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Cleanup Action Report
Verbeek Wrecking Property
18416 Bothell-Everett Highway
Bothell, Washington

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Prepared for

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1.0 INTRODUCTION

This report documents the cleanup action completed for the Verbeek Wrecking Site (Site), located at 18416 Bothell-Everett Highway in unincorporated Snohomish County, north of Bothell, Washington (Figure 1). Cleanup action at the Site was conducted in accordance with the Washington State Model Toxics Control Act (MTCAWAC 173-340) under the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP). The VCP reference number for the Site is NW 1982 (Facility/Site ID 51544175). It is the intent of the cleanup action to meet the MTCA requirements for cleanup to unrestricted site use standards.

Cleanup action for the Site was conducted between July and October 2010 in accordance with the cleanup action plan (CAP) developed for the Site (Landau Associates 2009a). Ecology reviewed the CAP and issued an opinion letter dated May 26, 2010 stating that the proposed cleanup action would likely be sufficient to meet the substantive requirements under the MTCA (Ecology 2010a).

1.1 BACKGROUND

This section presents information on Site background, including a description of the Site (Section 1.1.1), a summary of historic and current uses of the Site (Section 1.1.2), and the Site's regional geology (Section 1.1.3). Note that a detailed historical review was previously completed for the Site and is presented in the Interim Cleanup Action Report (Landau Associates 2009b), which should be reviewed for a more thorough description of Site historical uses and conditions.

1.1.1 SITE DESCRIPTION

Figure 1 shows a vicinity map for the Site. Figure 2 presents a site plan showing the property boundary and relevant historical Site features. The Site is bounded to the east by Bothell-Everett Highway (SR 527), followed by commercial properties, and by a commercial property (18332 Bothell-Everett Highway) currently used for storage of landscaping material, to the north by 183rd Street Southeast followed by residential and commercial properties, to the west by a residential neighborhood, and to the south by Gold's Gym and Lease Crutcher Lewis (a construction company). As shown on Figure 3, the Site slopes downward to a north-south trending drainage depression, and stormwater runoff is drained by a series of catch basins that connect to a centrally located north-south trending stormwater conveyance line. The approximate center of the Site is located at North 47.83092° and West 122.21085°. Verbeek Properties, LLC currently owns the property within the Site.

1.1.2 HISTORICAL AND CURRENT SITE USE

Verbeek Wrecking purchased the southern portion of the Site in 1956 and began its automobile salvage operations in the early 1960s. Verbeek Wrecking purchased the northern portion of the Site in the mid 1980s. Prior to 1957, the Site was heavily wooded and was occupied, in part, by several residences. During the Verbeek Wrecking operational history (1960s to 2008), auto wrecking and salvage activities were conducted in various portions of the Site.

Auto wrecking and salvage operations ceased in early 2008 in advance of the interim cleanup action activities. The Site was cleared of the salvaged materials and structures and machinery used for the wrecking and salvage processes. The Site is not currently in use, pending completion of environmental cleanup and redevelopment.

For organizational purposes, the Site is sub-divided into four areas: A, B, C, and D (Figure 2). Area A encompasses the western third of the property, was historically leased to other auto wrecking companies, and was separated from other portions of the Site by a fence. Area B, located in the southern portion of the Site, was used for storage, truck parking, and automobile salvage operations, and was the location where contaminated soil originating from the Gas Works Park (GWP) site in Seattle, Washington was used as fill. Area C is located in the northeastern portion of the Site and was used for heavy auto wrecking operations. Area D is located in the eastern portion of the Site and had several structures, including a residence/office building, a shop building, and truck scale; the shop building and the residence/office building are the only structures remaining on the Site. A more detailed description of the historical activities conducted in each of the four areas is presented in the CAP (Landau Associates 2009a).

Based on aerial photograph interpretation and other information, approximately 10,000 cubic yards of contaminated soil originating from the GWP site was brought to the Site at some point in the mid 1960s to early 1970s. Characterization and cleanup of the GWP soil is being conducted by Puget Sound Energy (PSE), a former owner of the GWP site. As a result, Area B is not addressed in this report, except for the results of cleanup action activities conducted to remediate the impacts of former wrecking yard activities in Area B. Cleanup of impacts from the GWP material at the Site will be presented in a separate document prepared by PSE's environmental consultant, Dalton, Olmsted & Fuglevand (DOF). The cleanup of the surficial carcinogenic polycyclic aromatic hydrocarbon (cPAH) contamination that overlapped with northern portion of the GWP material, as described in the CAP (Landau Associates 2009a), is also being addressed as part of the GWP cleanup by DOF. Information related to environmental conditions, interim action, and RI activities related to the GWP soil is discussed in this report to provide the reader a more complete understanding of Site environmental conditions.

1.1.3 REGIONAL GEOLOGY

The Site is located in the Puget Sound Lowland, which consists mainly of glacially deposited sediments. The Puget Sound Lowland is a basin lying between the Cascade Mountains to the east and the Olympic Mountains to the west. More specifically, the Site is situated in the North Creek Channel within the Intercity Plateau geomorphic province. The topography surrounding the Site slopes down to the south-southwest. Geologic maps of the area indicate that the Site lies within an area mapped as Vashon advanced glacial outwash (Qva). However, it is possible for Vashon glacial till (Qvt) to be present at the Site as well, because it is commonly located stratigraphically higher than the advanced outwash and is mapped in areas within 5 miles of the Site. A more detailed description of the regional geology is discussed in the CAP (Landau Associates 2009a).

The advanced glacial outwash deposit is described as clean, gray, well stratified, fine sand that grades to sand and gravel and contains some lenses of silt. The unit is 120 to 350 ft thick. The unit has a higher hydraulic conductivity than glacial till, is largely unconfined, and is known to be the principal aquifer (in terms of use) in western Snohomish County (USGS 1997). If present at the Site, the advanced glacial outwash unit would likely contain the uppermost hydrostratigraphic unit that would meet the definition of a potable water source under MTCA [WAC 173-340-720(2)]. Site hydrogeology is discussed in the CAP (Landau Associates 2009a).

2.0 SITE CHARACTERIZATION

This section summarizes Site cleanup levels (Section 2.1), characterization activities that were conducted to delineate the nature and extent of contamination (Section 2.2), the interim action that was conducted at the Site prior to implementation of the cleanup action presented in the CAP (Section 2.3), and the remedial investigation (RI) that was completed following the interim action (Sections 2.4 and 2.5). These activities are presented in chronological order because the interim action was conducted following the initial Phase II ESAs and the RI was conducted following the interim action to address data gaps resulting from the lack of characterization and documentation during the interim action. A more comprehensive discussion of these activities is presented in the Interim Cleanup Action Report (Landau Associates 2009b) and the CAP (Landau Associates 2009a).

2.1 CLEANUP LEVELS

Site cleanup levels were developed in the CAP to evaluate the nature and extent of contamination and to develop the Site cleanup action. Site cleanup levels for soil and groundwater are presented in Tables 1 and 2, respectively. Groundwater cleanup levels were also used to evaluate Site surface water due to the intermittent nature of surface water at the Site and in the Site vicinity.

Based on these cleanup levels, Site soil constituents of potential concern (COPC) consist of:

- cPAHs
- Lead
- Gasoline-, diesel-, and oil-range petroleum hydrocarbons
- Benzene, toluene, ethyl benzene, and xylene
- Naphthalene.

Site groundwater COPCs consist of:

- Arsenic
- TPH-G and TPH-D
- Benzene
- Naphthalene.

Site surface water CPOC consists of arsenic.

The CAP should be reviewed for a detailed discussion of development of Site preliminary cleanup levels.

2.2 PHASE II ENVIRONMENTAL INVESTIGATIONS

Two limited Phase II ESAs were conducted at the Site in April and May of 2008 (Geotech Consultants 2008a,b). These investigations were conducted on behalf of a prospective purchaser of the property. The purpose of the investigations was to obtain initial characterization data for evaluating Site environmental conditions.

Investigation of soil at the Site during the Phase II ESAs included collection and analysis of a total of 35 soil samples from soil borings and test pits located throughout the Site for various organic and inorganic constituents. A limited number of exceedances of Site soil cleanup levels were detected in the samples collected from borings and test pits. Of the 10 soil samples collected in Area A, none exhibited detections of the tested constituents above the laboratory reporting limits. Of the 17 soil samples collected in Area B, 4 samples exhibited exceedances of the Site soil cleanup levels for benzene, cPAHs, naphthalene, and/or oil-range petroleum hydrocarbons. Of the eight samples collected in Area C, one sample exhibited an exceedance of the MTCA Method B benzene soil cleanup level.

Investigation of groundwater at the Site included collection and analysis of eight groundwater samples collected from temporary wells installed in soil borings located throughout the Site during the Phase II ESAs. Laboratory analysis of the groundwater samples included a number of organic constituents. The only two exceedances of the Site groundwater cleanup levels detected during the Phase II ESA were limited exceedances of the benzene Site cleanup level at one location the northern portion of the Site (Area C), and exceedances of the gasoline-range petroleum hydrocarbons, benzene, and naphthalene Site cleanup levels at a single location in the southern portion of the Site (Area B). All other groundwater samples collected from the Site during the Phase II ESAs did not exhibit any exceedances of the Site cleanup levels.

2.3 INTERIM CLEANUP ACTION

An interim soil cleanup action was conducted at the Site by GreenCo between July and October 2008 in Areas A, B and C. According to GreenCo (GreenCo and CMSI 2008), the interim cleanup action was focused in these areas to address potential areas of soil contamination identified in the Geotech Consultant's Phase II ESAs.

In Areas A and C, the interim action included excavation and onsite treatment of petroleum hydrocarbon impacted soil. Soil was excavated based on the presence of soil cleanup level exceedances identified during the Phase II ESAs and field screening techniques (visual and olfactory senses). The excavated soil was then treated by amending it with "bio-enhancement chemicals" (what appears to be nitrate-based fertilizer) and mechanically mixing the amended soil to facilitate bio-remediation of the contaminants. Confirmation samples were collected from the bottom and sidewalls of the excavations

and from the remediation piles following treatment to verify that the Site cleanup levels were achieved. The excavations in Areas A and C were then backfilled with the treated soil. A detailed description of the interim action conducted in these areas is presented in the Interim Cleanup Action Report (Landau Associates 2009b).

As previously discussed, characterization and final cleanup of Area B is being addressed separately from the other portions of the Site by PSE due to the source of the contamination in this area. However, GreenCo conducted interim cleanup activities in Area B that impact conditions elsewhere on the Site, and as such, the cleanup activities are discussed in this section. Approximately 6,000 cubic yards of contaminated soil was excavated from Area B and stockpiled in Area A. GreenCo intended to treat the soil in the same manner as that used for Areas A and C. However, after a pilot project demonstrated that treatment for contaminants present in the GWP soil excavated from Area B was ineffective, GreenCo was directed by Verbeek Wrecking to cease treatment of Area B soil and consolidate and secure the contaminated soil. The approximate location of the Area B excavation from which contaminated soil was removed and the former location of the associated contaminated soil stockpile in Area A are shown on Figure 4.

2.4 REMEDIAL INVESTIGATION

RI activities were conducted by Landau Associates and took place between August and October 2009. The RI consisted of investigation of Site soil, groundwater, and surface water (stormwater) to evaluate the effectiveness of the interim cleanup action and fill remaining data gaps regarding Site environmental analysis. A more detailed description and RI results are presented in the CAP (Landau Associates 2009b).

Field activities consisted of:

- Evaluating soil conditions by collecting soil samples for analysis from 29 boring locations (6 of which were converted to monitoring wells) and 16 surface soil sampling locations.
- Sampling of one of the two existing groundwater monitoring wells (MW-1)
- Installing and sampling six additional groundwater monitoring wells (MW-3 through MW-8).

Soil and groundwater samples were analyzed for various constituents, including total petroleum hydrocarbons using the hydrocarbon identification method (TPH-HCID), metals (arsenic, cadmium, chromium, lead, and mercury), and/or cPAHs, with a follow up analysis of TPH-G, TPH-D and TPH-O for selected samples based on the HCID results. Surface water quality was evaluated by collecting and testing one stormwater grab sample from the most downgradient stormwater catch basin for total petroleum hydrocarbons by HCID, total metals (arsenic, cadmium, chromium, lead, mercury, and zinc), VOCs, and cPAHs.

Based on the results of the RI, and taking into consideration the previous Phase II ESAs and interim action, the nature and extent of Site contamination, excluding the GWP material, consisted of the following areas that required cleanup as part of the final cleanup action:

- Lead contamination in the gravel stockpiles located in the southwest corner of Area A
- Diesel-range petroleum hydrocarbon soil and groundwater contamination, and more limited oil and gasoline-range petroleum hydrocarbons, naphthalene, benzene and total xylene soil contamination, in the vicinity of monitoring well MW-8
- cPAHs surface soil contamination in southern portion of Areas C and D, likely related to the underlying GWP material.

These areas are shown on Figure 4. The CAP should be reviewed for a more detailed discussion of the RI scope and results.

2.5 SUPPLEMENTAL RI ACTIVITIES

In addition to the cleanup action, supplemental RI activities were conducted at the request of Ecology to address the following concerns:

- Whether diesel-range petroleum hydrocarbon soil contamination remained in the vicinity of a former diesel underground storage tank (UST) that was located to the north of the shop building in Area D
- Whether Site activities resulted in residual contamination to surface water or sediment via the Site stormwater system
- Whether Site activities resulted in residual contamination to the sanitary sewer lateral located at the north end of the Site.

The scope for the supplemental RI activities was developed in consultation with Ecology. The following sections present the scope of these activities and the associated results.

2.5.1 FORMER UST NORTH OF SHOP BUILDING

On May 17, 2010, Landau Associates conducted a supplemental RI to evaluate whether petroleum hydrocarbon-contaminated soil remained in the vicinity of a former diesel UST. The concern was associated with the elevated diesel concentration (2,400 mg/kg) in site assessment sample USS-8 collected when the tank was decommissioned in 1995 (Figure 6). USS-8 was collected from the excavation for the middle of three USTs decommissioned from the north side of the shop building in 1995 (Geotech Consultants 2008a); the depth of the sample was not recorded. The purpose of the supplemental remedial investigation was to determine whether petroleum-contaminated soil is still present, and if so, to determine the vertical and lateral extent of the contamination.

Five test pits (TP-1 through TP-5) were excavated in the area of soil sample USS-8 to assess soil conditions to a depth of 15 ft below ground surface (BGS) at the locations shown on Figure 6. The test

pits were completed using a rubber-tired backhoe operated by Kelly's Excavating. Test pits were excavated to refusal, which ranged from 12 to 14 ft BGS. Field screening and soil classification were conducted by a Landau Associates environmental professional. In general, the test pits encountered 2 to 4 ft of brown fill material, underlain by orange weathered glacial till and grey unweathered glacial till. The backhoe met refusal in very dense unweathered glacial till at 12 to14 ft BGS. Shallow groundwater was not encountered in any of the test pits. More detailed descriptions of the materials encountered during excavation of the test pits are provided on the exploration logs presented in Appendix A.

One to two soil samples were collected from each test pit and submitted for laboratory analysis based on the field screening information, and the material and stratigraphy encountered. No sheen, staining, or olfactory evidence of petroleum contamination was observed and there were no elevated PID results for excavated soil. Therefore, soil samples were collected for laboratory analysis at a variety of depths where contamination would be expected, if present, based on stratigraphy and the likely invert depth of the former UST. The soil samples submitted for laboratory analysis were collected from depths ranging from 5 to 14 ft BGS. The samples were analyzed for diesel- and oil-range petroleum hydrocarbons.

Analytical results for diesel and oil-range petroleum hydrocarbons were all below laboratory reporting limits with the exception of one soil sample from TP-1 in which motor oil-range petroleum hydrocarbon were detected at a concentration (260 mg/kg) well below the site soil cleanup level of 2,000 mg/kg. Analytical results are presented in Table 3.

Based on this information, the USS-8 sample was either not a representative sample of the soil remaining in the excavation at the time the USTs were decommissioned, or the concentrations have since decreased through natural attenuation. Based on these results, further remedial activity in the former UST area north of the shop building is not warranted.

2.5.2 Stormwater System Sediment Sampling

At the request of Ecology (Ecology 2010a), Landau Associates investigated the potential presence of contamination in sediment at the point of surface water discharge from the stormwater system for the Site. On May 17, 2010, a sediment sample was collected for laboratory analysis from the location where the Site stormwater system discharges to surface water at the head of an unnamed stream to the south of the Site. The sampling location is located approximately 0.17 mile south of the Site, as shown on Figure 7. The sample was collected from the sediment directly underneath the outfall. The sample was analyzed for Semi-Volatile Organic Compounds (SVOCs) and total metals, including arsenic, barium, cadmium, chromium, mercury, and lead, selenium, and silver.

SVOCs butyl benzyl phthalate and bis (2-ethylhexyl) phthalate were detected at concentrations greater than the laboratory reporting limits, but less than the Site soil cleanup levels. Mercury, arsenic, barium, chromium and lead were detected at concentrations greater than the laboratory reporting limits but less than the Site soil cleanup levels. Analytical results are presented in Table 4 and detected constituents are shown on Figure 7. Based on these results, Site releases have not adversely affected surface water sediment at the point of Site stormwater discharge and no further remedial action is warranted.

2.5.3 SEWER VIDEO SURVEY

At the request of Ecology (Ecology 2010a), the sanitary sewer line at the north end of the Site was video surveyed to investigate the potential for contaminated solids associated with previous Site releases to have accumulated in the sanitary sewer line. On August 31, 2010 Applied Professional Services (APS) performed a video survey in the sanitary sewer located in Area C (Figure 4. Results of the video survey showed no indications of accumulation of potentially contaminated solids, however, the line appeared to be collapsed approximately 60 ft north of the sanitary sewer stub-out on the Site. On September 14, 2010, the sanitary sewer line was excavated around the area of collapse and an additional video survey was performed in the section of piping not previously evaluated. The video survey showed no indication of accumulated solids or other indications of contamination between the point of entry and the connection with the main sewer line located in the 183rd Street SE right-of-way. The sewer line, which is no longer active, was capped and buried, and the location staked for future reference. The sewer survey videos are maintained in Landau Associates' files and are available for review upon request.

3.0 DEVELOPMENT OF THE CLEANUP ACTION

Development of a cleanup action for a site is a multi-step process. First, cleanup action objectives (CAOs) are established for the Site. Next, cleanup action technologies are evaluated to determine those technologies that are capable of achieving the established CAOs. The cleanup technologies were then assembled into alternatives that achieve all CAOs, and the alternatives are compared against criteria established under MTCA to select the most practicable cleanup action for the site.

This alternative development, evaluation, and selection process is typically accomplished by conducting a feasibility study [FS; WAC 173-340-350(8)]. The FS develops alternatives that achieve the CAOs, compares the alternatives against criteria established under MTCA (WAC 173-340-360), and selects the alternative that is permanent to the maximum extent practicable. However, the need to integrate Site cleanup with as yet undetermined future redevelopment of the Site focuses the cleanup on those actions that are compatible with a wide range of future redevelopment options. Therefore, rather than conducting an FS, the alternatives considered for Site cleanup were described and the selected cleanup action was compared against MTCA requirements to demonstrate compliance. An in-depth description of cleanup action objectives, development, and selection of cleanup action for the Site is presented in the CAP (Landau Associates 2009a).

Based on the development and evaluation of response actions and cleanup technologies, the selected final cleanup action for the Site soil and groundwater consists of the following elements:

- Excavation and offsite disposal of contaminated soil
- Removal and treatment/disposal of contaminated groundwater
- Soil and groundwater compliance monitoring.

Soil removal and offsite disposal was the selected remedy for cleanup of soil containing concentrations of metals, petroleum hydrocarbons, and/or cPAHs above the Site cleanup levels. Three soil cleanup action areas existed at the Site that were addressed under the cleanup action:

- Lead contaminated gravel stockpiles in the southwest corner of the Site (Area A)
- cPAH-contaminated surface soil near the center of the Site (Areas B/C)
- Petroleum hydrocarbon-contaminated soil near the center of the Site (Area D).

These cleanup action areas are shown on Figure 4. As previously described, the cPAH-contaminated surface soil was addressed in conjunction with the GWP material cleanup action being conducted by an outside party and the results of the cleanup action for this area are addressed in documentation associated with this concurrent cleanup action.

4.0 IMPLEMENTATION OF THE CLEANUP ACTION

The cleanup action was conducted between July and October 2010. The following sections describe the cleanup activities and the results of post-cleanup compliance monitoring. As previously discussed, cleanup of the GWP material and the cPAH surface soil contamination are addressed in a separate cleanup report prepared by PSE's consultant, DOF.

4.1.1 GRAVEL PILES

The two gravel stockpiles in the southwest corner of the Site that exceeded the Site cleanup level for lead were excavated and disposed of at a licensed solid waste landfill. A total of 2,013 tons of gravel and underlying soil was removed from the two stockpiles. The piles were excavated to adjacent grades, and an additional 3 inches of underlying soil was excavated to remove all affected soil. Following excavation, 6 compliance monitoring confirmation soil samples were collected from the upper 6 inches of soil underlying the former gravel piles at the locations shown on Figure 4. The compliance monitoring samples were submitted for analysis of lead and the analytical results are included in Table 5. Detected concentrations of lead ranged from 1.9 mg/kg to 9.5 mg/kg). The soil analytical results for all compliance monitoring samples were below the Site cleanup level for lead (220 mg/kg).

4.1.2 TPH CONTAMINATION AREA

Prior to excavation in the TPH contamination area, MW-8 was decommissioned by Cascade Drilling, Inc. (Cascade) due to its location within the proposed excavation area. Cleanup of the TPH contamination area included the remediation of both soil and groundwater, as described in the following sections.

4.1.3 SOIL CLEANUP

Due to the overburden present above the diesel-contaminated soil and the elevated surface on the eastern side of the excavation, about 2,900 yd^3 of clean soil was excavated to access and remove the contaminated soil. The excavated clean overburden soil was stockpiled on site, and two samples (EX-S-SP3-E and EX-S-SP3-W) were collected from the stockpile and analyzed for TPH-G, TPH-D, TPH-O, and VOCs to confirm that the soil did not exceed Site cleanup levels. Soil stockpile analytical results are presented in Table 6. The soil stockpile analytical results were below the Site cleanup levels and soil from the clean overburden stockpile was later used to backfill the excavation.

Prior to excavation of clean overburden material in the western portion of the excavation area, unanticipated oil-range petroleum hydrocarbon soil contamination associated with the disposal of used oil

filters was encountered in what was anticipated to be clean overburden soil and was remediated as described in Section 4.3. Following removal of the unanticipated soil contamination, the planned diesel-range petroleum hydrocarbon contamination was excavated and transported to the CEMEX Everett, Washington facility for thermal desorption.

Diesel-contaminated soil was excavated to depths up to about 15 ft BGS. Groundwater dewatering was required in order to excavate about the bottom 3 feet of contaminated soil in the dry. The excavation generally conformed to the planned excavation boundary, except that it was expanded to the south based on observed conditions. The volume of contaminated soil removed from this area was about 1,600 yd^3, approximately 1,000 yd^3 more than what was estimated in the CAP (Landau Associates 2009b); this soil volume does not include the unanticipated oil filter soil contamination described in Section 4.3. The limits of the excavation were not greatly increased from the planned limits; however, the amount of soil from the excavation that was managed as contaminated was significantly greater than anticipated. The excavation limits of the petroleum hydrocarbon-contaminated soil area are shown on Figures 4 and 5.

Following excavation and prior to backfilling, soil compliance monitoring samples were collected at the base and along the sidewalls of the excavation to evaluate the effectiveness of the soil cleanup action. Three soil samples (EX-S-B1, EX-S-B2, and EX-S-B3) were collected from the upper 6 inches at the base of the excavation, as shown on Figure 5. To collect data representative of the soil remaining along the sidewalls of the excavation, six samples (EX-S-SW-W1, -NW1, -NE1, -E1, -SE1, and -SW1) sample series) were initially collected from the sidewalls of the excavation at evenly spaced locations. Three additional sidewall samples (EX-S-SW-W2, -SE2, and -SW-2) were collected along the southern boundary after additional soil (including the locations of samples EX-S-SW-SW1 and -SE1) was excavated to remove soil containing groundwater with observable sheen, as described in Section 4.2 below. Sidewall samples were collected from the depth interval identified as contaminated in that area of the excavation. Visual observation (e.g., soil discoloration, presence of debris or sheen) and use of appropriate instrumentation (e.g., photoionization detector) showed no evidence of contamination at the base or sidewalls of the completed excavation.

Soil compliance monitoring samples collected from the excavation were submitted for analysis and evaluated to determine the need for any additional excavation. Samples were analyzed TPH-D, TPH-G, and TPH-O, and/or VOCs (including naphthalene). The analytical results of soil confirmation sampling are presented in Table 6. As is indicated, all results for soil remaining are below the Site cleanup levels listed in Table 1.

4.1.4 GROUNDWATER CLEANUP

Based on the results of the RI, the MW-8 vicinity was the only location where contaminated groundwater was present at the Site. The excavation of petroleum hydrocarbon-affected soil in Areas B, C, and D removed the source of elevated petroleum hydrocarbon concentrations previously detected in groundwater in this area. Groundwater cleanup was also aided by the dewatering that was needed to support excavation of diesel-contaminated soil in this area and associated product skimming from the excavation and the water holding tanks. The volume of groundwater extracted during dewatering was approximately 70,000 gallons. The groundwater extracted during dewatering was first skimmed with oil absorbent booms and pads and then pumped to temporary storage (Baker tanks) with internal baffles to segregate any free product, and tested to determine applicable requirements for treatment and disposal. Absorbent pads and booms were also maintained inside the first compartment of the holding tanks to recover any free product prior to the groundwater entering other compartments closer to the point of discharge from the tanks. Although minor sheen was recovered, no measurable free product was observed in the tanks.

A water grab sample was collected from the temporary storage tank prior to discharge (EX-Water-Tank-2) and the analytical results are presented in Table 7. The storage tank grab water sample analytical data indicated that the diesel and oil petroleum hydrocarbon concentrations in the extracted groundwater (410 µg/L and 260 µg/L, respectively) were below the Site cleanup levels (500 µg/L) and the water contained in the temporary storage tanks was subsequently discharged to the temporary detention storage area located in Area A and Area C, consistent with the water management process described in the CAP (Landau Associates 2009a). Prior to discharge, stormwater catch basins were plugged and the detention area was constructed according to the Grading Plan described in the CAP (Landau Associates 2009a).

Upon completion of the planned excavation area, groundwater emanating from the southern sidewalls of the excavation exhibited an observable sheen. Sheen was skimmed from the water surface using absorbent pads and booms, and further horizontal excavation was conducted along the southern sidewall. Excavation continued in this area until groundwater flowing into the excavation exhibited no observable sheen. A groundwater compliance monitoring grab sample was collected from the excavation bottom (EX-Water-Bottom-4). Analytical results for this sample are presented in Table 7. As is indicated in Table 4, TPH-D was detected at a concentration of 180 µg/L, which is below the Site cleanup level of 500 µg/L. The extent of the TPH contamination area excavation is shown on Figure 5.

Following the backfilling of the excavation, two monitoring wells (MW-9 and MW-10) were installed just west of the western extent of the excavation to evaluate groundwater conditions down gradient of the excavation area. The well locations were selected in consultation with Ecology (Ecology

2010b). Borings for MW-9 and MW-10 were advanced using hollow-stem auger drilling to depths of 20.5 and 21.5 ft BGS, respectively, and were completed to at least 5 ft into the uppermost hydrostratigraphic unit. No evidence of petroleum hydrocarbon impacts was observed during advancement of the soil borings. Well locations are shown on Figure 4, and boring logs are presented in Appendix A. As detailed in the Compliance Monitoring Plan (Landau Associates 2009a), two quarterly rounds of groundwater monitoring and sampling were be performed at the newly installed monitoring wells, to confirm that the cleanup action was effective in remediating TPH groundwater contamination. Groundwater samples were collected from MW-9 and MW-10 on September 29, 2010 and December 16, 2010, and were tested for petroleum hydrocarbons in the diesel and oil ranges. The analytical results for two quarterly rounds of groundwater samples are presented in Table 7. As is indicated, the analytical results for both rounds of sampling were below the laboratory reporting limits.

4.2 UNANTICIPATED CONDITIONS

During implementation of the cleanup action, unanticipated soil contamination was encountered in the vicinity of the TPH excavation area. The Site owner had previously indicated that used oil filters had been disposed of in the vicinity of the TPH excavation area, but the oil filter disposal area was not located during the RI. However, during excavation of the clean overburden soil in the western portion of the TPH contamination area, the former used automotive filter disposal area was encountered in what was anticipated to be clean soil overlying the TPH soil contamination. The presence of the oil filter contaminated soil was confirmed through visual identification of used automotive oil filters and oil-stained soil. The contaminated soil was excavated and stockpiled for analysis. Five soil samples were collected from within the oil filter contamination excavation area (EX-S-1 through EX-S-5) and the oil filter contaminated soil stockpile (EX-S-SP1), and analysis of these samples confirmed the presence of diesel-range and motor oil-range petroleum hydrocarbons, VOCs, and PAHs at concentrations exceeding the Site cleanup levels. Analytical results of oil filter contaminated soil samples are presented in Table 7 and the oil filter contamination area is shown on Figure 5.

A total of 1,227 tons (about 800 cubic yards) of contaminated soil and oil filters were excavated from the oil filter contamination area. The material was disposed of at the Allied Waste solid waste landfill facility. Because of its location within the planned TPH area excavation, removal of the oil filter contamination transitioned directly into excavation of the planned TPH-contaminated soil so it was not necessary to collect soil compliance monitoring samples independent of the planned sampling for the TPH area. Compliance monitoring soil samples for the TPH-contaminated soil are discussed above in Section 4.1.2.

5.0 CONCLUSIONS

Cleanup of the Site as detailed in the CAP (Landau Associates 2009a) is complete. The cleanup levels for the Site were developed using the MTCA Method B cleanup levels for unrestricted site use and all cleanup areas were remediated to below the Site cleanup levels established for soil groundwater and surface water. In addition, supplemental RI activities completed at the Site did not identify additional areas of contamination. Therefore, institutional controls or long-term compliance monitoring are not required and in the opinion of Landau Associates, the cleanup action conducted at the Site achieves the substantive requirements for cleanup under the MTCA and warrants a no further action determination from Ecology, subject to the receipt of similar results for the cleanup of the GWP material that was conducted under the direction of PSE.

6.0 USE OF THIS REPORT

This cleanup action report has been prepared for the exclusive use of Verbeek Properties LLC for specific application to the Verbeek Wrecking Site. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of the Verbeek Properties LLC and Landau Associates. Further, the reuse of information and conclusions provided herein for extensions of the project or for any other project, without review and authorization by the Verbeek Properties LLC and Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

This document has been prepared under the supervision and direction of the following key staff.

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LDB/PRR/rgm

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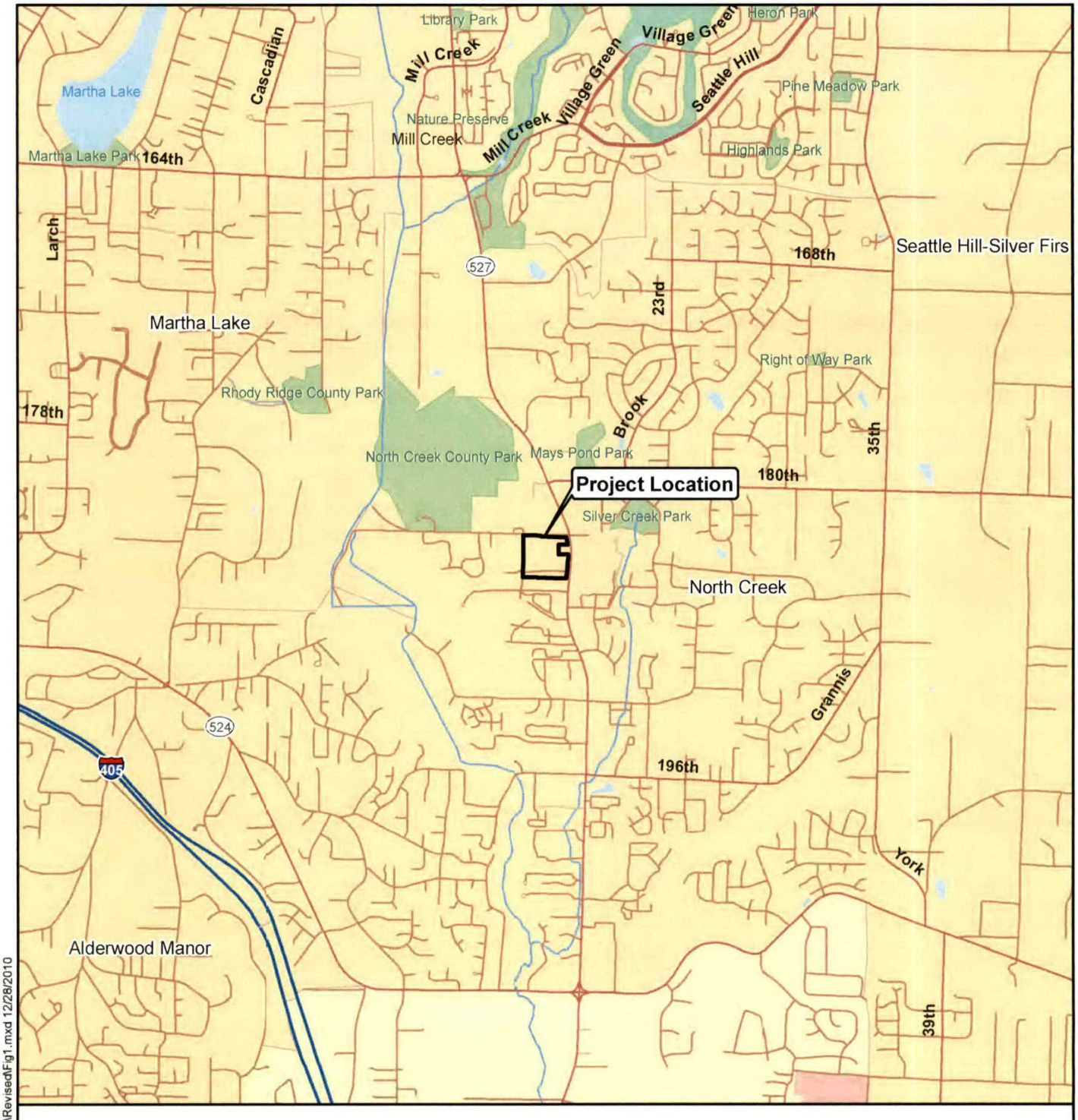

N

0 0.5 1

Miles

Data Source: ESRI 2008

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Verbeek Wrecking Bothell/Snohomish County Washington	**Vicinity Map**	Figure 1

0 120 240

Scale in Feet

Data Source: Snohomish County; ESRI

Y:\Projects\1173001\MapDocs\CAP Summary Report\RevisedFig2.mxd 12/28/2010

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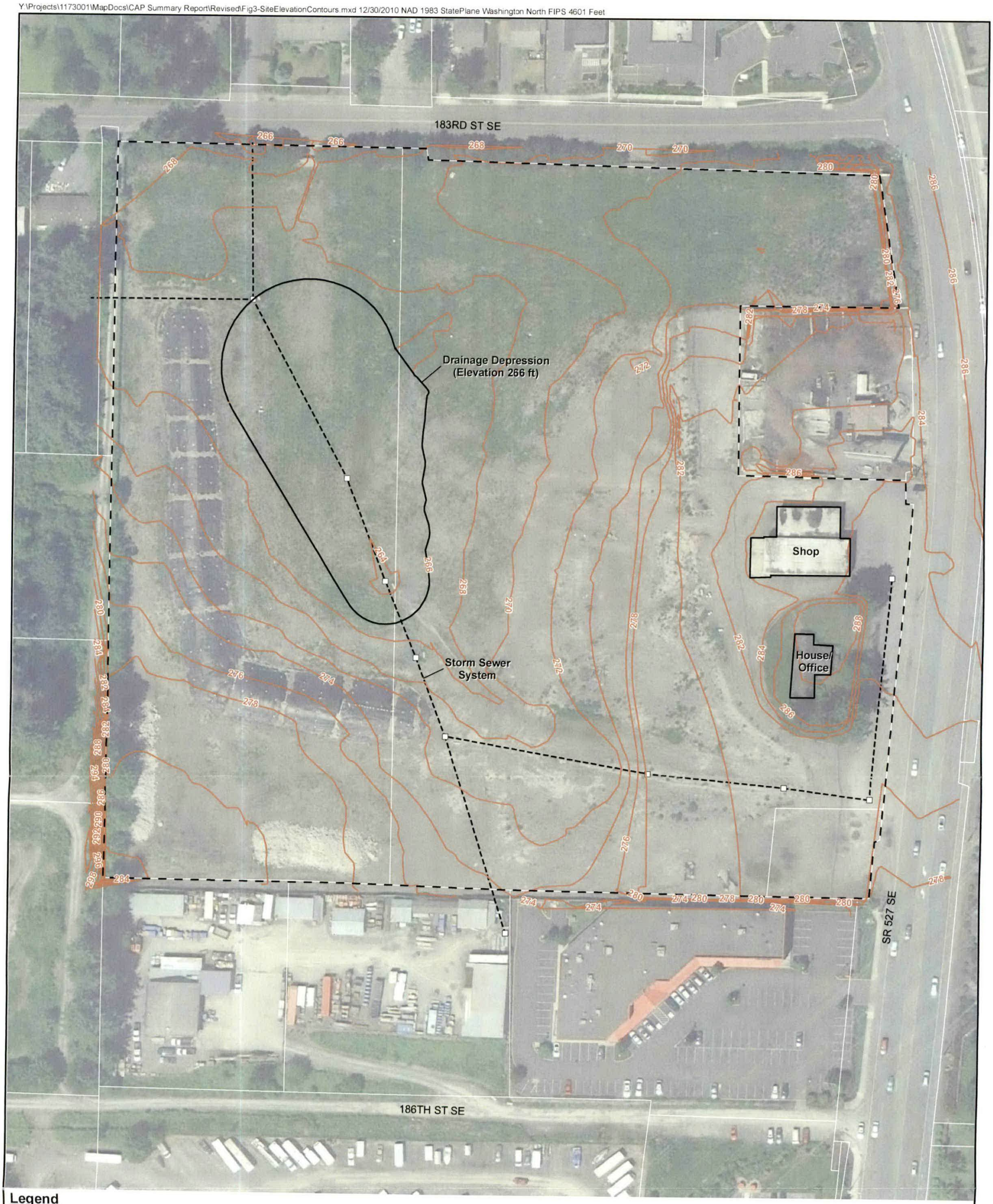
Verbeek Wrecking Bothell/Snohomish County Washington	**Historic Site Plan**	Figure 2

Y:\Projects\1173001\MapDocs\CAP Summary Report\Revised\Fig3-SiteElevationContours.mxd 12/30/2010 NAD 1983 StatePlane Washington North FIPS 4601 Feet



Legend

- Elevation Contour
- Catch Basin
- Storm Drains and Sanitary Sewer Lines
- Site Boundary

0 100 200

Scale in Feet

N

Data Source: Snohomish County; ESRI; Western Engineers Inc.

Note
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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Verbeek Wrecking
Bothell/Snohomish County,
Washington

Site Topography

Figure
3

Y:\Projects\1173001\MapDocs\CAP Summary Report\Revised\Fig4.mxd 12/30/2010 NAD 1983 StatePlane Washington North FIPS 4601 Feet

183RD ST SE

MW-6

Sanitary Sewer Stub-out

CB

MW-5

MW-3

C

CB

A

MW-4

CB

MW-7

Shop

D

CB

EX-S-SW-NW1

EX-S-SW-NE1

EX-S-SW-W1

MW-8

EX-S-SW-E1

EX-S-SW-W2

EX-S-B1

EX-S-B2

EX-S-B3

EX-S-SW-SW1

EX-S-SW-SE1

Former Stockpile Material From Area B

CB

House/ Office

MW-2

EX-S-SW-SW2

EX-S-SW-SE2

B

See Figure 5

CB

CB

CB

A-GP-CS-2

A-GP-CS-3

A-GP-CS-1

A-GP-CS-5

A-GP-CS-6

A-GP-CS-4

MW-1

SR 527 SE

186TH ST SE

Legend

- Approximate Soil Confirmation Sample Locations
- Existing Monitoring Well - Green Co. 2008
- RI Monitoring Well Location
- Elevation Contour
- Storm Drains and Sanitary Sewer Lines
- Gravel Stockpile
- Former GWP Soil Stockpile
- cPAH Affected Area
- TPH Excavation Area
- Approximate Extent of Excavated GWP Fill

N

0 100 200

Scale in Feet

Data Source: Snohomish County; ESRI; Western Engineers Inc.

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Note

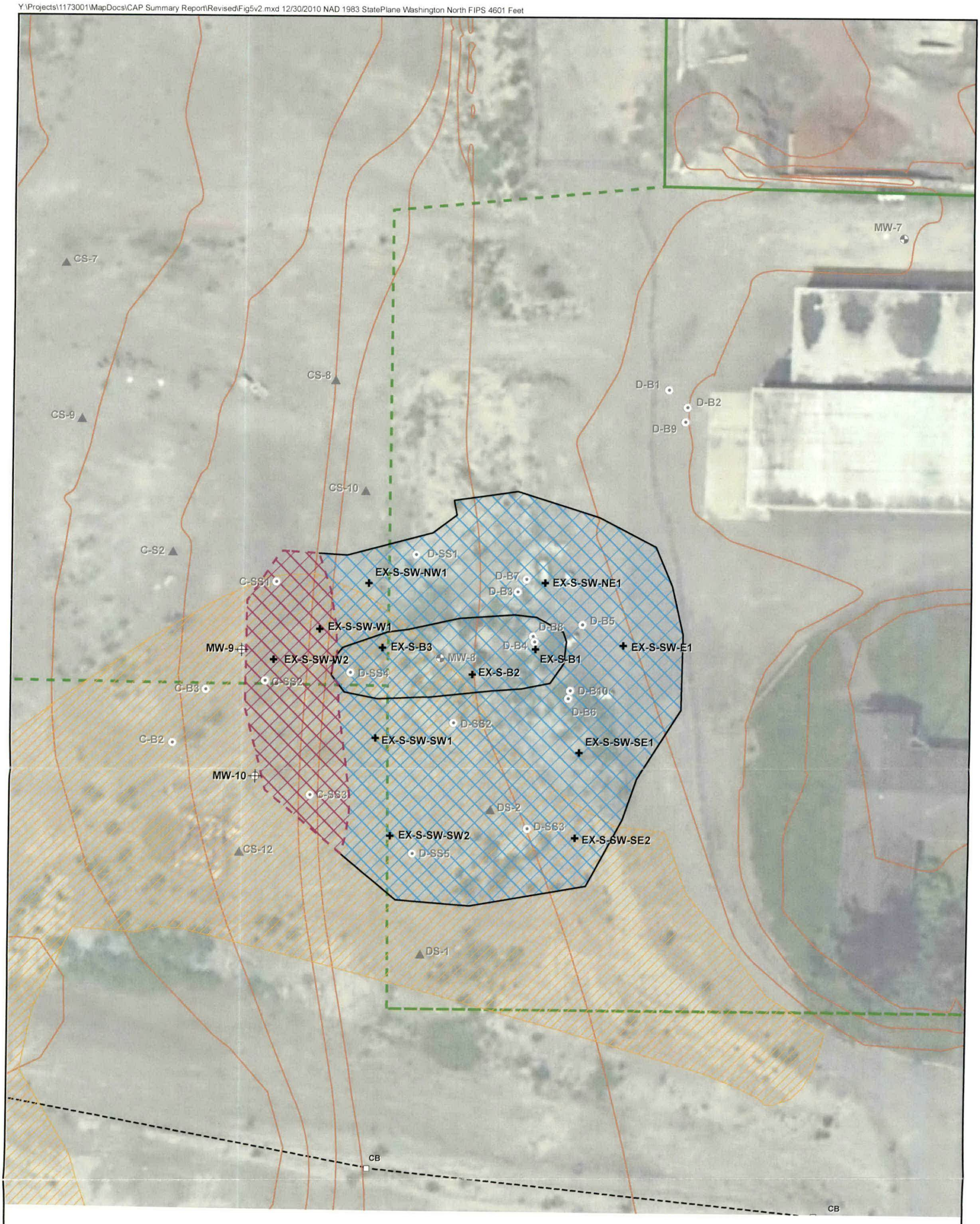
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Verbeek Wrecking
Bothell/Snohomish County, Washington

Cleanup Action Areas and Confirmation Sampling Locations

Figure 4

Y:\Projects\1173001\MapDocs\CAP Summary Report\Revised\Fig5v2.mxd 12/30/2010 NAD 1983 StatePlane Washington North FIPS 4601 Feet



Legend

- Approximate Soil Confirmation Sample Locations
- RI Boring Location
- RI Monitoring Well Location
- RI Surface Soil Sample Location
- Storm Drains and Sanitary Sewer Lines
- Elevation Contour
- Petroleum Hydrocarbon Affected Area
- Approximate Extent of Remaining GWP Fill
- Approximate Location of Oil Filter Area

N

0 30 60

Scale in Feet

Data Source: Snohomish County; ESRI; Western Engineers Inc.

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Notes

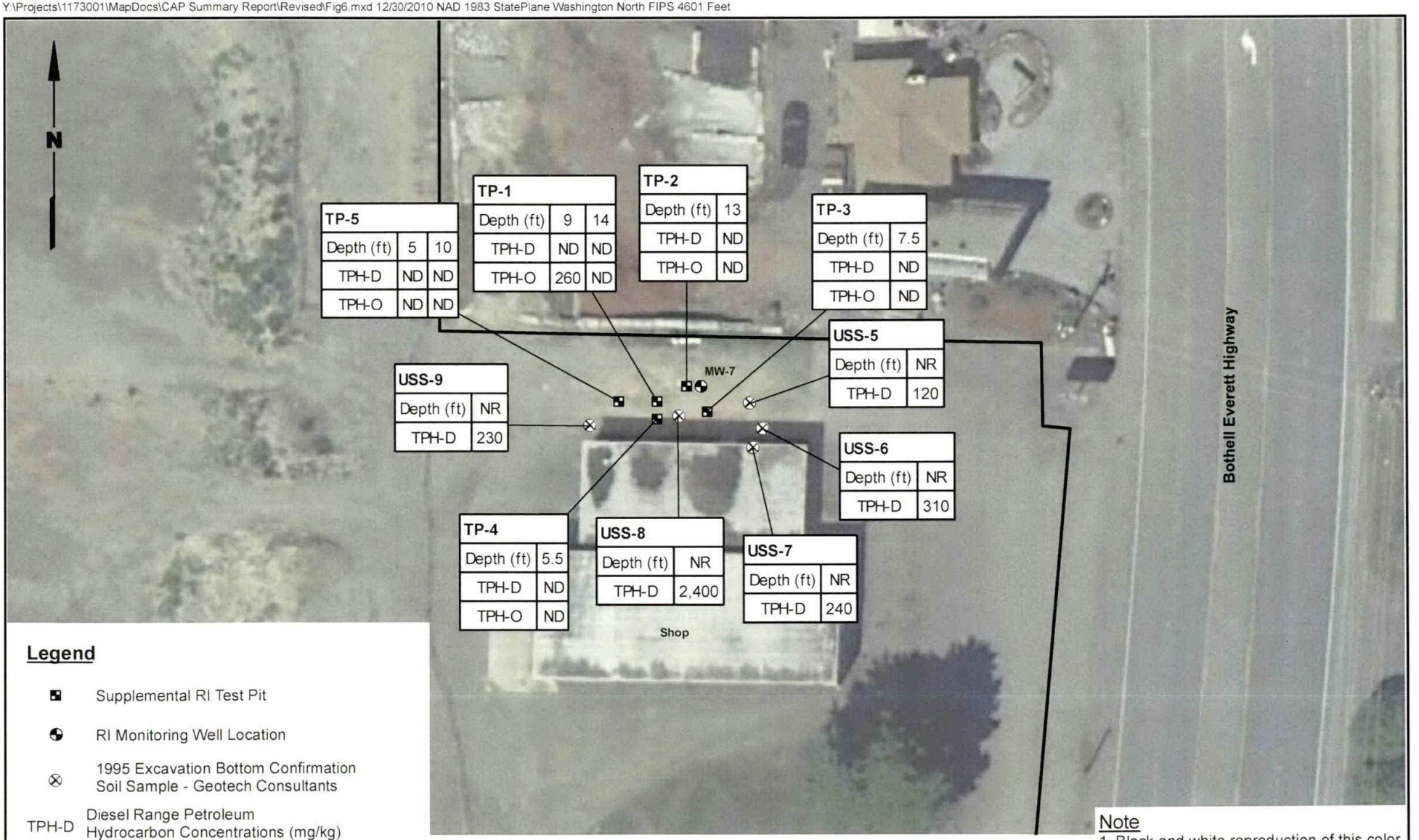
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Verbeek Wrecking
Bothell/Snohomish County, Washington

TPH Impacted Area Soil and Groundwater Compliance Monitoring Locations

Figure 5

Y:\Projects\1173001\MapDocs\CAP Summary Report\Revised\Fig6.mxd 12/30/2010 NAD 1983 StatePlane Washington North FIPS 4601 Feet



Legend

- Supplemental RI Test Pit
- RI Monitoring Well Location
- 1995 Excavation Bottom Confirmation Soil Sample - Geotech Consultants
- TPH-D: Diesel Range Petroleum Hydrocarbon Concentrations (mg/kg)
- TPH-O: Oil Range Petroleum Hydrocarbon Concentrations (mg/kg)

Data Source: Snohomish County; Google Earth Pro

Note
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.
2. ND = Not Detected
3. All results reported in mg/kg.

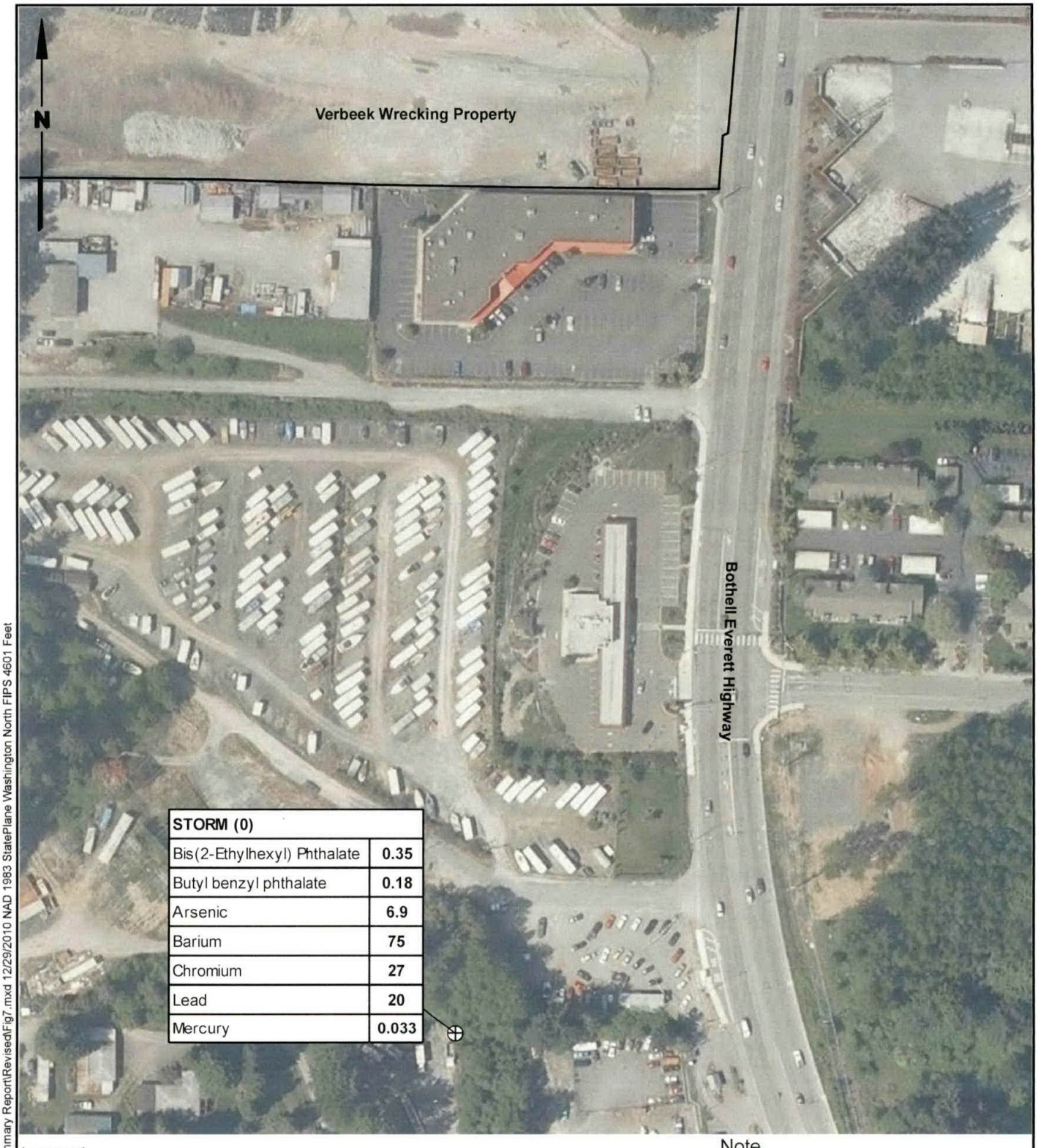
0 40 80
Scale in Feet

LANDAU ASSOCIATES

Verbeek Wrecking
Bothell/Snohomish County, Washington

Test Pit Locations and Analytical Results

Figure 6



STORM (0)	
Bis(2-Ethylhexyl) Phthalate	0.35
Butyl benzyl phthalate	0.18
Arsenic	6.9
Barium	75
Chromium	27
Lead	20
Mercury	0.033

Legend

⊕ Stormwater Outfall Sediment Sampling Location

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.
2. All results reported in mg/kg.

0 150 300

Scale in Feet

Data Source: I3 Imagery

Y:\Projects\1173001\MapDocs\CAP Summary Report\Revised\Fig7.mxd 12/29/2010 NAD 1983 StatePlane Washington North FIPS 4601 Feet

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Verbeek Wrecking
Bothell/Snohomish County,
Washington

Storm System Sediment Sample Location and Analytical Results

Figure 7

TABLE 1
SITE SOIL CLEANUP LEVELS
VERBEEK WRECKING
BOTHELL, WASHINGTON

	Protective of Direct Human Contact		Protective of Groundwater as Drinking Water	Protective of Terrestrial Ecological Receptors	Adjustments		
Constituent	MTCA Method B Unrestricted Land Use Carcinogen	MTCA Method B Unrestricted Land Use Non-Carcinogen	MTCA Method B (a)	Primary Contaminant Soil Concentrations Protective of Terrestrial Ecological Receptors Unrestricted Land Use (b)	PQL (b)	Soil Background (c)	**Preliminary Cleanup Level**
METALS (mg/kg)							
Arsenic	0.67	24	20 (d)	95	5	7	20
Barium	--	16,000	1700 (k)	1,250	50	--	16,000/1,250 (e)
Cadmium	--	80	0.69 (k)	25	1	1.0	25
Chromium III	--	120,000	3,600,000	42	5	48	120,000/48 (e)
Lead	--	250 (f)	-- (g)	220	5	24	250/220 (e)
Mercury	--	24	2.1 (k)	0.7	0.05	0.07	24 / 0.7 (e)
TOTAL PETROLEUM HYDROCARBONS (mg/kg)							
Diesel-Range	--	2,000 (h)	2,000 (h)	460	20	--	2,000/460 (e,h)
Gasoline-Range	--	100/30 (h, i)	100/30 (h, i)	200	5.0	--	100/30 (h,i)
Oil-Range	--	2,000 (h)	2,000 (h)	--	50	--	2,000 (h)
BTEX (mg/kg)							
Benzene	18	320	0.03	--	0.02	--	0.03
Ethylbenzene	--	8,000	6.0	--	0.05	--	6.0
Toluene	--	6,400	4.7	--	0.05	--	4.7
Xylenes (total)	--	16,000	15	--	0.05	--	15
m,p-Xylene	--	160,000	84	--	0.05	--	84
o-Xylene	--	160,000	92	--	0.05	--	92
Ethylene Glycol	--	160,000	-- (g)	--	--	--	160,000
VOLATILES (mg/kg)							
1,2,4-Trimethylbenzene	--	4,000	-- (g)	--	0.05	--	4,000
1,3,5-Trimethylbenzene	--	4,000	-- (g)	--	0.05	--	4,000
Isopropylbenzene	--	--	--	--	0.05	--	--
Isopropyltoluene	--	--	--	--	0.05	--	--
n-Butylbenzene	--	--	--	--	0.05	--	--
n-Propylbenzene	--	--	--	--	0.05	--	--
tert-Butylbenzene	--	--	--	--	0.05	--	--
p-Isopropyltoluene	--	--	--	--	0.05	--	--
sec-Butylbenzene	--	--	--	--	0.05	--	--
PCBS (mg/kg)							
Total PCBs	--	1 (h)	1 (h)	--	0.30	--	1 (h)

TABLE 1
SITE SOIL CLEANUP LEVELS
VERBEEK WRECKING
BOTHELL, WASHINGTON

Constituent	Protective of Direct Human Contact: MTCA Method B Unrestricted Land Use Carcinogen	Protective of Direct Human Contact: MTCA Method B Unrestricted Land Use Non-Carcinogen	Protective of Groundwater as Drinking Water: MTCA Method B (a)	Protective of Terrestrial Ecological Receptors: Primary Contaminant Soil Concentrations Protective of Terrestrial Ecological Receptors Unrestricted Land Use (b)	Adjustments: PQL (b)	Adjustments: Soil Background (c)	**Preliminary Cleanup Level**
PAHS (mg/kg)							
Naphthalene	--	1,600	4.5	--		--	4.5
1-Methylnaphthalene	--	--	-- (g)	--	0.10	--	--
2-Methylnaphthalene	--	320	-- (g)	--	0.10	--	320
1,2-Methylnaphthalenes		--	--	--	--	--	--
Acenaphthene	--	4,800	98	--	0.10	--	98 / 20 (e)
Fluorene	--	3,200	101	--	0.10	--	101 / 30 (e)
Phenanthrene	--	--	--	--	0.10	--	
Fluoranthene	--	3,200	630	--	0.10	--	630
Pyrene	--	2,400	650	--	0.10	--	650
Benzo(g,h,i)perylene	--	--	--	--	0.10	--	--
Benzo(a)pyrene	see total cPAHs	--	see total cPAHs	--	0.10	--	see total cPAHs
Benzo(a)anthracene	see total cPAHs	--	see total cPAHs	--	0.10	--	see total cPAHs
Benzo(b)fluoranthene	see total cPAHs	--	see total cPAHs	--	0.10	--	see total cPAHs
Benzo(k)fluoranthene	see total cPAHs	--	see total cPAHs	--	0.10	--	see total cPAHs
Chrysene	see total cPAHs	--	see total cPAHs	--	0.10	--	see total cPAHs
Dibenzo(a,h)anthracene	see total cPAHs	--	see total cPAHs	--	0.10	--	see total cPAHs
Indeno(1,2,3-cd)pyrene	see total cPAHs	--	see total cPAHs	--		--	see total cPAHs
Total cPAH - benzo(a)pyrene TEQ (i)	0.14	--	2.3 (k)		--	--	0.14

Shaded cell indicates basis for screening levels.

-- Indicates no criterion available.

(a) Calculated using fixed parameter 3-phase partitioning model, WAC 173-340-747(4) and preliminary groundwater cleanup levels shown in Table 2 of this report.

(b) Practical quantitation limit calculated using ten times Analytical Resources, Inc.'s 2008 method detection limit.

(c) From Ecology's Natural Background Soil Metals Concentrations in Puget Sound (1994). Used 90th percentile for Puget Sound.

(d) The MTCA Method A soil cleanup level for unrestricted site use was used for arsenic because it was established based on adjustments for background. From Responsiveness Summary for the Amendments to the MTCA Cleanup Regulation Chapter 173-340 WAC 1991.

(e) Soil concentrations protective of terrestrial ecological receptors apply to soil above a depth of 15 feet below ground surface.

(f) No MTCA Method B criteria available. MTCA Method A criteria based on preventing unacceptable blood lead levels is presented.

(g) Value cannot be calculated because Koc value is not available for this constituent.

(h) MTCA Method A soil cleanup levels for unrestricted land use.

(i) MTCA Method A cleanup level is 30 mg/kg when benzene is present and 100 mg/kg when benzene is not present.

(j) A toxicity equivalency quotient (TEQ) will be completed for each sample containing carcinogenic PAHs above reporting limits and the sum of the TEQs will be compared to the benzo(a)pyrene cleanup level in accordance with 173-340-708(8)(e).

(k) Critera based on protection of groundwater not applicable based on empirical demonstartion that groundwater not affected

TABLE 2
SITE GROUNDWATER CLEANUP LEVELS
VERBEEK WRECKING
BOTHELL, WASHINGTON

	Federal and State Criteria Protective of Drinking Water						MTCA Method B Unadjusted Site Screening Levels		MTCA Method B Adjusted Preliminary Cleanup Levels
Constituent	Federal MCL	State MCL	MTCA Method A	MTCA Method B (Formula Value) Carcinogen	MTCA Method B - Non Carcinogen	Concentration Associated with 10^{-5} Risk (if carcinogen)	**Protective of Drinking Water**	PQL (a)	**Protective of Drinking Water**
TOTAL METALS (µg/L)									
Arsenic	10	10	5.0	0.058	4.8	0.58	0.58	0.20	5.0 (b)
Barium	2,000	2,000	--	--	3,200	--	2,000	0.50	2,000
Cadmium	5.0	5.0	5.0		8.0	--	5.0	0.20	5.0
Chromium (total)	100	100	50	--	--	--	100	0.50	100
Chromium (III)	--	100	--	--	24,000	--	100	--	100
Chromium (VI)	--	100	--	--	48	--	48	--	48
Lead	15	15	15	--	--	--	15	1.0	15
TOTAL PETROLEUM HYDROCARBONS (µg/L)									
Diesel-Range	--	--	500	--	--	--			500
Gasoline-Range	--	--	1,000/800 (c)	--	--	--			1,000/800 (c)
Oil-Range	--	--	500	--	--	--			500
BTEX (µg/L)									
Benzene	5.0	5.0		0.8	32	8.0	5	1.0	5
Ethylbenzene	700	700		--	800	--	700	1.0	700
Toluene	1,000	1,000		--	640	--	640	1.0	640
Xylenes (total)	10,000	10,000		--	1,600	--	1,600	1.0	1,600
VOLATILES (µg/L)									
Acetone	--	--	--	--	800	--	800	10.0	800
2- Butanone (MEK)	--	--	--	--	4,800	--	4,800	10.0	4,800
1,2,4-Trimethylbenzene	--	--	--	--	400	--	400	1.0	400
1,3,5-Trimethylbenzene	--	--	--	--	400	--	400	1.0	400
Isopropylbenzene	--	--	--	--	--	--	--	1.0	--
n-Propylbenzene	--	--	--	--	--	--	--	1.0	--
Methyl-t-butyl ether	--	--	--	24	6,900	--	24	1.0	24
tert-Butylbenzene	--	--	--	--	--	--			

TABLE 2
SITE GROUNDWATER CLEANUP LEVELS
VERBEEK WRECKING
BOTHELL, WASHINGTON

	Federal and State Criteria Protective of Drinking Water						MTCA Method B Unadjusted Site Screening Levels		MTCA Method B Adjusted Preliminary Cleanup Levels
Constituent	Federal MCL	State MCL	MTCA Method A	MTCA Method B (Formula Value) Carcinogen	MTCA Method B - Non Carcinogen	Concentration Associated with 10^{-5} Risk (if carcinogen)	**Protective of Drinking Water**	PQL (a)	**Protective of Drinking Water**
PAHs (µg/L)									
Naphthalene	--	--	160 (d)	--	160	--	160 (d)	0.38	160 (d)
2-Methylnaphthalene	--	--	160 (d)	--	32 (e)	--	32 (e)	0.32	32 (e)
1-Methylnaphthalene	--	--	160 (d)	--	--	--	160 (d)	0.41	160 (d)
Acenaphthene	--	--	--	--	960	--	960	0.42	960
Fluorene	--	--	--	--	640	--	640	0.39	640
Phenanthrene	--	--	--	--	--	--	--	--	--
Anthracene	--	--	--	--	4,800	--	4,800	0.35	4,800
Fluoranthene	--	--	--	--	640	--	640	0.26	640
Pyrene	--	--	--	--	480	--	480	0.35	480
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--
cPAHs (µg/L)									
Benzo(a)pyrene	0.20	0.20	see total cPAHs	0.012	--	0.12	0.12	0.014	0.12
Benzo(a)anthracene	--	--	see total cPAHs	see total cPAHs	--	--	see total cPAHs	0.020	see total cPAHs
Benzo(b)fluoranthene	--	--	see total cPAHs	see total cPAHs	--	--	see total cPAHs	0.017	see total cPAHs
Benzo(k)fluoranthene	--	--	see total cPAHs	see total cPAHs	--	--	see total cPAHs	0.036	see total cPAHs
Chrysene	--	--	see total cPAHs	see total cPAHs	--	--	see total cPAHs	0.019	see total cPAHs
Dibenzo(a,h)anthracene	--	--	see total cPAHs	see total cPAHs	--	--	see total cPAHs	0.014	see total cPAHs
Indeno(1,2,3-cd)pyrene	--	--	see total cPAHs	see total cPAHs	--	--	see total cPAHs	0.017	see total cPAHs
Total cPAHs - TEQ	--	--	0.10	0.012	--	0.12 (f)	0.12	--	0.12 (f)

Shaded cell indicates basis for screening levels.

-- Indicates no cleanup level criteria available.

(a) Practical quantitation limit based on reporting limit from previous investigation except for metals. Metals PQL is based on Analytical Resources, Inc. laboratory reporting limit for analytical method 6020.

(b) Ecology's potable groundwater Method A Cleanup Screening Level for arsenic is based on background concentrations of this metal in groundwater (WAC 173-340-900; Table 720-1. As such, the proposed Cleanup Screening Level for arsenic of 5 ug/L is based on the MTCA Method A level for potable groundwater.

(c) Preliminary cleanup level of gasoline-range petroleum hydrocarbons is 800 ug/L if benzene is present, or is 1,000 ug/L if no detectable benzene is present in groundwater.

(d) Cleanup level is a total value for naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene.

(e) The concentration of 2-methylnapthalene cannot exceed 32 ug/L. The total concentration of naphthalene, 1-methylnaphthelene, and 2-methylnaphthalene cannot exceed 160 ug/L.

(f) A toxicity equivalency quotient (TEQ) will be completed for each sample containing carcinogenic PAHs above reporting limits and compared to the benzo(a)pyrene cleanup level protective of drinking water in accordance with 173-340-708(8)(d).

TABLE 3
TEST PIT INVESTIGATION RESULTS - SOIL
SUPPLEMENTAL RI INVESTIGATION
VERBEEK WRECKING
BOTHELL, WASHINGTON

	Cleanup Levels	TP-1 TP-1 (14) 5/17/2010 1005063-02A	TP-1 TP-1 (9) 5/17/2010 1005063-01A	TP-2 TP-2 (13) 5/17/2010 1005063-03A	TP-3 TP-3 (7.5) 5/17/2010 1005063-04A	TP-4 TP-4 (5.5) 5/17/2010 1005063-05A	TP-5 TP-5 (10) 5/17/2010 1005063-07A	TP-5 TP-5 (5) 5/17/2010 1005063-06A
PETROLEUM HYDROCARBONS (mg/kg)								
NWTPH-DX								
Diesel	460	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Motor Oil	2,000	50 U	**260**	50 U	50 U	50 U	50 U	50 U

U = Indicates the compound was undetected at the reported concentration.
Bold = Detected compound.

TABLE 4
STORMWATER SYSTEM SAMPLING RESULTS - SEDIMENT
SUPPLEMENTAL RI INVESTIGATION
VERBEEK WRECKING
BOTHELL, WASHINGTON

	Cleanup Level	STORM STORM (0) 5/17/2010 1005063-08A
SEMIVOLATILES (mg/kg)		
SW8270		
2,3,4,6-Tetrachlorophenol		0.25 U
2,4,5-Trichlorophenol		0.1 U
2,4,6-Trichlorophenol		0.1 U
2,4-Dichlorophenol		0.1 U
2,4-Dimethylphenol		0.1 U
2,4-Dinitrophenol		0.5 U
2,4-Dinitrotoluene		0.25 U
2,6-Dichlorophenol		0.1 U
2,6-Dinitrotoluene		0.25 U
2-Chloronaphthalene		0.1 U
2-Chlorophenol		0.1 U
2-Nitroaniline		0.25 U
2-Nitrophenol		0.25 U
3,3'-Dichlorobenzidine		0.37 U
4,6-Dinitro-2-Methylphenol		0.1 U
4-Bromophenyl phenyl ether		0.1 U
4-Chloro-3-Methylphenol		0.1 U
4-Chloroaniline		0.1 U
4-Chlorophenyl-Phenylether		0.1 U
4-Nitroaniline		0.25 U
4-Nitrophenol		0.5 U
Aniline		0.1 U
Azobenzene		0.1 U
Benzoic Acid		1 U
Benzyl Alcohol		0.1 U
Bis(2-Chloroethoxy)Methane		0.1 U
Bis(2-Chloroethyl)Ether		0.1 U
Bis(2-chloroisopropyl) ether		0.1 U
Bis(2-Ethylhexyl) Phthalate		**0.35**
Butyl benzyl phthalate		**0.18**
Carbazole		0.1 U
Dibenzofuran		0.1 U
Dibutyl phthalate		0.13 U
Diethyl phthalate		0.1 U
Dimethyl phthalate		0.1 U
Di-N-Octyl Phthalate		0.1 U

TABLE 4
STORMWATER SYSTEM SAMPLING RESULTS - SEDIMENT
SUPPLEMENTAL RI INVESTIGATION
VERBEEK WRECKING
BOTHELL, WASHINGTON

	Cleanup Level	STORM STORM (0) 5/17/2010 1005063-08A
Hexachlorobenzene		0.1 U
Hexachlorocyclopentadiene		0.5 U
Hexachloroethane		0.1 U
Isophorone		0.1 U
m,p-Cresol (2:1 ratio)		0.1 U
m-Nitroaniline		0.25 U
Nitrobenzene		0.1 U
N-Nitrosodimethylamine		0.1 U
N-Nitrosodi-n-propylamine		0.1 U
N-Nitrosodiphenylamine		0.1 U
o-Cresol		0.1 U
Pentachlorophenol		0.5 U
Phenol		0.1 U
Pyridine		0.2 U
TOTAL METALS (mg/kg)		
SW6020/7471		
Arsenic	20	**6.9**
Barium	1,250	**75**
Cadmium		0.28 U
Chromium	48	**27**
Lead	220	**20**
Mercury	0.7	**0.033**
Selenium		0.25 U
Silver		0.053 U

U = Indicates the compound was undetected at the reported concentration.
Bold = Detected compound.

TABLE 5
GRAVEL PILE CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

			TOTAL METALS (mg/kg)
			Method SW6020
Location	Lab ID	Date Collected	**Lead**
A-GP-CS-1	1007118-01A	7/22/2010	**5.7**
A-GP-CS-2	1007118-02A	7/22/2010	**3.8**
A-GP-CS-3	1007118-03A	7/22/2010	**9.5**
A-GP-CS-4	1007118-04A	7/23/2010	**2.7**
A-GP-CS-5	1007118-05A	7/23/2010	**1.9**
A-GP-CS-6	1007118-06A	7/23/2010	**2.5**
Cleanup Level			**220**

Bold = Detected compound.

TABLE 6
TPH CONTAMINATION AREA CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

		Samples collected from oil filter excavation (a)					
	Cleanup Level	EX-S-1 1008078-01A 8/16/2010	EX-S-2 1008078-02A 8/16/2010	EX-S-3 1008078-03A 8/16/2010	EX-S-4 1008078-04A 8/16/2010	EX-S-5 1008078-05A 8/16/2010	EX-S-SP1 1008071-01A 8/13/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)							
NWTPH-Dx							
Diesel	460	25 U	25 U	25 U	170	2,800	690
Motor Oil	2,000	300	590	26,000	980	19,000	4,100
NWTPH-G							
Gasoline		NA	NA	NA	NA	NA	NA
VOLATILES (mg/kg) Method SW8260B							
1,1,1,2-Tetrachloroethane		NA	NA	NA	NA	NA	10 U
1,1,1-Trichloroethane		NA	NA	NA	NA	NA	10 U
1,1,2,2-Tetrachloroethane		NA	NA	NA	NA	NA	10 U
1,1,2-Trichloroethane		NA	NA	NA	NA	NA	10 U
1,1-Dichloroethane		NA	NA	NA	NA	NA	10 U
1,1-Dichloroethene		NA	NA	NA	NA	NA	10 U
1,1-Dichloropropene		NA	NA	NA	NA	NA	10 U
1,2,3-Trichlorobenzene		NA	NA	NA	NA	NA	10 U
1,2,3-Trichloropropane		NA	NA	NA	NA	NA	10 U
1,2,4-Trichlorobenzene		NA	NA	NA	NA	NA	10 U
1,2,4-Trimethylbenzene	4,000	NA	NA	NA	NA	NA	2,700
1,2-Dibromo-3-Chloropropane		NA	NA	NA	NA	NA	50 U
1,2-Dichlorobenzene		NA	NA	NA	NA	NA	10 U
1,2-Dichloroethane		NA	NA	NA	NA	NA	10 U
1,2-Dichloropropane		NA	NA	NA	NA	NA	10 U
1,3,5-Trimethylbenzene	4,000	NA	NA	NA	NA	NA	610
1,3-Dichlorobenzene		NA	NA	NA	NA	NA	10 U
1,3-Dichloropropane		NA	NA	NA	NA	NA	10 U
1,4-Dichlorobenzene		NA	NA	NA	NA	NA	10 U
2,2-Dichloropropane		NA	NA	NA	NA	NA	10 U
2-Butanone		NA	NA	NA	NA	NA	50 U
2-Chlorotoluene		NA	NA	NA	NA	NA	10 U
2-Hexanone		NA	NA	NA	NA	NA	50 U
4-Chlorotoluene		NA	NA	NA	NA	NA	10 U
Acetone		NA	NA	NA	NA	NA	50 U
Acrylonitrile		NA	NA	NA	NA	NA	50 U
Benzene		NA	NA	NA	NA	NA	5 U
Bromobenzene		NA	NA	NA	NA	NA	10 U
Bromochloromethane		NA	NA	NA	NA	NA	10 U
Bromoform		NA	NA	NA	NA	NA	10 U
Bromomethane		NA	NA	NA	NA	NA	10 U
Carbon Disulfide		NA	NA	NA	NA	NA	NA
Carbon Tetrachloride		NA	NA	NA	NA	NA	10 U
CFC-11		NA	NA	NA	NA	NA	10 U
CFC-12		NA	NA	NA	NA	NA	10 U
Chlorobenzene		NA	NA	NA	NA	NA	10 U
Chloroethane		NA	NA	NA	NA	NA	10 U
Chloroform		NA	NA	NA	NA	NA	10 U
Chloromethane		NA	NA	NA	NA	NA	10 U
Cis-1,2-Dichloroethene		NA	NA	NA	NA	NA	10 U
Cis-1,3-Dichloropropene		NA	NA	NA	NA	NA	10 U
Dibromochloromethane		NA	NA	NA	NA	NA	10 U
Dibromomethane		NA	NA	NA	NA	NA	10 U
Dichlorobromomethane		NA	NA	NA	NA	NA	10 U
Ethylbenzene		NA	NA	NA	NA	NA	10 U
Ethylene dibromide		NA	NA	NA	NA	NA	5 U
Hexachlorobutadiene		NA	NA	NA	NA	NA	10 U
Isopropylbenzene (Cumene)		NA	NA	NA	NA	NA	10 U
m, p-Xylene	84	NA	NA	NA	NA	NA	450
Methyl isobutyl ketone		NA	NA	NA	NA	NA	50 U
Methyl t-butyl ether		NA	NA	NA	NA	NA	10 U
Methylene Chloride		NA	NA	NA	NA	NA	20 U

TABLE 6
TPH CONTAMINATION AREA CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

		Samples collected from oil filter excavation (a)					
	Cleanup Level	EX-S-1 1008078-01A 8/16/2010	EX-S-2 1008078-02A 8/16/2010	EX-S-3 1008078-03A 8/16/2010	EX-S-4 1008078-04A 8/16/2010	EX-S-5 1008078-05A 8/16/2010	EX-S-SP1 1008071-01A 8/13/2010
Naphthalene	4.5	NA	NA	NA	NA	NA	770
n-Butylbenzene		NA	NA	NA	NA	NA	10 U
n-Propylbenzene		NA	NA	NA	NA	NA	10 U
o-Xylene	92	NA	NA	NA	NA	NA	330
p-Isopropyltoluene		NA	NA	NA	NA	NA	10 U
Sec-Butylbenzene		NA	NA	NA	NA	NA	10 U
Styrene		NA	NA	NA	NA	NA	10 U
Tert-Butylbenzene		NA	NA	NA	NA	NA	10 U
Tetrachloroethene		NA	NA	NA	NA	NA	10 U
Toluene		NA	NA	NA	NA	NA	10 U
Trans-1,2-Dichloroethene		NA	NA	NA	NA	NA	10 U
Trans-1,3-Dichloropropene		NA	NA	NA	NA	NA	10 U
Trichloroethene		NA	NA	NA	NA	NA	10 U
Vinyl Chloride		NA	NA	NA	NA	NA	10 U
SEMIVOLATILES (µg/kg)							
Method SW8270							
Phenol		NA	NA	NA	NA	NA	100 U
2-Chlorophenol		NA	NA	NA	NA	NA	100 U
o-Cresol		NA	NA	NA	NA	NA	100 U
m,p-Cresol (2:1 ratio)		NA	NA	NA	NA	NA	100 U
2-Nitrophenol		NA	NA	NA	NA	NA	250 U
2,4-Dimethylphenol		NA	NA	NA	NA	NA	100 U
2,4-Dichlorophenol		NA	NA	NA	NA	NA	100 U
2,6-Dichlorophenol		NA	NA	NA	NA	NA	100 U
4-Chloro-3-Methylphenol		NA	NA	NA	NA	NA	100 U
2,4,6-Trichlorophenol		NA	NA	NA	NA	NA	100 U
2,4,5-Trichlorophenol		NA	NA	NA	NA	NA	100 U
2,4-Dinitrophenol		NA	NA	NA	NA	NA	500 U
4-Nitrophenol		NA	NA	NA	NA	NA	500 U
2,3,4,6-Tetrachlorophenol		NA	NA	NA	NA	NA	250 U
4,6-Dinitro-2-Methylphenol		NA	NA	NA	NA	NA	100 U
Pentachlorophenol		NA	NA	NA	NA	NA	500 U
PAHs (µg/kg)							
Method SW8270SIM							
Naphthalene	0.0045	NA	NA	NA	NA	NA	0.14
2-Methylnaphthalene	0.32	NA	NA	NA	NA	NA	0.38
1-Methylnaphthalene	--	NA	NA	NA	NA	NA	0.34
Acenaphthylene		NA	NA	NA	NA	NA	0.080 U
Acenaphthene		NA	NA	NA	NA	NA	0.080 U
Fluorene		NA	NA	NA	NA	NA	0.080 U
Phenanthrene	--	NA	NA	NA	NA	NA	0.18
Anthracene		NA	NA	NA	NA	NA	0.080 U
Fluoranthene	0.63	NA	NA	NA	NA	NA	0.10
Pyrene	0.65	NA	NA	NA	NA	NA	0.15
Benz[a]anthracene		NA	NA	NA	NA	NA	0.080 U
Chrysene		NA	NA	NA	NA	NA	0.080 U
Benzo(b)fluoranthene		NA	NA	NA	NA	NA	0.080 U
Benzo(k)fluoranthene		NA	NA	NA	NA	NA	0.080 U
Benzo(a)pyrene		NA	NA	NA	NA	NA	0.080 U
Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA	NA	0.080 U
Dibenzo(a,h)anthracene		NA	NA	NA	NA	NA	0.080 U
Benzo(ghi)perylene		NA	NA	NA	NA	NA	0.080 U
TEQ		NA	NA	NA	NA	NA	0.080 U
PCBs (mg/kg)							
Method SW8082							
PCB-aroclor 1016		NA	NA	NA	NA	NA	0.10 U
PCB-aroclor 1268		NA	NA	NA	NA	NA	0.10 U
PCB-aroclor 1221		NA	NA	NA	NA	NA	0.10 U
PCB-aroclor 1232		NA	NA	NA	NA	NA	0.10 U
PCB-aroclor 1242		NA	NA	NA	NA	NA	0.24

TABLE 6
TPH CONTAMINATION AREA CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

		Samples collected from oil filter excavation (a)					
	Cleanup Level	EX-S-1 1008078-01A 8/16/2010	EX-S-2 1008078-02A 8/16/2010	EX-S-3 1008078-03A 8/16/2010	EX-S-4 1008078-04A 8/16/2010	EX-S-5 1008078-05A 8/16/2010	EX-S-SP1 1008071-01A 8/13/2010
PCB-aroclor 1248		NA	NA	NA	NA	NA	0.10 U
PCB-aroclor 1254		NA	NA	NA	NA	NA	0.10 U
PCB-aroclor 1260		NA	NA	NA	NA	NA	0.10 U
Total PCBs	1	NA	NA	NA	NA	NA	**0.24**
TOTAL METALS (mg/kg)							
Method SW6020							
Chromium	48	NA	NA	NA	NA	NA	**33**
Copper		NA	NA	NA	NA	NA	**26**
Lead	220	NA	NA	NA	NA	NA	**25**
Zinc		NA	NA	NA	NA	NA	**69**

TABLE 6
TPH CONTAMINATION AREA CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

	Cleanup Level	EX-S-B1 1008117-04A 8/24/2010	EX-S-B2 1008117-05A 8/24/2010	EX-S-B3 1008121-03A 8/24/2010	EX-S-SW-E1 1008117-01A 8/24/2010	EX-S-SW-NE1 1008117-02A 8/24/2010	EX-S-SW-NW1 1008121-02A 8/24/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)							
NWTPH-Dx							
Diesel	460	25 U	25 U	25 U	25 U	25 U	25 U
Motor Oil	2,000	50 U	50 U	50 U	50 U	50 U	50 U
NWTPH-G							
Gasoline		3 U	3 U	3 U	3 U	3 U	3 U
VOLATILES (mg/kg)							
Method SW8260B							
1,1,1,2-Tetrachloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1,1-Trichloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1,2,2-Tetrachloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1,2-Trichloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1-Dichloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1-Dichloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1-Dichloropropene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2,3-Trichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2,3-Trichloropropane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2,4-Trichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2,4-Trimethylbenzene	4,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dibromo-3-Chloropropane		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichloropropane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,3,5-Trimethylbenzene	4,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,3-Dichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,3-Dichloropropane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,4-Dichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,2-Dichloropropane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Butanone		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Chlorotoluene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Chlorotoluene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acrylonitrile		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bromochloromethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bromoform		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bromomethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon Disulfide		NA	NA	0.01 U	NA	NA	0.01 U
Carbon Tetrachloride		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CFC-11		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CFC-12		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroform		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloromethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cis-1,2-Dichloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cis-1,3-Dichloropropene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibromochloromethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibromomethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dichlorobromomethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Ethylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Ethylene dibromide		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Hexachlorobutadiene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Isopropylbenzene (Cumene)		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
m, p-Xylene	84	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Methyl isobutyl ketone		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl t-butyl ether		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methylene Chloride		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

TABLE 6
TPH CONTAMINATION AREA CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

	Cleanup Level	EX-S-B1 1008117-04A 8/24/2010	EX-S-B2 1008117-05A 8/24/2010	EX-S-B3 1008121-03A 8/24/2010	EX-S-SW-E1 1008117-01A 8/24/2010	EX-S-SW-NE1 1008117-02A 8/24/2010	EX-S-SW-NW1 1008121-02A 8/24/2010
Naphthalene	4.5	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
n-Butylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
n-Propylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
o-Xylene	92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
p-Isopropyltoluene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Sec-Butylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Styrene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Tert-Butylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Tetrachloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Toluene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trans-1,2-Dichloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trans-1,3-Dichloropropene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trichloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Vinyl Chloride		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SEMIVOLATILES (µg/kg)							
Method SW8270							
Phenol		NA	NA	NA	NA	NA	NA
2-Chlorophenol		NA	NA	NA	NA	NA	NA
o-Cresol		NA	NA	NA	NA	NA	NA
m,p-Cresol (2:1 ratio)		NA	NA	NA	NA	NA	NA
2-Nitrophenol		NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol		NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol		NA	NA	NA	NA	NA	NA
2,6-Dichlorophenol		NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol		NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol		NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol		NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol		NA	NA	NA	NA	NA	NA
4-Nitrophenol		NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol		NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol		NA	NA	NA	NA	NA	NA
Pentachlorophenol		NA	NA	NA	NA	NA	NA
PAHs (µg/kg)							
Method SW8270SIM							
Naphthalene	0.0045	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	0.32	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	--	NA	NA	NA	NA	NA	NA
Acenaphthylene		NA	NA	NA	NA	NA	NA
Acenaphthene		NA	NA	NA	NA	NA	NA
Fluorene		NA	NA	NA	NA	NA	NA
Phenanthrene	--	NA	NA	NA	NA	NA	NA
Anthracene		NA	NA	NA	NA	NA	NA
Fluoranthene	0.63	NA	NA	NA	NA	NA	NA
Pyrene	0.65	NA	NA	NA	NA	NA	NA
Benz[a]anthracene		NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene		NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene		NA	NA	NA	NA	NA	NA
TEQ		NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Method SW8082							
PCB-aroclor 1016		NA	NA	NA	NA	NA	NA
PCB-aroclor 1268		NA	NA	NA	NA	NA	NA
PCB-aroclor 1221		NA	NA	NA	NA	NA	NA
PCB-aroclor 1232		NA	NA	NA	NA	NA	NA
PCB-aroclor 1242		NA	NA	NA	NA	NA	NA

TABLE 6
TPH CONTAMINATION AREA CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

	Cleanup Level	EX-S-B1 1008117-04A 8/24/2010	EX-S-B2 1008117-05A 8/24/2010	EX-S-B3 1008121-03A 8/24/2010	EX-S-SW-E1 1008117-01A 8/24/2010	EX-S-SW-NE1 1008117-02A 8/24/2010	EX-S-SW-NW1 1008121-02A 8/24/2010
PCB-aroclor 1248		NA	NA	NA	NA	NA	NA
PCB-aroclor 1254		NA	NA	NA	NA	NA	NA
PCB-aroclor 1260		NA	NA	NA	NA	NA	NA
Total PCBs	1	NA	NA	NA	NA	NA	NA
TOTAL METALS (mg/kg) Method SW6020							
Chromium	48	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA
Lead	220	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA

TABLE 6
TPH CONTAMINATION AREA CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

	Cleanup Level	EX-S-SW-SE1 1008117-03A 8/24/2010	EX-S-SW-SE2 1009046-01A 9/3/2010	EX-S-SW-SW1 1008121-01A 8/24/2010	EX-S-SW-SW2 1009046-02A 9/3/2010	EX-S-SW-W1 1008121-04A 8/24/2010	EX-S-SW-W2 1009046-03A 9/3/2010
TOTAL PETROLEUM HYDROCARBONS (mg/kg)							
NWTPH-Dx							
Diesel	460	**36**	25 U	25 U	25 U	**67**	**43**
Motor Oil	2,000	50 U	50 U	50 U	50 U	50 U	50 U
NWTPH-G							
Gasoline		6.1 U	3 U	3 U	3 U	3 U	3 U
VOLATILES (mg/kg) Method SW8260B							
1,1,1,2-Tetrachloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1,1-Trichloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1,2,2-Tetrachloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1,2-Trichloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1-Dichloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1-Dichloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,1-Dichloropropene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2,3-Trichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2,3-Trichloropropane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2,4-Trichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2,4-Trimethylbenzene	4,000	0.01 U	0.01 U	0.01 U	0.01 U	**0.012**	0.01 U
1,2-Dibromo-3-Chloropropane		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,2-Dichloropropane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,3,5-Trimethylbenzene	4,000	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,3-Dichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,3-Dichloropropane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
1,4-Dichlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,2-Dichloropropane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Butanone		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Chlorotoluene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Chlorotoluene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acrylonitrile		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bromochloromethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bromoform		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bromomethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon Disulfide		NA	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon Tetrachloride		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CFC-11		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
CFC-12		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chlorobenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloroform		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chloromethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cis-1,2-Dichloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cis-1,3-Dichloropropene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibromochloromethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dibromomethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Dichlorobromomethane		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Ethylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Ethylene dibromide		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Hexachlorobutadiene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Isopropylbenzene (Cumene)		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
m, p-Xylene	84	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Methyl isobutyl ketone		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl t-butyl ether		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Methylene Chloride		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

TABLE 6
TPH CONTAMINATION AREA CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

	Cleanup Level	EX-S-SW-SE1 1008117-03A 8/24/2010	EX-S-SW-SE2 1009046-01A 9/3/2010	EX-S-SW-SW1 1008121-01A 8/24/2010	EX-S-SW-SW2 1009046-02A 9/3/2010	EX-S-SW-W1 1008121-04A 8/24/2010	EX-S-SW-W2 1009046-03A 9/3/2010
Naphthalene	4.5	0.01 U	0.01 U	0.01 U	0.01 U	**0.018**	0.01 U
n-Butylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
n-Propylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
o-Xylene	92	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
p-Isopropyltoluene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Sec-Butylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Styrene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Tert-Butylbenzene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Tetrachloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Toluene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trans-1,2-Dichloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trans-1,3-Dichloropropene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Trichloroethene		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Vinyl Chloride		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
SEMIVOLATILES (µg/kg)							
Method SW8270							
Phenol		NA	NA	NA	NA	NA	NA
2-Chlorophenol		NA	NA	NA	NA	NA	NA
o-Cresol		NA	NA	NA	NA	NA	NA
m,p-Cresol (2:1 ratio)		NA	NA	NA	NA	NA	NA
2-Nitrophenol		NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol		NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol		NA	NA	NA	NA	NA	NA
2,6-Dichlorophenol		NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol		NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol		NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol		NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol		NA	NA	NA	NA	NA	NA
4-Nitrophenol		NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol		NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol		NA	NA	NA	NA	NA	NA
Pentachlorophenol		NA	NA	NA	NA	NA	NA
PAHs (µg/kg)							
Method SW8270SIM							
Naphthalene	0.0045	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	0.32	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	--	NA	NA	NA	NA	NA	NA
Acenaphthylene		NA	NA	NA	NA	NA	NA
Acenaphthene		NA	NA	NA	NA	NA	NA
Fluorene		NA	NA	NA	NA	NA	NA
Phenanthrene	--	NA	NA	NA	NA	NA	NA
Anthracene		NA	NA	NA	NA	NA	NA
Fluoranthene	0.63	NA	NA	NA	NA	NA	NA
Pyrene	0.65	NA	NA	NA	NA	NA	NA
Benz[a]anthracene		NA	NA	NA	NA	NA	NA
Chrysene		NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene		NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene		NA	NA	NA	NA	NA	NA
Benzo(a)pyrene		NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene		NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene		NA	NA	NA	NA	NA	NA
TEQ		NA	NA	NA	NA	NA	NA
PCBs (mg/kg)							
Method SW8082							
PCB-aroclor 1016		NA	NA	NA	NA	NA	NA
PCB-aroclor 1268		NA	NA	NA	NA	NA	NA
PCB-aroclor 1221		NA	NA	NA	NA	NA	NA
PCB-aroclor 1232		NA	NA	NA	NA	NA	NA
PCB-aroclor 1242		NA	NA	NA	NA	NA	NA

TABLE 6
TPH CONTAMINATION AREA CONFIRMATION SAMPLE ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

	Cleanup Level	EX-S-SW-SE1 1008117-03A 8/24/2010	EX-S-SW-SE2 1009046-01A 9/3/2010	EX-S-SW-SW1 1008121-01A 8/24/2010	EX-S-SW-SW2 1009046-02A 9/3/2010	EX-S-SW-W1 1008121-04A 8/24/2010	EX-S-SW-W2 1009046-03A 9/3/2010
PCB-aroclor 1248		NA	NA	NA	NA	NA	NA
PCB-aroclor 1254		NA	NA	NA	NA	NA	NA
PCB-aroclor 1260		NA	NA	NA	NA	NA	NA
Total PCBs	1	NA	NA	NA	NA	NA	NA
TOTAL METALS (mg/kg) Method SW6020							
Chromium	48	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA
Lead	220	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA

U = Indicates the compound was undetected at the reported concentration.
NA = Not analyzed.
Bold = Detected compound.
Box = Detected concentration is greater than preliminary cleanup level.
(a) Additional soil removed following collection of these samples. Sample results do not represent soil remaining.

TABLE 7
GROUNDWATER ANALYTICAL RESULTS
VERBEEK CLEANUP ACTION REPORT

TOTAL PETROLEUM HYDROCARBONS (µg/L)

			Method NWTPH-Dx	
Location	Lab ID	Date Collected	**Diesel**	**Motor Oil**
Ex-Water-Bottom-4	1009045-01A	9/7/2010	**180**	250 U
Ex-Water-Tank-2	1009016-01A	9/1/2010	**410**	**260**
MW-9	1009219-01A	9/29/2010	130 U	250 U
MW-10	1009219-02A	9/29/2010	130 U	250 U
MW-9	1012107-01A	12/6/2010	130 U	250 U
MW-10	1009219-02A	12/6/2010	130 U	250 U
MW-101 (a)	1009219-03A	12/6/2010	130 U	250 U
Cleanup Level			500	500

U = Indicates the compound was undetected at the reported concentration.

Bold = Detected compound.

(a) duplicate of sample MW-10

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL[1]	TYPICAL DESCRIPTIONS[2][3]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. USCS letter symbols correspond to symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM for sand or gravel) indicate soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
2. Soil descriptions are based on the general approach presented in the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the Standard Test Method for Classification of Soils for Engineering Purposes, as outlined in ASTM D 2487.
3. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent:	> 50%	- "GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents:	> 30% and ≤ 50%	- "very gravelly," "very sandy," "very silty," etc.
	> 15% and ≤ 30%	- "gravelly," "sandy," "silty," etc.
Additional Constituents:	> 5% and ≤ 15%	- "with gravel," "with sand," "with silt," etc.
	≤ 5%	- "with trace gravel," "with trace sand," "with trace silt," etc., or not noted.

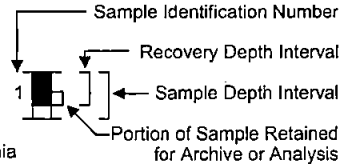
4. Soil density or consistency descriptions are based on judgement using a combination of sampler penetration blow counts, drilling or excavating conditions, field tests, and laboratory tests, as appropriate.

Drilling and Sampling Key

SAMPLER TYPE

Code	Description
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon
c	Shelby Tube
d	Grab Sample
e	Single-Tube Core Barrel
f	Double-Tube Core Barrel
g	2.50-inch O.D., 2.00-inch I.D. WSDOT
h	3.00-inch O.D., 2.375-inch I.D. Mod. California
i	Other - See text if applicable
1	300-lb Hammer, 30-inch Drop
2	140-lb Hammer, 30-inch Drop
3	Pushed
4	Vibrocore (Rotosonic/Geoprobe)
5	Other - See text if applicable

SAMPLE NUMBER & INTERVAL



Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

Groundwater

▽	Approximate water level at time of drilling (ATD)
▼	Approximate water level at time other than ATD

1/10/11 N:\PROJECTS\1173001.020.GPJ SOIL CLASS SHEET

LANDAU ASSOCIATES

Verbeek Wrecking Cleanup Action
Bothell, Washington

Soil Classification System and Key

Figure A-1

MW-09

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Water Level
0						SP	
						SM	
5		b1	13	0.0			
						SP/ SM	
10		b1	30	0.0		SP	
		b1	17	0.0			ATD
15		b1	7	0.0		SP/ SM	
						SM	
20		b1	50/ 4.5"	0.0			
25							
30							
35							

Drilling Method: Hollow-Stem Auger

Ground Elevation (ft):

Drilled By: Holocene Drilling Inc.

Brown, fine to medium SAND with silt, trace gravel (medium dense, damp) (no odor, no stain)

No Recovery.
Observed cuttings: Gray, silty, fine to medium SAND, trace cobbles (damp) (no odors, no stain)

Brown to gray, fine to medium SAND with silt and gravel (medium dense, moist) (no odors, no stain)

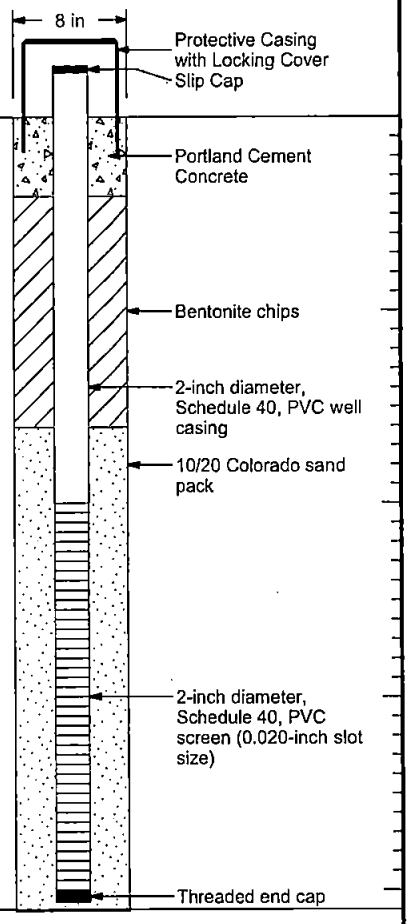
Brown, fine to medium SAND, trace silt and gravel (loose to medium dense, wet) (no odors, no stain)

Brown, fine to medium SAND with silt, trace gravel (medium dense, wet) (no odors, no stain)

Brown, silty SAND, trace gravel (dense, moist to wet) (no odors, no stain)

Boring Completed 09/23/10
Total Depth of Boring = 20.5 ft.

Monitoring Well Detail



Monitoring Well Completed 09/23/10
Total Depth of Monitoring Well = 20.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
4. Ecology Well ID #BCJ227

1173001.02 1/10/11 N:\PROJECTS\1173001.020.GPJ WELL LOG

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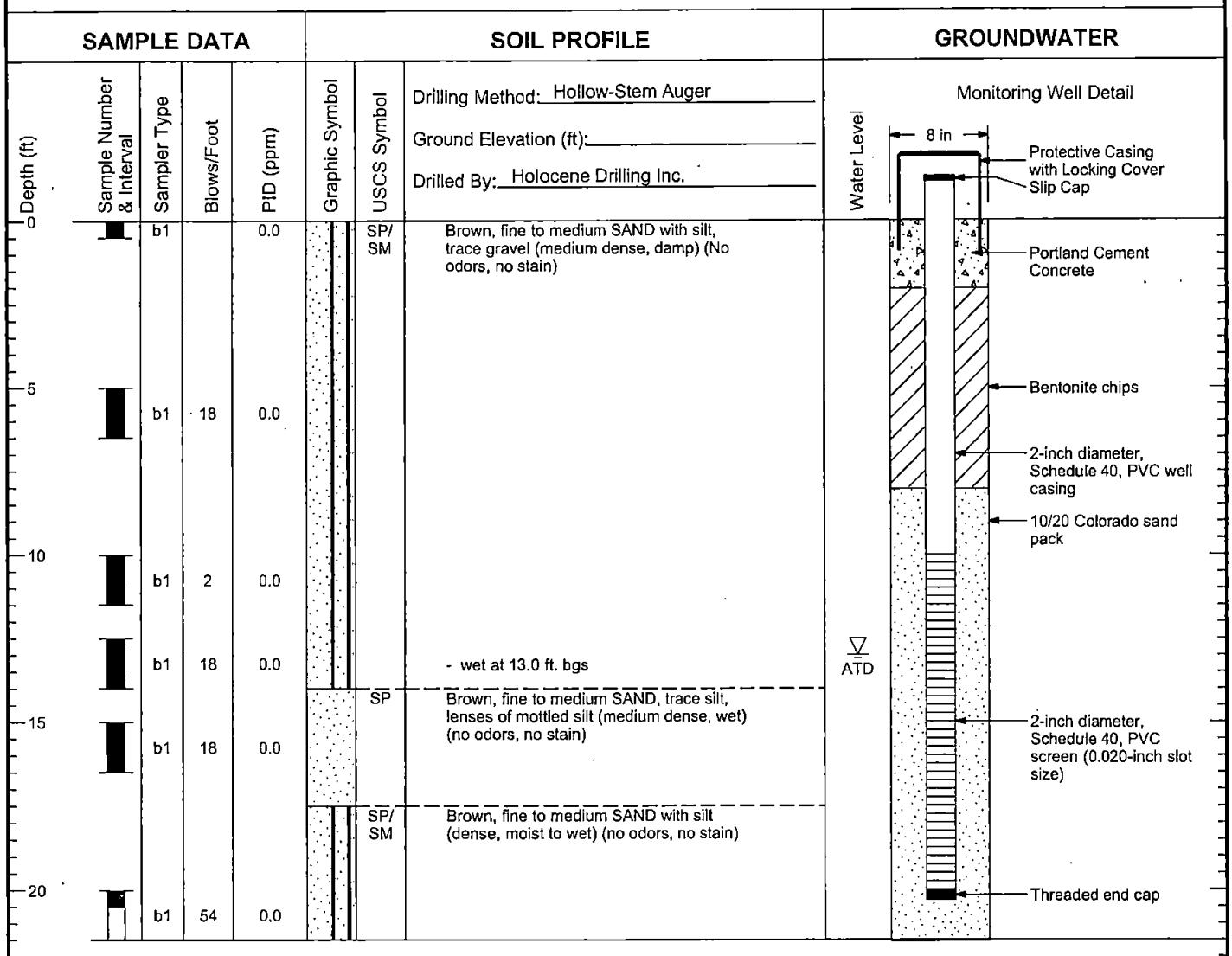
Verbeek Wrecking Cleanup Action
Bothell, Washington

Log of Monitoring Well MW-09

Figure A-2

MW-10



Boring Completed 09/23/10
Total Depth of Boring = 21.5 ft.

Monitoring Well Completed 09/23/10
Total Depth of Monitoring Well = 20.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
4. Ecology Well ID #BCJ228

1173001.02 1/10/11 N:\PROJECTS\1173001.020.GPJ WELL LOG

LANDAU ASSOCIATES

Verbeek Wrecking Cleanup Action
Bothell, Washington

Log of Monitoring Well MW-10

Figure A-3