures were followed during transport of the soil samples.

Sampling equipment was decontaminated between each sampling attempt. Samples were obtained using either a decontaminated soil knife or new, clean nitrile glove and placed into 4-ounce glass sample jars with Teflon lids.

Samples were placed in a cooler with ice and delivered to the analytical laboratory; standard chain-of-custody procedures were observed during transport of the samples to the laboratory.

Field Screening Methods

A GeoEngineers field geologist or engineer performed field screening tests on selected soil samples from the explorations. Field screening results were used to aid in the selection of soil samples for chemical analysis. Screening methods included (1) visual examination, (2) water sheen screening, and (3) headspace vapor screening using a photo-ionization detector (PID).

Monitoring Well Construction, Development, and Surveying

Monitoring wells MW-1 through MW-9 were constructed in accordance with WAC 173-160, Section 400, Washington State Resource Protection Well Construction Standards. Monitoring well installation was observed by a GeoEngineers field geologist or engineer, who maintained a detailed log of the materials and depths of the well. Well construction details, including the depths of the well screen and filter packs are shown on Logs of Monitoring Wells, Figures A-2 through A-10.

The nine monitoring wells were constructed using 2-inch-diameter polyvinyl chloride (PVC) well casing. The annular space in each well was sealed between the top of the filter pack and the ground surface with bentonite to prevent infiltration of groundwater into the well bore from shallower zones. A lockable compression-type cap was installed in the top of the PVC well casing. A flush-mount above-grade monument equipped with a watertight cover was installed to protect the PVC well casing. A concrete surface seal was placed around the monument at the ground surface to divert surface water away from the well location.

Monitoring wells MW-1 through MW-9 were developed shortly after installation to remove water introduced into the well during drilling, stabilize the filter pack and formation materials surrounding the well screen, and restore the hydraulic connection between the well screen and the surrounding soil. Each well screen was gently surged and water was removed with a surge block and disposable bailer, or an air-lift pump several times during the development process.

Scott Vollrath, PLS with Landline Surveyors mobilized to the site on October 28, 2013 to survey the locations and elevations of monitoring wells MW-1 through MW-8, and existing wells B-1, OW-1 through OW-7. Survey data is presented on the monitoring wells logs. Monitoring well elevations are referenced to the NAVD 88 vertical datum, and monitoring well coordinates are referenced to NAD 83-98 horizontal datum. Coordinates for the direct-push borings, test pits and boring AR-1 were obtained in the field using a hand-held global positioning system (GPS) device. Coordinates for direct-push borings, AR-1, MW-9 and the test pits are presented on the exploration logs referenced to the WGS 84 horizontal coordinate system. Elevations for the direct-push borings, AR-1, MW-9 and the test pits were not measured.

Groundwater Sampling

The wells were allowed to equilibrate after well development. The initial groundwater sampling event occurred on October 28, 2013. The second groundwater sampling event occurred on December 3 and 4, 2013. A groundwater sample was collected from well MW-9 on December 20, 2013. Before sampling, VOCs in the well headspace were measured with a PID by first inserting the PID into the well casing immediately after removal of the well cap.

Each groundwater sample was obtained using low-flow purging methods. The groundwater samples were transferred in the field to laboratory-prepared sample containers and kept cool during transport to the testing laboratory. Water quality parameters were recorded during sampling and are presented in Table B-1. Soluble ferrous iron concentrations in groundwater also were measured in the field using a Hach IR-18C color disc test kit and the 1,10 phenanthrine testing method. The sample containers were filled completely to eliminate headspace in the container. Chain-of-custody procedures were observed from the time of sample collection to delivery to the testing laboratory.

Surface Water Sampling

Surface water samples were collected by slowly placing laboratory-sterilized sample containers into the creek. The field geologist stood downstream during sampling.

Decontamination Procedures

The objective of the decontamination procedure is to minimize the potential for cross-contamination between sample locations.

A designated decontamination area was established for decontamination of drilling equipment and reusable sampling equipment. Drilling equipment was cleaned using high-pressure/low-volume cleaning equipment.

Sampling equipment was decontaminated in accordance with the following procedures before each sampling attempt or measurement.

1. Brush equipment with a nylon brush to remove large particulate matter.
2. Rinse with potable tap water.
3. Wash with non-phosphate detergent solution (Liquinox® and potable tap water).
4. Rinse with potable tap water.
5. Rinse with distilled water.

Handling of Investigation-Derived Waste

Investigation Derived Waste (IDW), which consists of mainly drill cuttings and decontamination/purge water, typically was placed in DOT-approved 55-gallon drums. Each drum was labeled with the project name, exploration number, general contents, and date. The drummed IDW was stored onsite pending analysis and disposal.

Disposable items, such as sample tubing, disposable bailers, bailer line, gloves and protective overalls, paper towels, etc., were placed in plastic bags after use and deposited in trash receptacles for disposal.

Table B-1

Summary of Field Quality Parameters

Former Cashmere Mill Site
Cashmere, Washington

Sample Number	Date Sampled	pH	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	ORP (mV)	Soluble Ferrous Iron[1] (mg/L)	Well Headspace PID Readings[2] (ppm)
MW-1	10/28/13	7.00	0.55	3.78	0.02	16.53	-47	0.0	10.2
	12/03/13	6.71	0.48	4.73	0.03	12.69	-43	0.8	0
MW-2	10/28/13	7.12	0.65	9.27	0.02	17.95	-81	0.0	0
	12/03/13	6.94	0.58	14.78	0.05	13.70	-88	1.0	0
MW-3	10/28/13	6.13	0.95	5.58	0.01	16.47	-86	0.0	0
	12/03/13	5.88	0.86	3.87	0.01	14.00	-65	1.5	0
MW-4	10/28/13	7.08	0.56	2.48	0.02	16.61	-107	0.0	0
	12/03/13	6.90	0.50	1.69	0.03	11.81	-85	1.0	0
MW-5	10/28/13	7.04	0.57	0.68	0.03	15.73	-83	0.0	0
	12/03/13	6.85	0.53	0.97	0.04	10.81	-70	0.7	0
MW-6	10/28/13	7.12	0.57	8.77	0.00	16.75	-125	0.0	0
	12/03/13	6.88	0.51	5.20	0.03	13.37	-54	1.0	115
MW-7	10/28/13	6.95	0.48	3.91	0.98	14.67	-16	0.0	0
	12/03/13	6.76	0.44	0.12	0.00	10.13	-44	1.2	0
MW-8	10/28/13	6.73	0.34	4.22	0.00	12.35	-123	0.0	0
	12/03/13	6.44	0.38	5.17	0.02	10.80	-110	1.7	0
MW-9	12/20/13	7.12	0.55	0.00	0.20	11.69	114	NA	NA
B-1	10/28/13[3]	6.10	0.70	1884	0.03	18.13	-75	0.0	0
	12/03/13	5.92	0.86	40.81	0.07	15.62	-52	0.8	17.6
OW-1	12/04/13	6.84	0.49	7.06	0.06	13.43	5	0.0	0.0

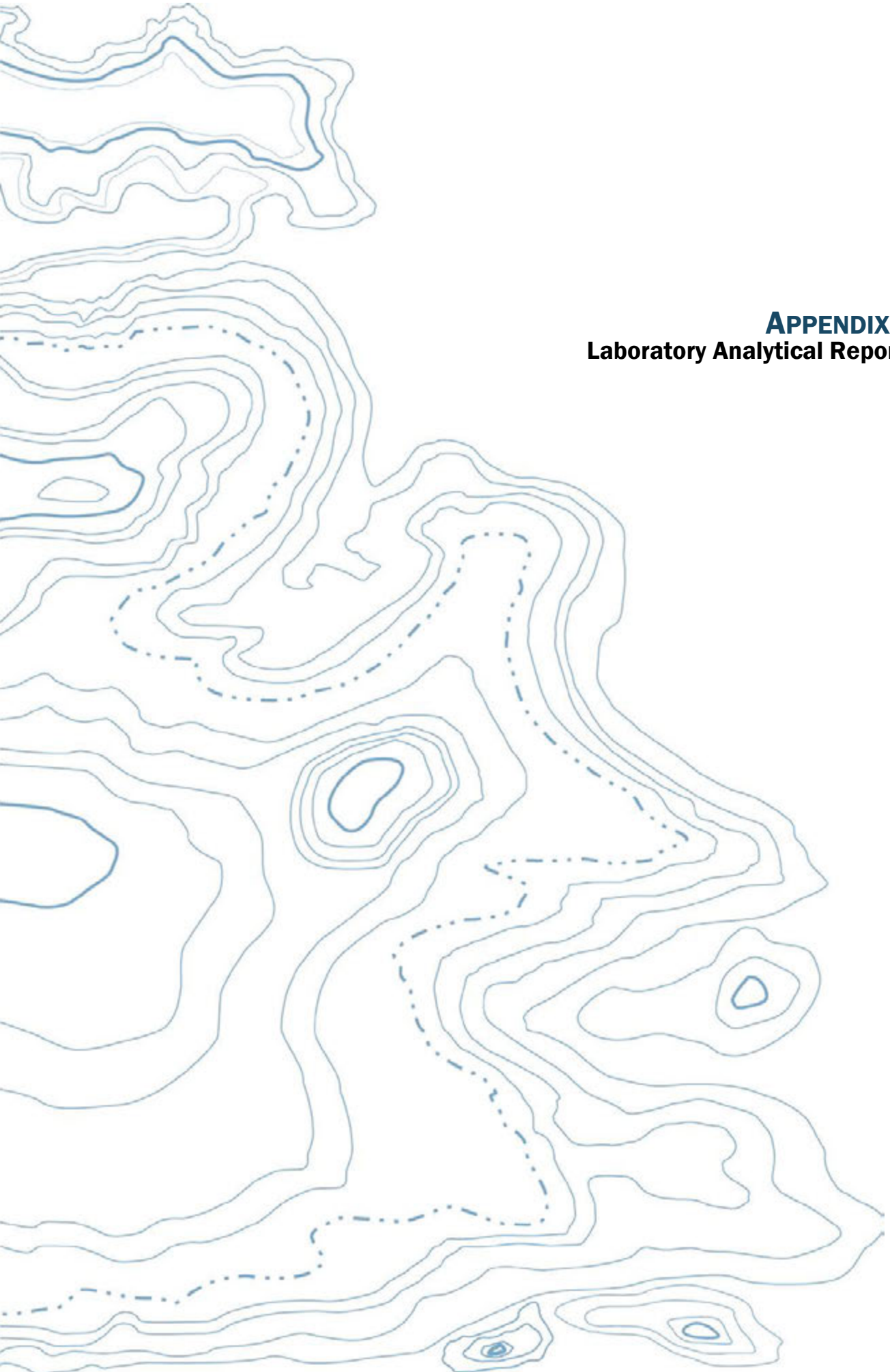
Notes:

[1] Soluble ferrous iron was measured in the field using a Hach IR-18C color disc test kit and the 1,10 phenanthroline testing method.

[2] Well headspace reading measured using a MiniRae2000 Photo-ionization detector (PID).

[3] Water level within B-1 did not stabilize, well pumped dry during initial purging. Well allowed to recharge before collecting groundwater sample.

mS/m = millisiemens per centimeter; NTU = nephelometric turbidity units; mg/L = milligrams per liter; mV = millivolts; ppm = parts per million; NA=Not Analyzed



APPENDIX C
Laboratory Analytical Reports

APPENDIX D
MTCA TPH Output

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

1. Enter Site Information

Date: 12/05/13
Site Name: Cashmere
Sample Name: SDP75A-TP5(3)

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	2.065	0.07%
AL_EC >6-8	2.065	0.07%
AL_EC >8-10	2.475	0.09%
AL_EC >10-12	2.475	0.09%
AL_EC >12-16	15.4	0.54%
AL_EC >16-21	195	6.88%
AL_EC >21-34	2360	83.23%
AR_EC >8-10	2.475	0.09%
AR_EC >10-12	2.475	0.09%
AR_EC >12-16	2.475	0.09%
AR_EC >16-21	22.7	0.80%
AR_EC >21-34	225	7.94%
Benzene	0.0094	0.00%
Toluene	0.0625	0.00%
Ethylbenzene	0.0625	0.00%
Total Xylenes	0.375	0.01%
Naphthalene	0.0329	0.00%
1-Methyl Naphthalene	0.0329	0.00%
2-Methyl Naphthalene	0.0329	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	0.0329	0.00%
Benzo(b)fluoranthene	0.0329	0.00%
Benzo(k)fluoranthene	0.0329	0.00%
Benzo(a)pyrene	0.0329	0.00%
Chrysene	0.0329	0.00%
Dibenz(a,h)anthracene	0.0329	0.00%
Indeno(1,2,3-cd)pyrene	0.0329	0.00%
Sum	2835.4434	100.00%

Notes for Data Entry | Set Default Hydrogeology
Clear All Soil Concentration Data Entry Cells
Restore All Soil Concentration Data cleared

REMARK:
Enter site-specific information here.....

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: 12/5/2013
Site Name: Cashmere
Sample Name: SDP75A-TP5(3)
Measured Soil TPH Concentration, mg/kg: **2,835.443**

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	5,917	4.80E-07	1.52E-01	Pass
	Method C	225,620	1.19E-07	1.26E-02	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	100% NAPL	9.35E-07	5.98E-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	**5,917.09**	**225,619.94**
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*	1.86E+04	3.15E-06	1.00E+00	YES	2.26E+05	9.47E-06	9.99E-01
Total Risk=1E-5	*NO*	5.91E+04	1.00E-05	3.18E+00	*NO*	2.38E+05	1.00E-05	1.06E+00
Risk of Benzene= 1E-6	*NO*	5.48E+06	9.27E-04	2.95E+02	NA			
Risk of cPAHs mixture= 1E-6	YES	5.92E+03	1.00E-06	3.18E-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	2.71E+01	1.63E-06	8.03E-02	100% NAPL
Total Risk = 1E-5	YES	2.71E+01	1.63E-06	8.03E-02	100% NAPL
Total Risk = 1E-6	YES	2.41E+01	1.00E-06	6.19E-02	3.33E+03
Risk of cPAHs mixture= 1E-5	YES	2.71E+01	1.63E-06	8.03E-02	100% NAPL
Benzene MCL = 5 ug/L	YES	2.71E+01	1.63E-06	8.03E-02	100% NAPL
MTBE = 20 ug/L	NA	NA	NA	NA	NA

Note: 100% NAPL is 70000 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: 12/05/13
Site Name: Cashmere
Sample Name: SDP75A-TP2a(2)

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	2.37	0.15%
AL_EC >6-8	2.37	0.15%
AL_EC >8-10	2.46	0.15%
AL_EC >10-12	2.46	0.15%
AL_EC >12-16	17.1	1.06%
AL_EC >16-21	136	8.43%
AL_EC >21-34	1280	79.34%
AR_EC >8-10	2.46	0.15%
AR_EC >10-12	2.46	0.15%
AR_EC >12-16	2.46	0.15%
AR_EC >16-21	16.3	1.01%
AR_EC >21-34	146	9.05%
Benzene	0.011	0.00%
Toluene	0.0735	0.00%
Ethylbenzene	0.0735	0.00%
Total Xylenes	0.4405	0.03%
Naphthalene	0.0325	0.00%
1-Methyl Naphthalene	0.0325	0.00%
2-Methyl Naphthalene	0.0325	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	0.0325	0.00%
Benzo(b)fluoranthene	0.0325	0.00%
Benzo(k)fluoranthene	0.0325	0.00%
Benzo(a)pyrene	0.0325	0.00%
Chrysene	0.0325	0.00%
Dibenz(a,h)anthracene	0.0325	0.00%
Indeno(1,2,3-cd)pyrene	0.0325	0.00%
Sum	1613.3635	100.00%

Notes for Data Entry | Set Default Hydrogeology
Clear All Soil Concentration Data Entry Cells
Restore All Soil Concentration Data cleared

REMARK:
Enter site-specific information here.....

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: 0 ug/L

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 12/5/2013
Site Name: Cashmere
Sample Name: SDP75A-TP2a(2)
Measured Soil TPH Concentration, mg/kg: **1,613.364**

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	3,408	4.74E-07	1.04E-01	Pass
	Method C	137,169	1.18E-07	8.51E-03	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	100% NAPL	1.42E-06	9.52E-02	Pass
	NA	NA	NA	NA	Fail

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	**3,408.25**	**137,169.23**
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*	1.55E+04	4.56E-06	1.00E+00	*NO*	1.90E+05	1.38E-05	1.00E+00
Total Risk=1E-5	*NO*	3.40E+04	1.00E-05	2.19E+00	YES	1.37E+05	1.00E-05	7.23E-01
Risk of Benzene= 1E-6	*NO*	2.66E+06	7.83E-04	1.71E+02	NA			
Risk of cPAHs mixture= 1E-6	YES	3.41E+03	1.00E-06	2.19E-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	4.99E+01	3.25E-06	1.50E-01	100% NAPL
Total Risk = 1E-5	YES	4.99E+01	3.25E-06	1.50E-01	100% NAPL
Total Risk = 1E-6	YES	3.52E+01	1.00E-06	7.94E-02	9.33E+02
Risk of cPAHs mixture= 1E-5	YES	4.99E+01	3.25E-06	1.50E-01	100% NAPL
Benzene MCL = 5 ug/L	YES	4.99E+01	3.25E-06	1.50E-01	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: 12/05/13
Site Name: Cashmere
Sample Name: NDP8-TP5(6.5)

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	2.04	3.12%
AL_EC >6-8	2.04	3.12%
AL_EC >8-10	2.04	3.12%
AL_EC >10-12	2.04	3.12%
AL_EC >12-16	2.445	3.73%
AL_EC >16-21	5.76	8.80%
AL_EC >21-34	38	58.04%
AR_EC >8-10	2.04	3.12%
AR_EC >10-12	2.04	3.12%
AR_EC >12-16	2.04	3.12%
AR_EC >16-21	2.04	3.12%
AR_EC >21-34	2.04	3.12%
Benzene	0.092	0.14%
Toluene	0.0615	0.09%
Ethylbenzene	0.0615	0.09%
Total Xylenes	0.368	0.56%
Naphthalene	0.0329	0.05%
1-Methyl Naphthalene	0.0329	0.05%
2-Methyl Naphthalene	0.0329	0.05%
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	0.0329	0.05%
Benzo(b)fluoranthene	0.0329	0.05%
Benzo(k)fluoranthene	0.0329	0.05%
Benzo(a)pyrene	0.0329	0.05%
Chrysene	0.0329	0.05%
Dibenz(a,h)anthracene	0.0329	0.05%
Indeno(1,2,3-cd)pyrene	0.0329	0.05%
Sum	65.477	100.00%

Notes for Data Entry | Set Default Hydrogeology

Clear All Soil Concentration Data Entry Cells

Restore All Soil Concentration Data cleared previously

REMARK:
Enter site-specific information here.....

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:	0	ug/L

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 12/5/2013
Site Name: Cashmere
Sample Name: NDP8-TP5(6.5)
Measured Soil TPH Concentration, mg/kg: **65.477**

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	137	4.84E-07	8.74E-03	Pass
	Method C	5,472	1.20E-07	5.95E-04	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	20	2.00E-05	8.08E-01	Fail
	NA	NA	NA	NA	Fail

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	**136.64**	**5,471.82**
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*	7.49E+03	5.54E-05	1.00E+00	*NO*	1.10E+05	2.01E-04	1.00E+00
Total Risk=1E-5	*NO*	1.35E+03	1.00E-05	1.80E-01	YES	5.47E+03	1.00E-05	4.97E-02
Risk of Benzene= 1E-6	*NO*	1.29E+04	9.56E-05	1.72E+00	NA			
Risk of cPAHs mixture= 1E-6	YES	1.37E+02	1.01E-06	1.82E-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

	Benzene MCL = 5 ug/L
Most Stringent Criterion	
Protective Ground Water Concentration, ug/L	**67.08**
Protective Soil Concentration, mg/kg	**20.20**

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*	2.21E+02	2.53E-05	1.00E+00	8.40E+01
Total Risk = 1E-5	*NO*	1.02E+02	1.00E-05	4.29E-01	3.23E+01
Total Risk = 1E-6	YES	1.05E+01	1.00E-06	4.36E-02	3.21E+00
Risk of cPAHs mixture= 1E-5	*NO*	1.03E+03	4.62E-04	1.24E+01	100% NAPL
Benzene MCL = 5 ug/L	YES	6.71E+01	6.30E-06	2.76E-01	2.02E+01
MTBE = 20 ug/L	NA	NA	NA	NA	NA

Note: 100% NAPL is 70000 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: 12/05/13
Site Name: Cashmere
Sample Name: S-DP-75A(2-3)

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	3.95	0.06%
AL_EC >6-8	3.95	0.06%
AL_EC >8-10	3.95	0.06%
AL_EC >10-12	3.95	0.06%
AL_EC >12-16	51	0.82%
AL_EC >16-21	410	6.56%
AL_EC >21-34	5000	80.04%
AR_EC >8-10	3.95	0.06%
AR_EC >10-12	3.95	0.06%
AR_EC >12-16	20	0.32%
AR_EC >16-21	91	1.46%
AR_EC >21-34	650	10.41%
Benzene	0.092	0.00%
Toluene	0.0615	0.00%
Ethylbenzene	0.0615	0.00%
Total Xylenes	0.368	0.01%
Naphthalene	0.0329	0.00%
1-Methyl Naphthalene	0.0329	0.00%
2-Methyl Naphthalene	0.0329	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	0.0329	0.00%
Benzo(b)fluoranthene	0.0329	0.00%
Benzo(k)fluoranthene	0.0329	0.00%
Benzo(a)pyrene	0.0329	0.00%
Chrysene	0.0329	0.00%
Dibenz(a,h)anthracene	0.0329	0.00%
Indeno(1,2,3-cd)pyrene	0.0329	0.00%
Sum	6246.612	100.00%

Notes for Data Entry | Set Default Hydrogeology
Clear All Soil Concentration Data Entry Cells
Restore All Soil Concentration Data cleared previously

REMARK:
Enter site-specific information here.....

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:	0	ug/L

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 12/5/2013
Site Name: Cashmere
Sample Name: S-DP-75A(2-3)
Measured Soil TPH Concentration, mg/kg: **6,246.612**

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	13,036	4.84E-07	4.41E-01	Pass
	Method C	171,138	1.20E-07	3.65E-02	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	13,719	5.39E-06	1.62E-01	Pass
	NA	NA	NA	NA	Fail

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	**13,035.61**	**171,138.23**
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*	1.42E+04	1.10E-06	1.00E+00	YES	1.71E+05	3.28E-06	1.00E+00
Total Risk=1E-5	*NO*	1.29E+05	1.00E-05	9.10E+00	*NO*	5.22E+05	1.00E-05	3.05E+00
Risk of Benzene= 1E-6	*NO*	1.23E+06	9.56E-05	8.70E+01	NA			
Risk of cPAHs mixture= 1E-6	YES	1.30E+04	1.01E-06	9.20E-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	**24.15**
Protective Soil Concentration, mg/kg	**13719.09**

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*	2.51E+01	7.07E-06	2.05E-01	100% NAPL
Total Risk = 1E-5	*NO*	2.51E+01	7.07E-06	2.05E-01	100% NAPL
Total Risk = 1E-6	YES	1.16E+01	1.00E-06	4.33E-02	3.52E+02
Risk of cPAHs mixture= 1E-5	*NO*	2.51E+01	7.07E-06	2.05E-01	100% NAPL
Benzene MCL = 5 ug/L	YES	2.41E+01	6.29E-06	1.85E-01	1.37E+04
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: 12/05/13
Site Name: Cashmere
Sample Name: S-DP-101(3-3.5)

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	7.5	1.14%
AL_EC >6-8	7.5	1.14%
AL_EC >8-10	7.5	1.14%
AL_EC >10-12	7.5	1.14%
AL_EC >12-16	23.5	3.56%
AL_EC >16-21	23.5	3.56%
AL_EC >21-34	280	42.43%
AR_EC >8-10	7.5	1.14%
AR_EC >10-12	7.5	1.14%
AR_EC >12-16	23.5	3.56%
AR_EC >16-21	23.5	3.56%
AR_EC >21-34	240	36.37%
Benzene	0.092	0.01%
Toluene	0.0615	0.01%
Ethylbenzene	0.0615	0.01%
Total Xylenes	0.368	0.06%
Naphthalene	0.0329	0.00%
1-Methyl Naphthalene	0.0329	0.00%
2-Methyl Naphthalene	0.0329	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	0.0329	0.00%
Benzo(b)fluoranthene	0.0329	0.00%
Benzo(k)fluoranthene	0.0329	0.00%
Benzo(a)pyrene	0.0329	0.00%
Chrysene	0.0329	0.00%
Dibenz(a,h)anthracene	0.0329	0.00%
Indeno(1,2,3-cd)pyrene	0.0329	0.00%
Sum	659.912	100.00%

Notes for Data Entry | Set Default Hydrogeology
Clear All Soil Concentration Data Entry Cells
Restore All Soil Concentration Data cleared previously

REMARK:
Enter site-specific information here.....

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:	0	ug/L

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 12/5/2013
Site Name: Cashmere
Sample Name: S-DP-101(3-3.5)
Measured Soil TPH Concentration, mg/kg: **659.912**

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	1,377	4.84E-07	1.61E-01	Pass
	Method C	50,909	1.20E-07	1.30E-02	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	228	1.47E-05	6.37E-01	Fail
	NA	NA	NA	NA	Fail

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	**1,377.12**	**50,909.19**
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*	4.10E+03	3.01E-06	1.00E+00	YES	5.09E+04	9.23E-06	1.00E+00
Total Risk=1E-5	*NO*	1.36E+04	1.00E-05	3.32E+00	*NO*	5.51E+04	1.00E-05	1.08E+00
Risk of Benzene= 1E-6	*NO*	1.30E+05	9.56E-05	3.17E+01	NA			
Risk of cPAHs mixture= 1E-6	YES	1.38E+03	1.01E-06	3.36E-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

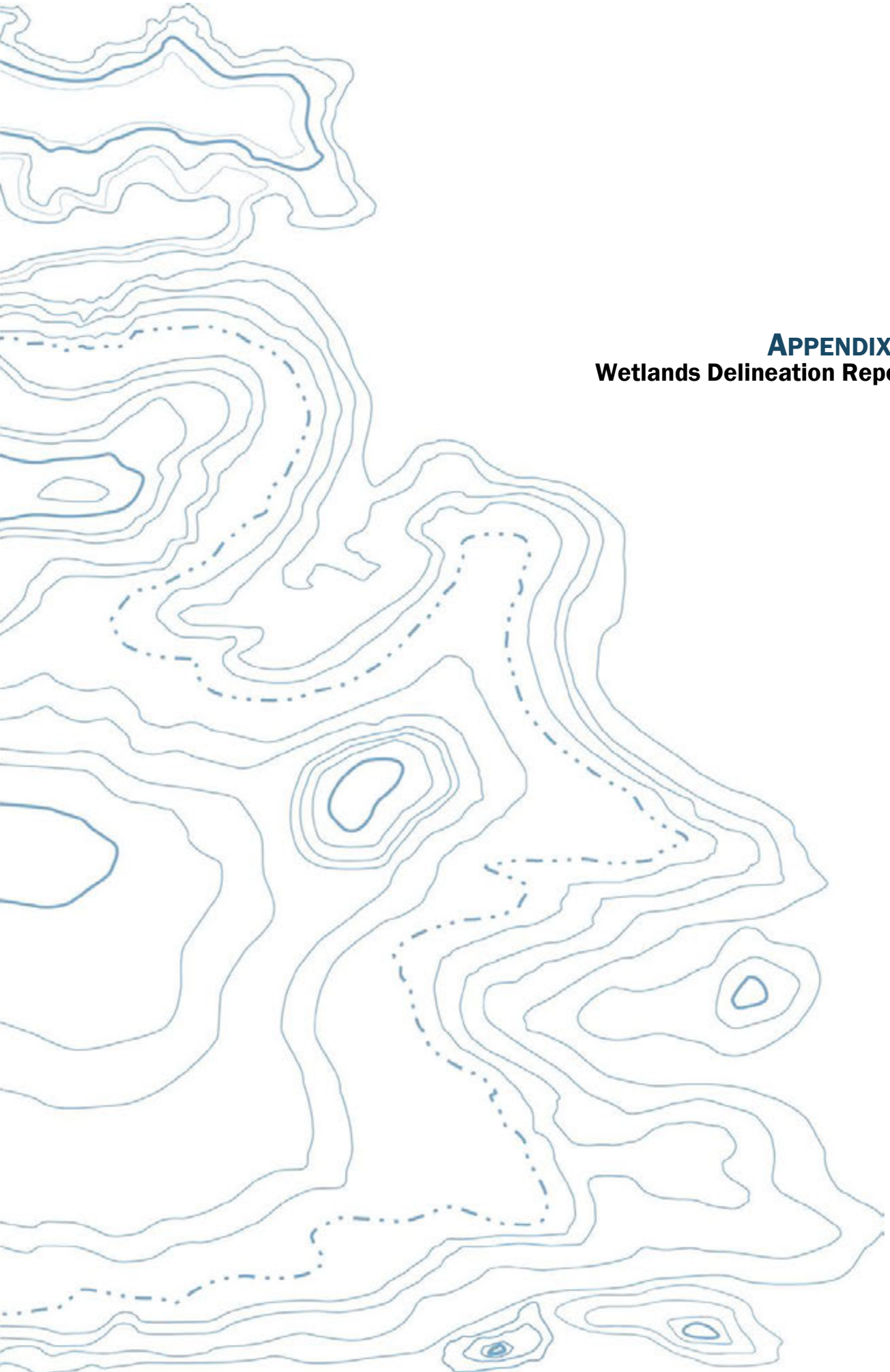
Most Stringent Criterion	**Benzene MCL = 5 ug/L**
Protective Ground Water Concentration, ug/L	**117.97**
Protective Soil Concentration, mg/kg	**228.36**

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*	2.18E+02	2.79E-05	1.00E+00	1.97E+03
Total Risk = 1E-5	*NO*	1.48E+02	1.00E-05	4.90E-01	3.96E+02
Total Risk = 1E-6	YES	3.36E+01	1.00E-06	8.86E-02	3.26E+01
Risk of cPAHs mixture= 1E-5	*NO*	2.57E+02	4.92E-05	1.55E+00	100% NAPL
Benzene MCL = 5 ug/L	YES	1.18E+02	6.29E-06	3.59E-01	2.28E+02
MTBE = 20 ug/L	NA	NA	NA	NA	NA

Note: 100% NAPL is 81000 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 E
Wetlands Delineation Report

APPENDIX F
Phase 1 Interim Action Report

APPENDIX G
Report Limitations and Guidelines for Use

APPENDIX G
REPORT LIMITATIONS AND GUIDELINES FOR USE[1]

This appendix provides information to help you manage your risks with respect to the use of this report.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

GeoEngineers has performed this data gap assessment of the Former Cashmere Mill Site located in Cashmere, Washington in general accordance with the Work Plan, dated September 4, 2013. This report has been prepared for the exclusive use of the Washington State Department of Ecology, their authorized agents and regulatory agencies. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an ESA study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. No one except the Washington State Department of Ecology should rely on this environmental report without first conferring with GeoEngineers. Use of this report is not recommended for any purpose or project except the one originally contemplated.

This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the Former Cashmere Mill Site located in Cashmere, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

If important changes are made to the project or property after the date of this report, we recommend that GeoEngineers be given the opportunity to review our interpretations and recommendations. Based on that review, we can provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

Our report was prepared for the exclusive use of our Client. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there

1 Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Environmental Regulations Are Always Evolving

Some substances may be present in the vicinity of the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

Uncertainty May Remain Even After This Phase II ESA is Completed

Performance of a Phase II ESA is intended to reduce uncertainty regarding the potential for contamination in connection with a property, but no ESA can wholly eliminate that uncertainty. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

Subsurface Conditions Can Change

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

Soil and Groundwater End Use

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. We are unable to assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location or its reuse on-site in instances that we did not know or could not control.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or

samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ, sometimes significantly, from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproduction is acceptable, but separating logs from the report can create a risk of misinterpretation.

Read These Provisions Closely

It is important to recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. Without this understanding, there may be expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you need to know more about how these "Report Limitations and Guidelines for Use" apply to your project or property.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

Have we delivered World Class Client Service?
Please let us know by visiting **www. geoengineers.com/feedback**.

GeoEngineers