PES Environmental, Inc.
Engineering & Environmental Services

February 14, 2013

1006.008.01.003

SRMKII, LLC
520 6th Street South
Kirkland WA 98033

Attention: Mr. Dave Tomson

SAMPLING AND ANALYSIS PLAN
FORMER PACE NATIONAL PROPERTY
500 7TH AVENUE SOUTH
KIRKLAND, WASHINGTON

Dear Mr. Tomson:

PES Environmental, Inc. (PES) has prepared this Sampling and Analysis Plan (SAP) for the pre-excavation assessment and soil excavation activities at the Former Pace National property, located at 500 7th Avenue South, in Kirkland, Washington (Property; Figure 1). On behalf of SRMKII, LLC (SRMKII), PES previously identified excavation areas for soils requiring off-site disposal at a facility permitted to accept soil with detectable concentrations of contaminants, including concentrations below applicable cleanup levels (referred to as "gray soil") and those that may be disposed of off-site without restrictions (referred to as "clean soil"). PES also evaluated the removal of saturated soils and groundwater within the estimated vinyl chloride area located in the northwestern portion of the Property.

SITE DESCRIPTION

The 5-acre Property is currently vacant. The northern one-third portion of the Property is the location of the former Pace National operations and is a mixture of dirt, vegetation, and asphalt surfaces (see Figure 2). The majority of the non-asphalt areas are overgrown with brush, blackberries, and a few small trees. The southern two-thirds of the Property are wooded and have never been developed. The surface terrain of the northern portion of the Property consists of a relatively flat area at an elevation of approximately 169 feet above mean sea level (amsl) and slopes to the west to an elevation of approximately 149 feet amsl along the western property line. The area of a former drum storage yard is at a slightly lower elevation of approximately 160 feet amsl.

REDEVELOPMENT PLANS

The preliminary proposed redevelopment plans for the Property include a mass excavation to an elevation of approximately 142.5 feet amsl for the construction of two floors of subsurface parking. The parking garage footprint is shown on Figure 2. A two-story office complex will be

constructed above the parking structure. Slope cuts for the mass excavation will be 1:1 along the northern, western, and southern excavation limits. The eastern sidewall of the excavation will be shored along the property line. In addition to the redevelopment mass excavation, saturated soils within the vinyl chloride area will be removed. The sidewalls for the vinyl chloride area excavation will be shored along the northern and western property lines as shown on Figure 3.

FIELD PROCEDURES

Pre-Excavation Assessment of the Vinyl Chloride Area

A portion of the proposed subsurface parking garage is located over the area where vinyl chloride is present in perched water near the northwestern corner of the Property (Figure 3). The water is perched on a glaciolacustrine layer (herein referred to as the confining silt layer), located at an estimated elevation of 130 to 140 feet above mean sea level (amsl). SRMKII will extend the excavation in this area to remove the saturated soils, including the perched water containing vinyl chloride at concentrations greater than the applicable cleanup level (0.2 micrograms per liter [µg/L]). This additional excavation is being conducted to mitigate potential concerns regarding vapor intrusion into the subsurface parking garage and overlying office complex. The assumed area of vinyl chloride-impacted groundwater (as shown on Figure 3) is based on the area of monitored natural attenuation specified in the Cleanup Action Plan (CAP) prepared by SoundEarth Strategies, Inc. Prior to conducting the excavation in this area, a limited investigation will be performed to further delineate the extent of the vinyl chloride-impacted perched water in this area to better direct the excavation activities.

Specific sampling objectives and tasks for this investigation are as follows:

- Evaluate the northern and southern extent of vinyl chloride-impacted water;
- Confirm the depth of the confining silt layer; and
- Collect samples of both the non-saturated and saturated soil for disposal characterization.

The results of the pre-excavation assessment will be used to determine the final limits (vertical and horizontal) of the vinyl chloride area excavation. This information will be used during the redevelopment to design the depth and extent of the shoring system along the western and northern excavation sidewalls. The lateral limits of the excavation area will be determined by comparing the groundwater concentrations to the action limit for vinyl chloride-impacted water, which is both the method reporting limit (MRL) and the Model Toxics Control Act (MTCA) Method A (unrestricted use) cleanup level (0.2 µg/L). The vertical limit of the excavation will be determined using the soil boring information as the depth of the confining silt layer.

The soil analytical results for the samples collected from borings located in the area between the garage wall and the western and northern limits of the vinyl chloride excavation will be used to determine if the overburden soil in this area can be used as backfill. If the samples contain detectable concentrations of contaminants, the soil will not be used as backfill and will be transported off-site for proper disposal.

Six direct-push borings will be advanced with a limited access rig in the locations shown on Figure 3. The boring locations will be pre-cleared using both public and private utility locating services. The borings will be advanced to the depth of the confining silt layer (estimated depths ranging from 10 to 15 feet below ground surface [ft. bgs]). Continuous soil samples will be collected using four-foot-long core barrels lined with new acetate sleeves. Each soil core will be screened with a photoionization detector (PID) for the presence of volatile organic compounds (VOCs) and reviewed for lithology. Lithology and PID results will be recorded on field boring log forms.

The pre-excavation assessment soil samples will be analyzed for gasoline-range organics (GRO) using Washington Department of Ecology (Ecology) Method NWTPH-Gx, diesel-range organics (DRO) and heavy oil-range organics (HO) using Ecology Method NWTPH-Dx, and VOCs using United States Environmental Protection Agency (USEPA) Method 8260B (Tables 1 and 2).

Soil samples for volatile organic analyses will be collected using syringe samplers following the USEPA Method 5035 protocols. The samples will be placed in the appropriate laboratory supplied containers (VOA bottles preserved with methanol), sealed, labeled, and placed in a cooler, on ice, for delivery to Fremont Analytical Laboratory, Inc. (Fremont), a Washington State accredited analytical laboratory. Soil samples will also be collected in unpreserved, glass soil sample jars for additional analyses and to determine the soil moisture content (Table 3).

After completion of the soil sampling, one-inch diameter schedule 40 PVC with five-foot screened sections will be temporarily installed in the boreholes for the collection of water samples. After allowing the water within the temporary well casing to equilibrate (approximately one hour), the water level will be measured to the nearest 0.01 foot, using an electronic water level probe, and recorded. The probe tip will be rinsed with distilled water between each temporary well to avoid cross contamination.

New disposable polyethylene tubing will be used to sample each temporary well. The polyethylene tubing will be slowly lowered into the well until the tubing intake is at the mid-point of the well screen. The well will be purged with a peristaltic pump fitted with new disposable silicon tubing in the pump head. The polyethylene tubing in the well will be connected to the silicon tubing in the pump head. The time will be recorded and the pump will be started. Pumping rates will be measured with a stopwatch and graduated cylinder, graduated cup, or volatile organic analysis (VOA) 40 milliliter (mL) vial, depending on flow rate. Low flow purging will be conducted at a pumping rate between 80 and 500 mL per minute (mL/min).

During purging, the water level will be measured approximately every 3 to 5 minutes, until a steady water level is determined. If possible, a drawdown of 0.3 feet or less will be maintained in the well, with the pumping rate lowered to a minimum rate of 80 mL/min if necessary to maintain a drawdown of 0.3 feet or less. The water level in the well will be maintained above the tubing intake depth at all times. If the well yield is sufficiently poor that the water level drops to the tubing intake, the pump will be stopped until the water level recovers to near the pre-pumping level. The process will then be repeated until the field parameters have stabilized. The final purge volume will be at least as great as the submerged tubing volume plus the

stabilized drawdown volume. All measured water levels and pumping rate changes will be recorded.

Field indicator parameters will be measured approximately every 3 to 5 minutes during purging. Field parameters will include pH, specific conductance, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP). Measurements will be recorded to the following standards:

- pH to ±0.01 units;
- Specific conductance to ±1 micro ohm;
- Temperature to ±0.1^{o}C;
- DO to ±0.1 milligrams per liter (mg/L); and
- ORP to ±1millivolts (mV).

Samples will not be collected until these parameters have stabilized for three consecutive readings to the following criteria:

- pH to ±0.1 pH unit;
- Conductivity to ±3 percent;
- Temperature to ±3 percent; and
- DO to ±10 percent.

ORP measurements will not be used to determine stability. If field parameters do not stabilize after 1 hour of pumping, a sample will be collected. Well purging data will be recorded. Field instruments will be calibrated using known standard solutions a minimum of once per day.

Upon completion of purging, samples will be collected from the discharge end of the peristaltic pump tubing. The same pump rate used at the end of well purging will be used during sample collection. The pre-excavation assessment water samples will be submitted for analysis of vinyl chloride using USEPA Method 8260B. All sample containers will be prepared and provided by the analytical laboratory (Table 3).

After collection of the sample from each well, the polyethylene tubing will be removed from the well, the casing will be removed, and the boring will be abandoned by filling the bottom of the boring to the surface with hydrated bentonite chips. All used tubing and the temporary well casing will be discarded appropriately.

Decontamination and purge water will be handled in accordance with the procedures described in the gray soil and vinyl chloride excavation activities and as described in the Sampling Residuals management procedures (below).

Gray Soil Excavation

SRMKII will excavate soils in the locations of borings with detectable contaminant concentrations prior to the start of the redevelopment mass excavation. The proposed locations of the gray soil excavations, designated as “Area 1” through “Area 8” are shown on Figure 3.

PES recommends soil excavation activities be conducted within each of the identified Areas beginning at the locations with the documented soil contamination and extending radially outward 10 feet and one to two feet below the depth of the soil sample with a detection. The proposed excavations for Area 1 and Areas 4 through 8 begin at the ground surface due to the chemical detections within the shallowest soil samples. For Areas 2 and 3, the soil from the ground surface to seven feet bgs is considered clean based on a clean soil sample at seven feet in boring GP-8. It is assumed that seven feet of overburden will be removed and transported off-site as clean soil in Areas 2 and 3. Excavated soils designated for off-site disposal will be directly loaded into trucks and transported off-site. Care will be taken to operate the trucks over clean soil and all trucks will go through standard tire cleaning procedures typical of this type of construction prior to leaving the site.

Upon completion of the initial excavation of gray soil, discreet samples from each of the four sidewalls and base of each excavation will be collected (i.e., a total of five samples) and analyzed for the known chemical detections in each area (Table 1). If the sample results indicate soils with detectable chemical concentrations remain, the sidewalls and/or base, as applicable, will be excavated and extended an additional four feet and the remaining soils will be re-tested until each Area meets the clean soil criteria (i.e., the MRL). If soil with detectable contaminant concentrations extends below the base of the planned redevelopment mass excavation (approximate elevation of 142.5 amsl), confirmation samples will be compared to the MTCA Method A or, if MTCA Method A levels are not available, MTCA Method B cleanup levels. The soil re-testing will occur at a density of one sidewall sample for every 50 lineal feet of sidewall and one base sample for every 625 square feet of excavation base. The samples will be collected at the depths of the previous detections (Table 1) and will be collected directly from the center of the backhoe bucket using clean, decontaminated stainless steel spoons and placed into the appropriate laboratory-prepared sample containers (Table 3). Samples from excavated areas less than four feet deep will be directly accessible by field personnel and will be collected directly from the base and/or sidewalls using clean, stainless steel spoons. Samples for volatile organic analyses will be collected using syringe samplers following the USEPA Method 5035 protocols and placed into laboratory-prepared sample containers. Additional sample volumes will be collected in laboratory-prepared glass jars for additional analyses and moisture content.

Once an Area meets the clean soil criteria, the Area will be approved for mass excavation and no further soil testing will be required or conducted. Given the large size of the Property and locations of the gray soil areas within the Property, this approach will limit the volume of gray soil excavated while minimizing impacts to the general redevelopment activities.

It is anticipated that Areas 1 and 2 will extend beneath the perched water table. The rate of infiltration is expected to be low based on the type of soil present and based on the low recharge rate of the site monitoring wells (purged dry during sampling). If required for gray soil excavation activities, water that accumulates in the excavations (rainwater or perched water) will be collected, stored, tested, and properly disposed. The water will be tested for disposal purposes and will not be used to evaluate further excavation. Soils excavated from Areas 1 and 2 will not be used to backfill the over excavated areas in Area 9.

Vinyl Chloride Area Excavation

Saturated soils within the vinyl chloride area (Area 9 or as modified above following the pre-excavation assessment) will be excavated to the depth of the confining silt layer. The elevation of this layer outside the garage footprint is estimated to range from 130 to 132 feet amsl. If the results of the pre-excavation assessment indicate the non-saturated overburden does not contain detectable contaminant concentrations, the clean overburden will be removed and stockpiled on-site for use as backfill. The saturated soils will be transported off-site for disposal as either clean material or gray soil, based on the pre-excavation assessment analytical results. Excavated soils designated for off-site disposal will be directly loaded into trucks and transported off-site, using the same protocols as with the gray soil excavation.

The excavation sidewalls will be sampled at a density of one sample per 50 linear feet and the base will be sampled at a density of one sample per 625 square feet. The samples will be collected from the saturated soils, immediately above the confining layer, and will be collected directly from the center of the backhoe bucket using syringe samplers following the USEPA Method 5035 protocols and clean stainless steel spoons. The samples will be placed into laboratory-prepared sample containers (Table 3). Soil samples collected from the vinyl chloride area excavation will be submitted for vinyl chloride analysis using USEPA Method 8260B. If the results of the pre-excavation assessment indicate the presence of other constituents, the confirmation sample analytical list will be expanded to include those constituents.

If vinyl chloride is detected in the sidewall confirmation samples located on the east and/or south boundary of the excavation, additional excavation will be conducted and the area re-sampled. This process will be repeated until the sidewall samples do not contain detectable concentrations of vinyl chloride. The limits of the excavation on the western and northern boundaries are generally defined by the property boundary making further excavation impracticable.

If the sidewall samples contain constituents other than vinyl chloride, additional excavation will be conducted and the area re-sampled. The excavation sidewalls within the garage footprint will be extended and re-sampled until the sidewall samples do not contain detectable concentrations. The excavation sidewalls outside of the garage footprint and within the property boundary will be extended and re-sampled until the sidewalls do not contain concentrations above applicable cleanup levels.

Water that accumulates in the excavation (rainwater or perched water) will be collected, stored, tested, and properly disposed. The excavation areas beneath and outside of the planned garage footprint will be back-filled with either clean on-site soils or imported clean fill material.

The majority of saturated soils within the vinyl chloride area inside the garage footprint will be excavated during planned site mass excavation for the redevelopment (Figure 3). The current planned mass excavation elevation for the base of the parking garage is 142.5 feet amsl. Based on a review of soil boring logs, PES anticipates that the depth to the confining silt layer could extend to an elevation of approximately 132 feet amsl in portions of the vinyl chloride area and therefore, over-excavation deeper than the planned redevelopment excavation will be necessary to remove the saturated soils above the confining silt layer. A cross section showing the vinyl

chloride area excavation is shown on Figure 4. The cross-section is based on the Generalized Geologic Cross Section A-A' from the SoundEarth Strategies RI/FS report, which was annotated to show the limits of the subsurface garage, additional geologic information obtained from the more recent soil assessment conducted by PES on behalf of SRMKII, and the proposed vertical extent of the saturated soil excavation in the vinyl chloride area. As shown on Figure 4, upon completion of the proposed excavation, the saturated soil and the perched groundwater containing the vinyl chloride will be removed from the Property.

Laboratory Analytical Procedures, Sampling Labeling, Shipping and Chain-of-Custody

All samples will be submitted to Fremont Analytical Inc., of Seattle, Washington for laboratory analysis. The soil sample analyses and MRLs are shown in Tables 1 and 2 and the bottle type, preservation, and hold times are shown in Table 3. The pre-excavation assessment water samples will only be analyzed for vinyl chloride, using USEPA Method 8260B with an MRL of 0.2 µg/L.

Sample container labels will be completed immediately before or immediately following sample collection. Container labels will include the following information:

- Project name;
- Water Sample Name: direct-push boring location followed by the date sampled. For example, the sample name for a water sample collected at direct-push boring 1 (DPB-1) on July 1, 2013, would be "DPB-1-W-070113";
- Direct-Push Soil Sample Name: Soil sampling location followed by the date sampled. For example, the sample name for a soil sample collected at DPB-1 on July 1, 2013 would be "DPB-1-S-070113";
- Excavation Soil Sample Name: Soil sampling location followed by the date sampled. For example, the sample name for a soil sample collected on the north sidewall of Area 1 at a depth of 2 feet on July 1, 2013 would be "Area1-N-2ft-070113";
- Initials of collector;
- Date and time of collection; and
- Analysis requested.

Samples will be transported via courier to the analytical laboratory using the following procedures:

- Sample containers will be place in a sealed, iced cooler after sample collection. This cooler will be used for transporting the samples to the analytical laboratory;
- In each cooler, glass bottles will be separated by a shock absorbing material to prevent breakage and leakage;
- Ice sealed in separate plastic bags or "gel ice" packs, will be placed into each cooler with the samples;
- All sample coolers will be accompanied by a chain-of-custody form (COC). The completed form will be sealed in a plastic bag, which will be taped to the inside lid of the cooler;
- Signed and dated COC seals will be placed on all coolers; and

- The name and address of the analytical laboratory, along with PES's name and office (return) address, will be placed on each cooler prior to transportation to the lab.

Once a sample is collected, it will remain in the custody of the sampler or other PES personnel until transported to the laboratory. Upon transfer of sample possession to subsequent custodians, a COC will be signed by the persons transferring custody of the sample container. A signed and dated COC seal will be placed on each cooler prior to transport. COC records will be included in the analytical report prepared by the laboratory.

Documentation

Direct-Push Boring s – Soil Sampling

A description of the sampling information will be recorded on a boring log for each boring location. Sampling information recorded on the log will include the following:

- Date and time of sampling;
- Sampling location, determined with a GPS unit;
- Names of sampling team members;
- Sampling technique;
- Parameters to be analyzed;
- Lithology per ASTM D 2488;
- PID measurements; and
- Blow counts.

Direct-Push Borings – Water Sampling

A description of the sampling information will be recorded on water sampling forms. Sampling information recorded on the form will include the following:

- Date and time of sampling;
- Sampling location, identified by the direct-push boring ID;
- Names of sampling team members;
- Sampling technique;
- Parameters to be analyzed;
- Field parameter measurements: pH, specific conductance, ORP, dissolved oxygen, and temperature;
- Depth to water;
- Purge rate and volume;
- Record weather conditions at the time of sampling; and
- Unusual circumstances.

Excavation – Soil Sampling

- Date and time of sampling;
- Sampling location (Area Number, Sidewall or Base, and Depth), and as determined with a GPS unit;
- Names of sampling team members;
- Sampling technique;
- Parameters to be analyzed;
- PID measurement;
- Weather conditions at the time of sampling; and
- Unusual circumstances.

Decontamination

All downhole drilling equipment, excavation equipment, tools, and sampling equipment will have accumulated soils brushed off between boreholes/excavations and be high-pressure-washed with hot water after completion of the work. Equipment washing will be completed in a designated decontamination area so that all rinsate will be contained and collected.

All smaller, non-disposable sampling equipment will be decontaminated prior to initial use, between sampling locations, and at the completion of the site-specific sampling.

The following decontamination procedure will be used for non-dedicated and non-disposable smaller sampling equipment:

- Tap water rinse;
- Non-phosphatic detergent (e.g., Liquinox) and tap water wash;
- Tap water rinse; and
- Distilled water rinse.

Decontamination of personnel involved in sampling activities will be accomplished as described in the site-specific health and safety plan.

Sampling Residuals

The following procedures will be used for the investigation residuals, including water sampling purge water and decontamination water:

- Purge water and decontamination water will be placed in 55-gallon drums and stored on site. The residuals will be sampled and characterized for disposal. The disposal will occur concurrent with site redevelopment activities;
- Residual soils will be placed in a 30-gallon drum and stored on site. The residuals will be sampled and characterized for disposal. The disposal will occur concurrent with site redevelopment activities; and

- Disposable clothing and equipment will be placed in plastic bags and disposed of as solid waste.

Health and Safety

All workers associated with the environmental activities described in this SAP will be required to provide and implement a project specific health and safety plan (HASP) prior to starting work at the Property. The HASP will be prepared consistent with the requirements outlined in the Worker Health and Safety guidelines (WAC 173-340-810) and the Occupational Safety and Health Act (OSHA, 29 CFR 1900).

QUALITY ASSURANCE PROJECT PLAN

The quality assurance project plan (QAPP) describes the measures undertaken so that the data collected during the project are acceptable for their intended use(s). The specific requirements pertaining to this monitoring plan are described in this section. The laboratory and field control sample frequency is summarized in Table 4.

Quality Assurance Project Plan Objectives

The overall QAPP objective for measurement data is to provide data of known and acceptable quality. All measurements will be made to yield accurate and precise results representative of the media and conditions measured. Chemical analyses will be performed in accordance with the requirements of the analytical methods. All sample results will be calculated and reported in consistent units to allow comparison of the sample data with regulatory criteria and federal, state, and local databases. QAPP objectives for precision, accuracy, and completeness have been established for each measurement variable, where possible, and are discussed below.

Chemical Analyses

Analysis of environmental samples will be performed in accordance with the laboratory analytical methods summarized in Table 1. The laboratory will report to the MRL. Any special analytical methods or modifications to methods will be determined with laboratory concurrence prior to beginning sample analysis.

Laboratory Quality Control

This section presents quality control (QC) requirements for the analytical laboratory. The purpose of this QC program is to produce data of known quality meeting project objectives and the requirements of the standard methods of analysis. Laboratory QC samples will include laboratory control samples (LCSs), matrix spike/matrix spike duplicate (MS/MSD) samples, and method blanks. Laboratory QC samples (e.g., blanks and LCSs) will be included in the preparation batch with the field samples. An analytical batch is a number of samples (not to exceed 20, including the associated laboratory QC samples, MSs and MSDs) that are from a

similar matrix and extracted or digested at the same time, analyzed sequentially, and with the same lot of reagents.

The identity of each analytical batch will be reported with the analyses so that a reviewer can identify the QC samples and the associated environmental samples. Samples that do not need separate extraction or digestion (e.g., volatile analyses by purge and trap) are included in each analytical batch.

All sample preparation and analysis will be completed within the method-required holding times. The holding time begins at the time of sample collection. If holding times are exceeded and the analyses are performed, the data will be qualified during the data review, in accordance with USEPA Functional Guidelines for Organic Data Review[1].

Field Duplicates

A field duplicate sample is a second sample collected at the same location as the original sample. Duplicate samples are collected simultaneously or in immediate succession, using identical sampling techniques, and treated in an identical manner during storage, transportation, and analysis. The sample containers are assigned an identification number in the field so that they cannot be identified (blind duplicate) as duplicate samples by laboratory personnel performing the analysis. Duplicate sample results are used to assess precision of the sample collection process. One duplicate sample will be collected for approximately every 20 project samples.

Trip Blanks

A trip blank consists of a VOC sample vial filled in the laboratory with reagent-grade water, transported to the sampling site, handled under the same conditions as an environmental sample, and returned to the laboratory for analysis. Trip blanks are not opened in the field. Trip blanks are prepared only when volatile samples are collected and are analyzed only for volatile analytes. Trip blanks are used to assess the potential introduction of contaminants from sample containers or during the transportation and storage procedures. One trip blank per sampling event will be included with the shipment of samples to the laboratory and will be analyzed for VOCs. If an analyte is detected in a trip blank, the data will be qualified during the data review per USEPA Functional Guidelines for Organic Data Review.

Data Reporting and Review

The laboratory performing sample analyses will be required to submit summary data and QA information to permit independent determination of data quality. The determination of data

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[1] U.S. Environmental Protection Agency (USEPA). 1999. *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*. EPA 540-R-01-008. USEPA Office of Emergency and Remedial Response. October.

quality will be performed using USEPA Functional Guidelines for Organic Data Review as guidelines for data review.

Laboratory deliverable requirements are outlined below:

- Narrative cover letters for each sample batch will include a summary of any QC, sample, shipment, or analytical problems, and will document all internal decisions. Problems will be outlined and final solutions documented;
- A copy of the signed chain-of-custody form for each batch of samples will be included in the results packet;
- Sample concentrations will be reported on standard data sheets in proper units and to the appropriate number of significant figures. For undetected values, the MRL for each compound will be reported separately for each sample. Dates of sample extraction or preparation and analysis must be included;
- A method blank summary will be included;
- Surrogate percent recovery will be calculated and reported;
- LCS results will be included;
- MS/MSD percent recoveries, spike level, and relative percent difference will be included; and
- Laboratory duplicate results will be included.

PES appreciates the opportunity to be of service on this project. If you have any questions regarding this letter, or need any additional information, please feel free to contact either of us at (206) 529-3980.

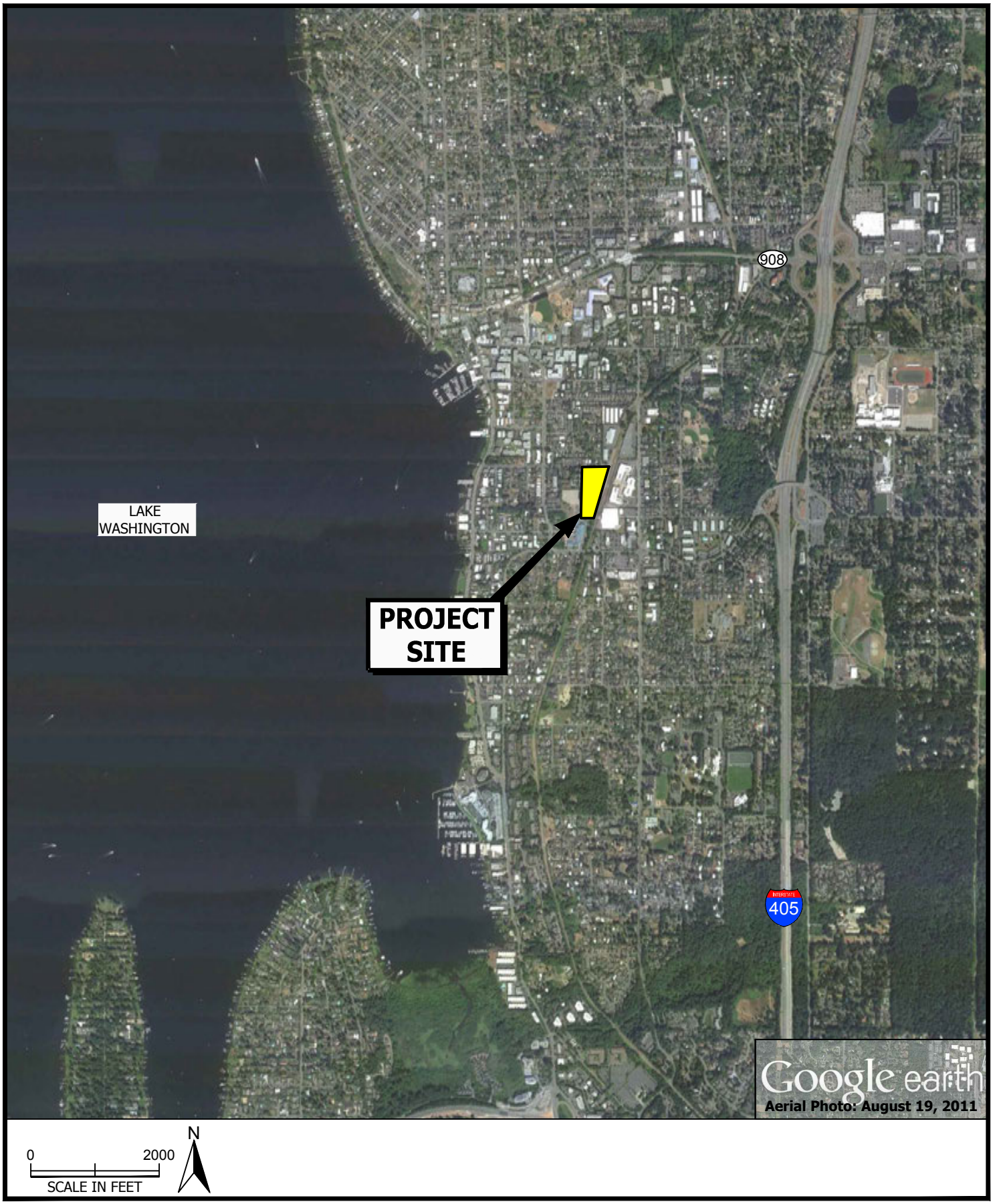
Very truly yours,

PES ENVIRONMENTAL, INC.

Kelly L. Rankich
Project Engineer

Daniel A. Balbiani, P.E.
Principal Engineer

Attachments: Figure 1 – Site Location Map
Figure 2 – Soil Assessment Boring Locations
Figure 3 – Proposed Pre-Excavation Borings, Excavation Areas, and Cross Section Location
Figure 4 – Cross-Section A-A
Table 1 – Laboratory Analytical Parameters and Screening Levels - Soil
Table 2 – Detected VOCs and Vinyl Chloride MRLs and Screening Levels - Soil
Table 3 – Analytical Methods and Sample Handling Details
Table 4 – Laboratory and Field Quality Control Summary

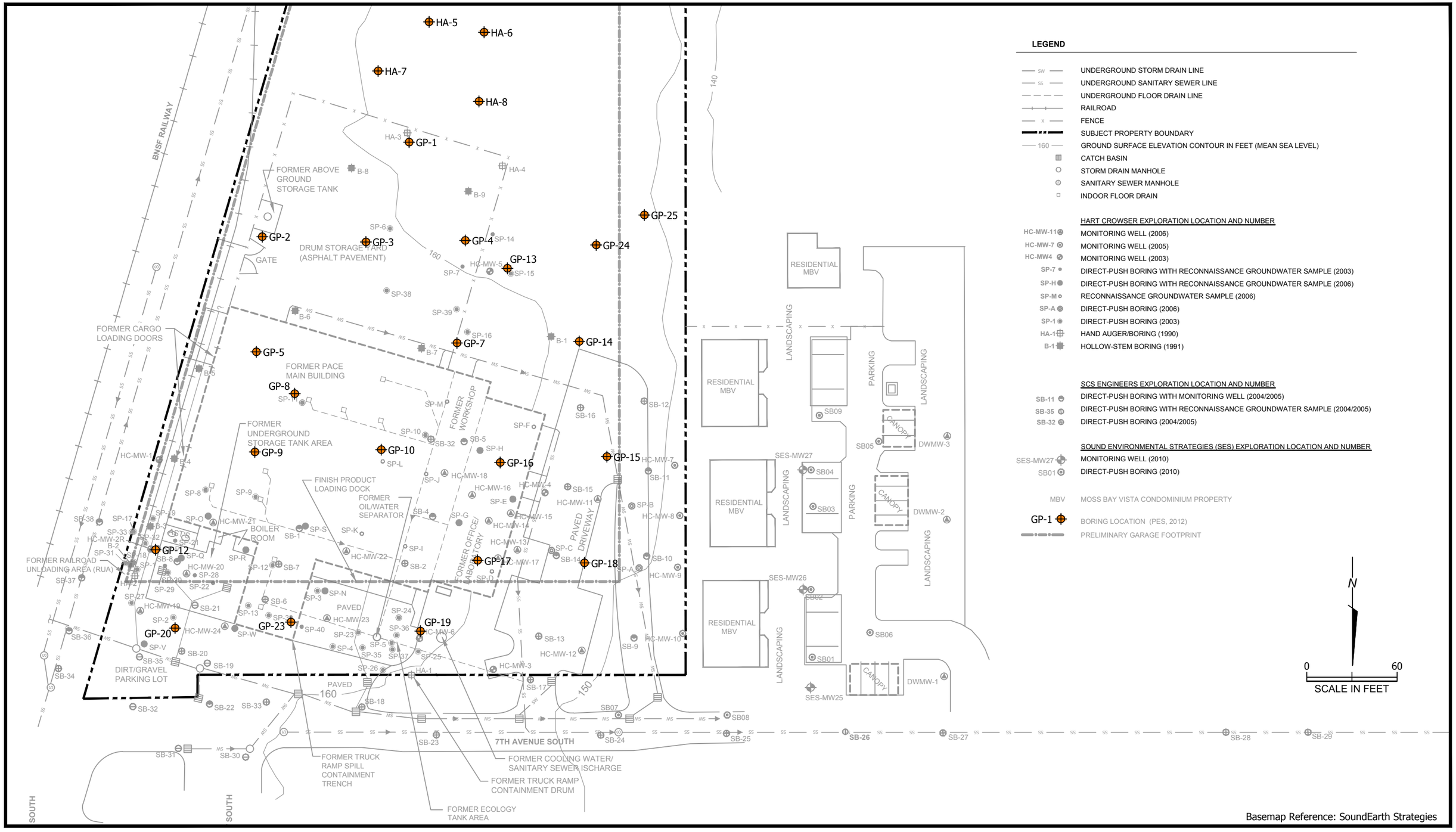


PES Environmental, Inc.
Engineering & Environmental Services

Site Location Map
Former Pace National Property
500 7th Avenue South
Kirkland, Washington

FIGURE
1

1006.008.01.003	100600801003_SAP_1	KLR	2/13
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



LEGEND

- UNDERGROUND STORM DRAIN LINE
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND FLOOR DRAIN LINE
- RAILROAD
- FENCE
- SUBJECT PROPERTY BOUNDARY
- GROUND SURFACE ELEVATION CONTOUR IN FEET (MEAN SEA LEVEL)
- CATCH BASIN
- STORM DRAIN MANHOLE
- SANITARY SEWER MANHOLE
- INDOOR FLOOR DRAIN

HART CROWSER EXPLORATION LOCATION AND NUMBER

- HC-MW-11 MONITORING WELL (2006)
- HC-MW-7 MONITORING WELL (2005)
- HC-MW4 MONITORING WELL (2003)
- SP-7 DIRECT-PUSH BORING WITH RECONNAISSANCE GROUNDWATER SAMPLE (2003)
- SP-H DIRECT-PUSH BORING WITH RECONNAISSANCE GROUNDWATER SAMPLE (2006)
- SP-M RECONNAISSANCE GROUNDWATER SAMPLE (2006)
- SP-A DIRECT-PUSH BORING (2006)
- SP-1 DIRECT-PUSH BORING (2003)
- HA-1 HAND AUGER/BORING (1990)
- B-1 HOLLOW-STEM BORING (1991)

SCS ENGINEERS EXPLORATION LOCATION AND NUMBER

- SB-11 DIRECT-PUSH BORING WITH MONITORING WELL (2004/2005)
- SB-35 DIRECT-PUSH BORING WITH RECONNAISSANCE GROUNDWATER SAMPLE (2004/2005)
- SB-32 DIRECT-PUSH BORING (2004/2005)

SOUND ENVIRONMENTAL STRATEGIES (SES) EXPLORATION LOCATION AND NUMBER

- SES-MW27 MONITORING WELL (2010)
- SB01 DIRECT-PUSH BORING (2010)

- MBV MOSS BAY VISTA CONDOMINIUM PROPERTY
- GP-1 BORING LOCATION (PES, 2012)
- PRELIMINARY GARAGE FOOTPRINT

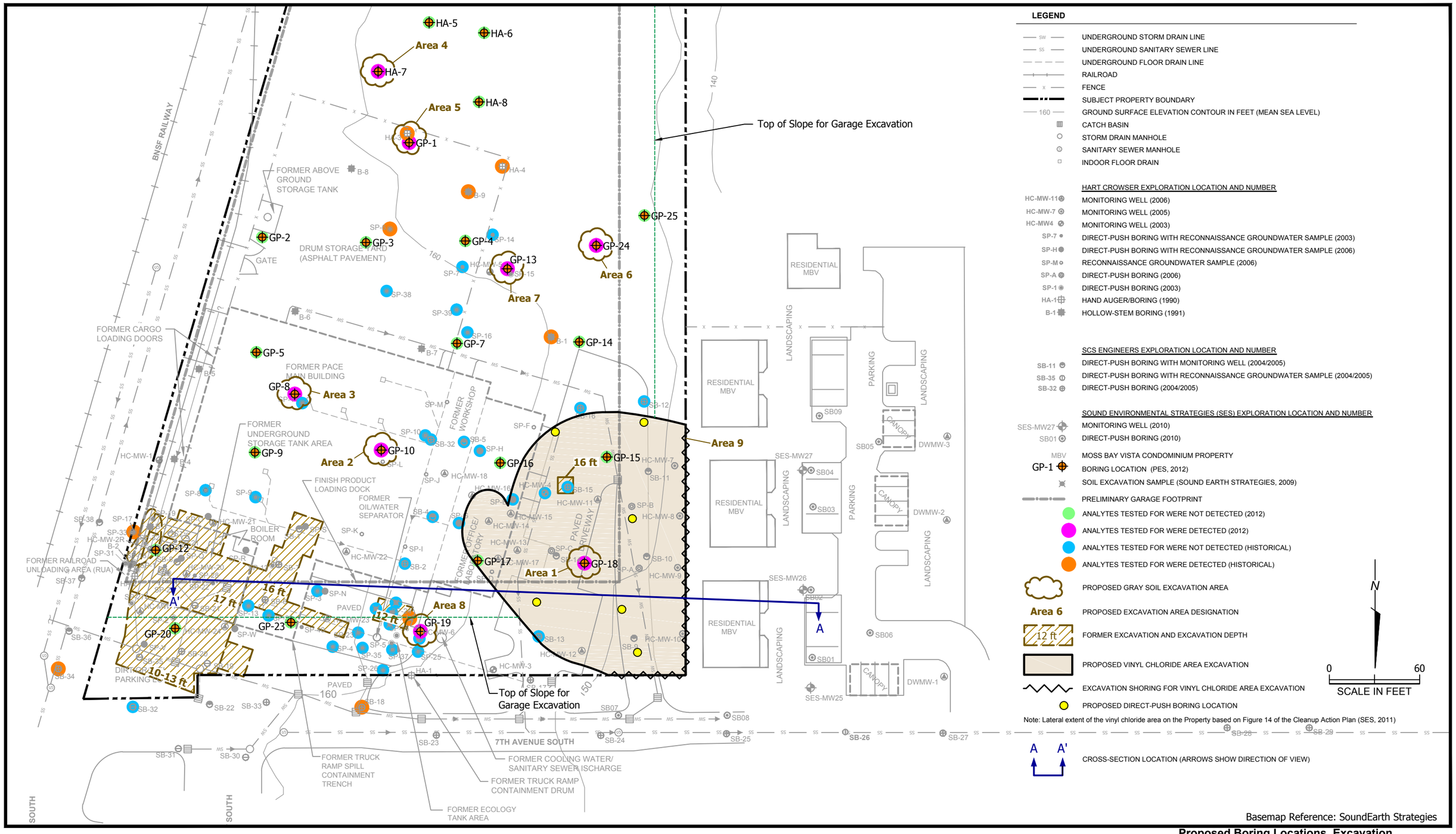
Basemap Reference: SoundEarth Strategies

PES Environmental, Inc.
Engineering & Environmental Services

Soil Assessment Boring Locations
Former Pace National Property
500 7th Avenue South
Kirkland, Washington

FIGURE
2

1006.008.01.003	100600801003_SAP_2	KLR	2/13
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



LEGEND

- UNDERGROUND STORM DRAIN LINE
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND FLOOR DRAIN LINE
- RAILROAD
- FENCE
- SUBJECT PROPERTY BOUNDARY
- GROUND SURFACE ELEVATION CONTOUR IN FEET (MEAN SEA LEVEL)
- CATCH BASIN
- STORM DRAIN MANHOLE
- SANITARY SEWER MANHOLE
- INDOOR FLOOR DRAIN

HART CROWSER EXPLORATION LOCATION AND NUMBER

- HC-MW-11 — MONITORING WELL (2006)
- HC-MW-7 — MONITORING WELL (2005)
- HC-MW4 — MONITORING WELL (2003)
- SP-7 — DIRECT-PUSH BORING WITH RECONNAISSANCE GROUNDWATER SAMPLE (2003)
- SP-H — DIRECT-PUSH BORING WITH RECONNAISSANCE GROUNDWATER SAMPLE (2006)
- SP-M — RECONNAISSANCE GROUNDWATER SAMPLE (2006)
- SP-A — DIRECT-PUSH BORING (2006)
- SP-1 — DIRECT-PUSH BORING (2003)
- HA-1 — HAND AUGER/BORING (1990)
- B-1 — HOLLOW-STEM BORING (1991)

SCS ENGINEERS EXPLORATION LOCATION AND NUMBER

- SB-11 — DIRECT-PUSH BORING WITH MONITORING WELL (2004/2005)
- SB-35 — DIRECT-PUSH BORING WITH RECONNAISSANCE GROUNDWATER SAMPLE (2004/2005)
- SB-32 — DIRECT-PUSH BORING (2004/2005)

SOUND ENVIRONMENTAL STRATEGIES (SES) EXPLORATION LOCATION AND NUMBER

- SES-MW27 — MONITORING WELL (2010)
- SB01 — DIRECT-PUSH BORING (2010)
- MBV — MOSS BAY VISTA CONDOMINIUM PROPERTY
- GP-1 — BORING LOCATION (PES, 2012)
- SOIL EXCAVATION SAMPLE (SOUND EARTH STRATEGIES, 2009)
- PRELIMINARY GARAGE FOOTPRINT
- ANALYTES TESTED FOR WERE NOT DETECTED (2012)
- ANALYTES TESTED FOR WERE DETECTED (2012)
- ANALYTES TESTED FOR WERE NOT DETECTED (HISTORICAL)
- ANALYTES TESTED FOR WERE DETECTED (HISTORICAL)
- PROPOSED GRAY SOIL EXCAVATION AREA
- Area 6 — PROPOSED EXCAVATION AREA DESIGNATION
- 12 ft — FORMER EXCAVATION AND EXCAVATION DEPTH
- PROPOSED VINYL CHLORIDE AREA EXCAVATION
- EXCAVATION SHORING FOR VINYL CHLORIDE AREA EXCAVATION
- PROPOSED DIRECT-PUSH BORING LOCATION

Note: Lateral extent of the vinyl chloride area on the Property based on Figure 14 of the Cleanup Action Plan (SES, 2011)

A A' — CROSS-SECTION LOCATION (ARROWS SHOW DIRECTION OF VIEW)

N

0 60

SCALE IN FEET

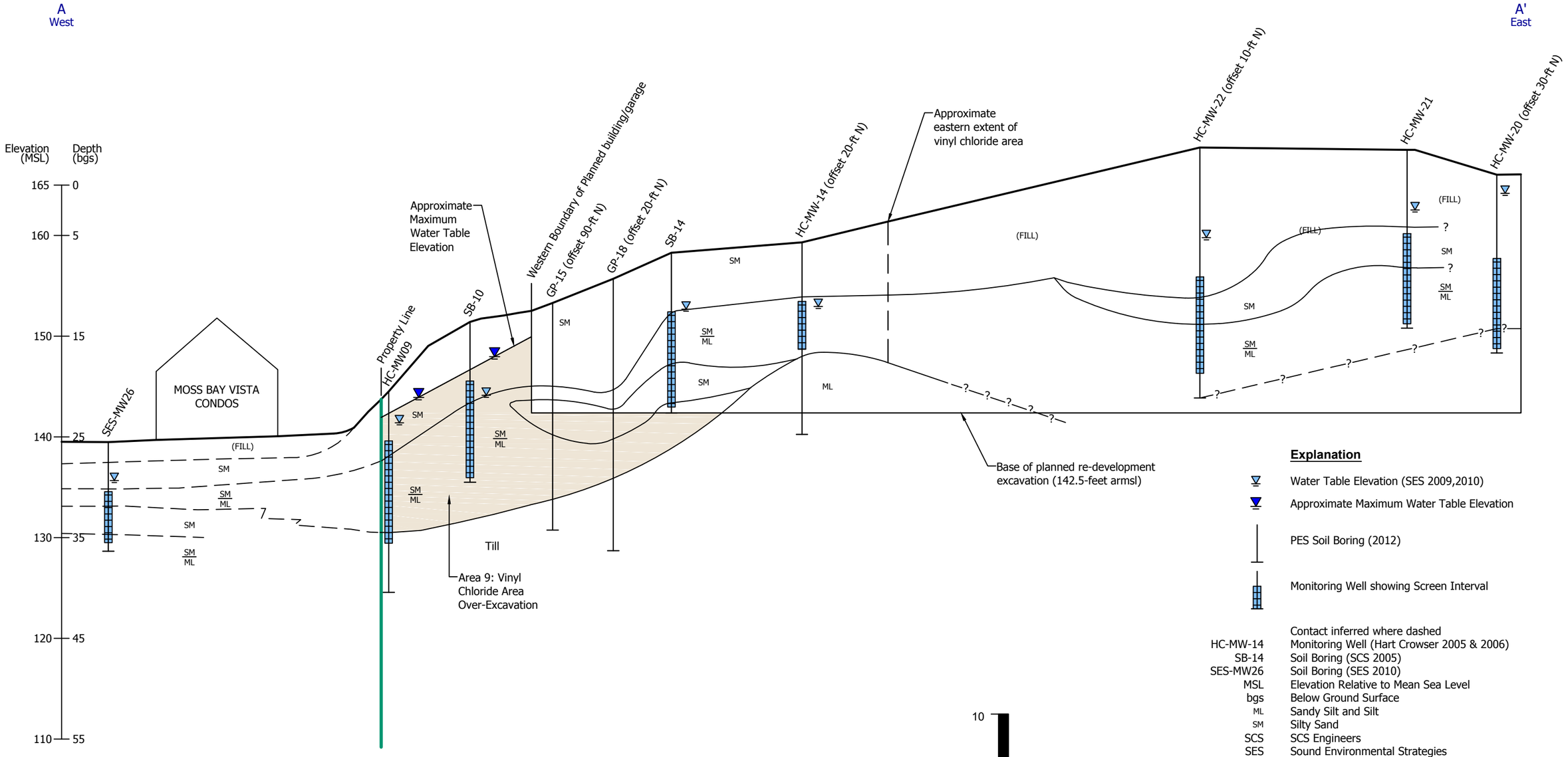
Basemap Reference: SoundEarth Strategies

PES Environmental, Inc.
Engineering & Environmental Services

Proposed Boring Locations, Excavation Areas and Cross-Section Location
Former Pace National Property
500 7th Avenue South
Kirkland, Washington

FIGURE
3

1006.008.01.003	100600801003_SAP_3-4	KLR	2/13
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Water Table Elevation (SES 2009,2010)
- Approximate Maximum Water Table Elevation
- PES Soil Boring (2012)
- Monitoring Well showing Screen Interval
- Contact inferred where dashed
- HC-MW-14 Monitoring Well (Hart Crowser 2005 & 2006)
- SB-14 Soil Boring (SCS 2005)
- SES-MW26 Soil Boring (SES 2010)
- MSL Elevation Relative to Mean Sea Level
- bgs Below Ground Surface
- ML Sandy Silt and Silt
- SM Silty Sand
- SCS SCS Engineers
- SES Sound Environmental Strategies

Source Reference: SoundEarth Strategies' Figure 4, Generalized Geologic Cross Section A-A', Remedial Investigation/Feasibility Study , December 13, 2010

PES Environmental, Inc.
Engineering & Environmental Services

Cross-Section A-A'
Former Pace National Property
500 7th Avenue South
Kirkland, Washington

FIGURE
4

1006.008.01.003	100600801003_SAP_3-4	KLR	2/13
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

Table 1
Laboratory Analytical Parameters and Screening Levels - Soils
Former Pace National Property
500 7th Avenue South, Kirkland, WA

Area	Depth of Historical Detection (ft bgs	Parameter	Method	Screening Levels (mg/kg)	
				Method Reporting Limit	MTCA Method A/B
Pre-Excavation Assessment	NA	GRO	NWTPH-Gx	5	100
	NA	DRO	NWTPH-Dx	20	2,000
	NA	HO	NWTPH-Dx	50	2,000
	NA	VOCs (full list)	USEPA Method 8260B	see Table 2	see Table 2
1	6 and 12	DRO	NWTPH-Dx	20	2,000
	6 and 12	HO	NWTPH-Dx	50	2,000
	6 and 12	VOCs (full list)	USEPA Method 8260B	see Table 2	see Table 2
2	14.5	GRO	NWTPH-Gx	5	100
	14.5	DRO	NWTPH-Dx	20	2,000
	14.5	VOCs (full list)	USEPA Method 8260B	see Table 2	see Table 2
3	10	cis-1,2 dichloroethene	USEPA Method 8260B	0.02	800
4	2	xylenes	USEPA Method 8260B	0.02	9
5	1	toluene	USEPA Method 8260B	0.02	7
6	0.5	HO	NWTPH-Dx	50	1,000
7	6	GRO	NWTPH-Gx	5	100
	6	DRO	NWTPH-Dx	20	2,000
	6	VOCs (full list)	USEPA Method 8260B	see Table 2	see Table 2
8	1.5	DRO	NWTPH-Dx	25	2,000
	1.5	Chlordane	USEPA Method 8081	0.01	2.86
9	NA	Vinyl Chloride	USEPA Method 8260B	0.002	0.67

Notes:
1) ft bgs = feet below ground surface
2) GRO = gasoline-range organics
3) DRO = diesel-range organics
4) HO = heavy oil
5) VOCs = volatile organic compounds
6) NA = not applicable
7) mg/kg = milligrams per kilogram

Table 2
Detected VOCs and Vinyl Chloride MRLs and Screening Levels - Soil
Former Pace National Property
500 7th Avenue South, Kirkland, Washington

Analyte	Screening Level (mg/kg)	
	MRL	MTCA Method A/B
1,2,4-Trimethylbenzene	0.02	NA
1,3,5-Trimethylbenzene	0.02	800*
4-Isopropyltoluene	0.02	NA
Benzene	0.02	0.03
cis-1,2-Dichloroethene	0.02	800*
Cumene	0.08	8000*
Naphthalene	0.03	5
n-Butylbenzene	0.02	NA
n-Propylbenzene	0.02	8000*
Ethylbenzene	0.03	6
o-Xylene	0.02	9
m,p-Xylene	0.02	9
sec-Butylbenzene	0.02	NA
Toluene	0.02	7
Vinyl chloride	0.002	0.67*

Notes:
1) VOCs = volatile organic compounds
2) NA = not available
3) mg/kg = milligrams per kilogram
4) MRL = method reporting limit
5) * = Ecology Model Toxics Control Act (MTCA) Method B cleanup level

Table 3

Analytical Methods and Sample Handling Details
Former Pace National Property
500 7th Avenue South, Kirkland, Washington

Method Number	Analysis	Container[a] Type	Container[a] Size	Preservative	Maximum Holding Time
Soil					
NWTPH-Gx	Gasoline-Range Organics	Glass	4 to 8 oz.	4 ± 2°C	
		Glass - VOA	40 ml	4 ± 2°C; methanol	analyze within 14 days
NWTPH-Dx	Diesel and Heavy Oil-Range Organics	Glass	4 to 8 oz.	4 ± 2°C	extract within 14 days/analyze within 40 days
EPA Method 8260	Volatile Organic Compounds	Glass	4 to 8 oz.	4 ± 2°C	
		Glass - VOA	40 ml	4 ± 2°C; methanol	analyze within 14 days
EPA Method 8081	Organochlorine Pesticides	Glass	4 to 8 oz.	4 ± 2°C	extract within 14 days/analyze within 40 days
Water					
EPA Method 8260	Volatile Organic Compounds	Glass - VOA	40 ml	4 ± 2°C; HCl	analyze within 14 days

Notes:

a) The size and number of containers may be modified by the analytical laboratories.

Laboratory and Field Quality Control Sample Summary
Former Pace National Property
500 7th Avenue South, Kirkland, Washington

Matrix	QA/QC Analyses	Frequency
Field		
Water	Trip blank	1 per sampling event when samples are analyzed for VOCs
Water	Field duplicate	1 per 20 project samples (approximately)
Soil	Field duplicate	1 per 20 project samples (approximately)
Laboratory		
Water/Soil	Laboratory control sample (LCS)	Every analytical batch
Water/Soil	MS/MSD	1 per 20 project samples
Water/Soil	Method blank	Every analytical batch