Final Post-Construction Environmental Management Plan

500 Fifth Avenue North Property
Seattle, Washington
VCP No. NW1493

for
IRIS Holdings, LLC

June 15, 2017

GeoEngineers
Earth Science + Technology

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VCP No. NW1493

File No. 12068-001-22

June 15, 2017

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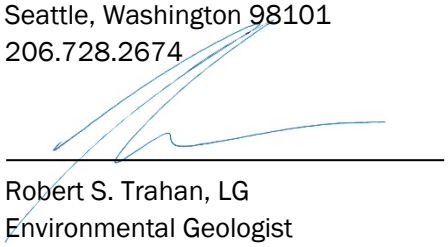
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Appendix A. Report Limitations and Guidelines for Use

1.0 INTRODUCTION

This Post-Construction Environmental Management Plan (EMP) presents the engineering and institutional controls established for the 500 Fifth Avenue North Property (Property; Site/Facility Identification No. 2593) located in Seattle, Washington. The Property consists of approximately 12 acres of land located between Mercer Street, Sixth Avenue North, Harrison Street and Fifth Avenue North in Seattle, Washington. IRIS Holdings, LLC (IRIS), an affiliated entity of the Bill & Melinda Gates Foundation purchased the Property from the Seattle Center (SC) in 2006 for redevelopment. Redevelopment of the Property included a new parking facility (5th Avenue North Parking Garage) for the Seattle Center and a multi-building office campus with a visitor center for the Bill & Melinda Gates Foundation. The Property is shown relative to surrounding physical features on Figure 1. The current and anticipated future Property layout is shown on Figure 2.

Redevelopment of the Property (i.e., 5th Avenue North Parking Garage, Phase 1 Campus and Phase 2A Campus construction excavation activities) and groundwater remediation efforts (i.e., Phase I and II Groundwater Treatment Systems) have resulted in a significant source reduction of soil and groundwater contamination. However, residual contamination remains in-place following Property redevelopment at concentrations exceeding Modal Toxics Control Act (MTCA) cleanup levels. In accordance with the Property-Wide Cleanup Action Plan[1] (CAP; GeoEngineers, 2012a), the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP No. NW1493), the Model Toxics Control Act (MTCA) and associated implementing regulations (i.e., Chapter 173-340 Washington Administrative Code [WAC]), the EMP has been prepared to:

- Identify areas where previous study results and construction observations indicate the presence of contaminated soil and groundwater at the Property;
- Identify areas where vapor intrusion management systems and barriers exist; and,
- Provide guidance on the proper handling and disposal of soil and groundwater encountered during future development, maintenance, utility work and/or excavation activities as well as proper Ecology notification procedures prior to ground disturbance.

2.0 BACKGROUND INFORMATION

2.1. Historical Operations and Property Uses

Historical records indicate that the Property has been owned/occupied by multiple residential, commercial, and industrial facilities since the late 1890s/early 1900s. In the northern portion of the Property, the land was occupied by a baseball stadium prior to being acquired by the City of Seattle (City) for the operation of a streetcar and later bus maintenance and fueling facility (Former Bus Barn, which was the source of the

[1]Separate Cleanup Action Plans (CAPs) were prepared for the 5th Avenue North Parking Garage (GeoEngineers, 2006a) and Phase 1 Campus (GeoEngineers, 2008a) redevelopment projects. These plans were provided to Ecology, and include documentation of the Property history and site conditions as well as an evaluation of cleanup alternatives considered and the cleanup actions proposed (and implemented) for the 5th Avenue North Parking Garage and Phase 1 Campus redevelopment projects. At the request of Ecology, a Property-Wide CAP was prepared to serve as the CAP for the entire Property, which includes the 5th Avenue North Parking Garage and Phase 1 Campus project areas as well as the Phase 2 Campus project area. Copies of these documents are presented as Attachment 1.1.

Gasoline Contaminated Site discussed later). In the southern and eastern portions of the Property, residential, commercial and light industrial facilities were in operation since the early 1900s.

In the early 1960s, the southern portion of the Property was acquired by the City and a parking lot constructed using imported backfill material from undocumented location(s). In the early 1990s, the northern portion of the Property was backfilled and a surface parking lot constructed (referred to as the Seattle Center Lot No. 2). Backfill used in the northern portion of the Property was reportedly imported from the Pacific Place Site, located in downtown Seattle. The Seattle Supersonics basketball training facility which occupied the east portion of the Property was constructed in the 1990s and demolished in 2010 in preparation for the surface street improvements to Mercer Street and Sixth Avenue.

Detailed descriptions of the Property history including previous uses and Property and adjacent Property features are presented in the SC Site Phase I Environmental Site Assessment (ESA; GeoEngineers, 2005a), and subsequent ESA update reports (GeoEngineers, 2005b; and GeoEngineers, 2006b). Copies of these documents detailing the historical use of the Property and surrounding area are presented in the Property-Wide Cleanup Action Report (GeoEngineers, 2015).

2.2. Summary of Cleanup Actions During Property Redevelopment

Property redevelopment began in January 2007 with the construction of the 5th Avenue North Parking Garage which occupies an approximately one city block area located in the southwest corner of the Property. The first phase of campus construction (Phase 1 Campus, consisting of the North and South Buildings) was completed in 2011. In addition, construction activities in the eastern portion of the Property were completed in 2012 to facilitate road surface improvements associated with the State Route 99/Alaskan Way Tunnel Project (Phase 2A) and Mercer Street Widening Project.

During Property redevelopment, contaminated soil and/or groundwater encountered within the construction excavations for the 5th Avenue North Parking Garage, Phase 1 Campus and Phase 2A Campus areas (see Figure 2) were managed in accordance with the Ecology VCP (VCP No. NW1493, MTCA and associated implementing regulations [i.e., Chapter 173-340 WAC]). As a result of the redevelopment activities, a significant portion of the identified soil and/or groundwater contamination was transported from the Property for permitted disposal. However, residual contamination associated with historical operations and uses remain in place at the Property.

Residual contamination at the Property is isolated by protective barriers to restrict direct human contact. These protective barriers consist of:

- The subgrade building foundations and floorslabs;
- Concrete and asphalt roads/sidewalks;
- Imported topsoil (approximately 3 feet thick) overlying a visual marker (orange construction netting, geotextile or similar) within the landscaped areas adjacent to the North and South Campus Buildings;
- Imported topsoil and vegetation covering the sloped area east of the North Building;
- Imported topsoil and vegetation cover within the recently acquired triangular property south of the South Building; and,

- A chemical vapor barrier (Liquid Boot®) applied to all subgrade surfaces (building walls and floors) of the Phase 1 Campus (beneath, and around, the North and South Campus Buildings and adjoining underground parking garage) and portions of the 5th Avenue North Parking garage to restrict the migration of gasoline vapors into the occupied building spaces.

Cleanup Actions completed during Property redevelopment are presented in the Property-Wide Cleanup Action Report (GeoEngineers, 2015). Current property conditions and engineering controls for the 500 Fifth Avenue North Property are summarized in the following sections.

2.3. Summary of Current Property Conditions

2.3.1. Post-Construction Soil Conditions

During each phase of Property redevelopment, all accessible contaminated soil within the limits of the construction were excavated and removed from the Property for permitted landfill disposal. Based on field screening results and visual observation during construction and the chemical analytical results of soil samples, the Property currently contains three "sites" (as defined by MTCA) where hazardous substances are still located. Contamination sites currently located at the Property include:

- **Contaminated Fill Site –** Soil with randomly distributed residual contamination, generally including metals (arsenic, mercury and lead), carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and petroleum hydrocarbons remains in-place beyond the 5th Avenue North Parking Garage, Phase 1 Campus and Phase 2 Campus construction footprints. The Contaminated Fill Site is shown relative to the Property on Figures 2 and 3 and is generally depicted by the yellow shaded area shown on Diagram 1. Accessible contaminated soil associated with this site was removed during Property redevelopment. Residual contaminated soil currently remains in soil above the native soil – fill contact to depths of approximately 20 feet below ground surface (bgs).

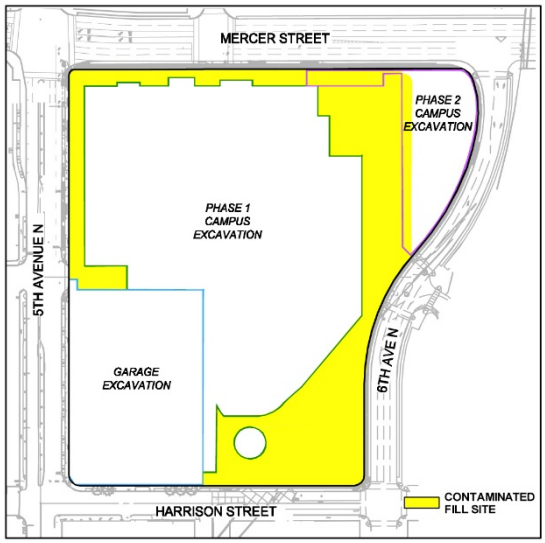


Diagram 1: The approximate extent of petroleum hydrocarbon, metals and/or PAH contaminated soil (yellow shaded area) remaining at the Property. See Figures 2 and 3 for additional

  The Contaminated Fill Site is isolated by the Phase 1 Campus and 5th Avenue North Parking Garage structures, paved roads, concrete sidewalks, imported topsoil overlying a visual marker (orange construction fencing, geotextile fabric or similar) in landscaped areas adjacent to the North and South Campus Buildings, and imported topsoil and vegetation covering the sloped area in the eastern portion of the Property and recently acquired triangular property south of the South Building between Harrison Street and Sixth Avenue.

- **Gasoline Contamination Site –** Gasoline-related contaminated soil associated with releases from the former bus maintenance and fueling facility (the Former Bus Barn Area) remains in-place in the northern portion of the Property beneath the North Building and the Phase 1 Campus underground parking garage. The Gasoline Contamination Site is shown relative to the Property on Figures 2 and 4

and is generally depicted by the red shaded area on Diagram 2. Accessible contaminated soil associated with this site was removed during Property redevelopment for the Phase 1 Campus. Residual gasoline-related contaminated soil currently remains in this area at depths between approximately 15 feet and 60 feet bgs.



Diagram 2: The approximate extent of gasoline and benzene contaminated soil (red shaded area) and groundwater (purple dashed line) remaining at the Property. See Figures 2 and 4 for additional explanation.

The soil portion of the Gasoline Contamination Site is isolated by the Phase 1 Campus structure, paved roads and sidewalks and imported topsoil overlying a visual marker (orange construction fencing, geotextile fabric or similar) with landscaped areas north of the North Building. Groundwater contamination associated with the Gasoline Contamination Site is being addressed by the Seattle Center through monitored natural attenuation. The mobile fraction of gasoline contamination in groundwater was removed. The potential for migration of gasoline vapors into the Phase 1 Campus structure is being managed by two components beneath and around the buildings: (1) a chemical vapor barrier encapsulating the below ground portions of the campus buildings and parking garage; and (2) drainage features installed during construction which provide passive ventilation for contaminate vapors to the atmosphere.

- **Gasoline UST Contamination Site –** Gasoline-related contaminated soil associated with releases from fueling facilities related to a former dairy remains in-place in the southern portion of the Property beyond the 5th Avenue North Parking Garage and Phase 1 Campus construction footprints. The Gasoline UST Contamination Site is shown relative to the Property on Figures 2 and 4 and is generally depicted by the green shaded area on Diagram 3. Accessible contaminated soil associated with this site was removed during Property redevelopment for the 5th Avenue North Parking Garage and the Phase 1 Campus. Residual gasoline-related contaminated soil currently remains in native soil in this area at depths between approximately 10 feet and 25 feet bgs.



Diagram 3: The approximate extent of petroleum hydrocarbon contaminated soil (green shaded area) remaining at the Property. See Figures 2 and 4 for additional explanation.

The Gasoline Underground Storage Tank (UST) Contamination Site is isolated by the Phase 1 Campus and 5th Avenue North Parking Garage structures, and paved roads and sidewalks. The potential for migration of gasoline vapors into Phase 1 Campus and 5th Avenue North Parking Garage structures is being managed by two components beneath and around the buildings: (1) a chemical vapor barrier on the subsurface walls and floor slab of the Taylor Ramp Tunnel and on the subsurface walls of the parking garage; and (2) drainage features installed during construction which provide passive ventilation for contaminate vapors to the atmosphere.

- **Stoddard Solvent Contamination Site –** Stoddard solvent-contaminated soil associated with off-Property releases from USTs (now decommissioned) related to a former dye works/cleaning facility (Basil Lee Property; Site/Facility Identification No. 794187 34) remains in-place at the Property boundary south of the 5th Avenue North Parking Garage construction footprint. The Stoddard Solvent Contamination Site is shown relative to the Property on Figures 2 and 4 and is generally depicted by the orange shaded area on Diagram 2. Accessible contaminated soil associated with this site was removed during Property redevelopment for the 5th Avenue North Parking Garage. Residual Stoddard-related contaminated soil from the off-property source currently remains in this area at depths between 15 feet and 25 feet bgs.

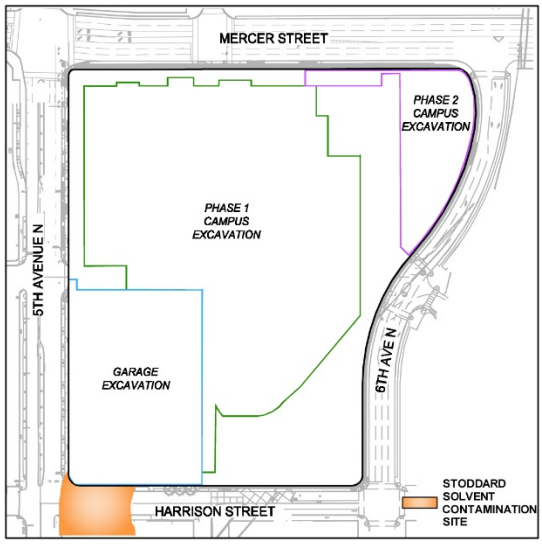
  

  Diagram 4: The approximate extent of petroleum hydrocarbon contaminated soil (orange shaded area) remaining at the Property. See Figures 2 and 4 for additional explanation.

  Contaminated soil is isolated by the paved roads and concrete sidewalks located within the City right-of-way. A chemical vapor barrier is located on the south wall of the 5th Avenue North Parking Garage building to prevent chemical vapor migration into the parking garage structure. The Stoddard Solvent Contamination Site should not present any long-term maintenance issues unless the vapor barrier is compromised through work on the garage wall or work within the right of way where contaminated soil could be encountered.

Soil conditions at the final limits of the 5th Avenue North Parking Garage, Phase 1 Campus and Phase 2A Campus construction excavations are characterized by soil samples obtained from previous environmental studies and during construction. Sample locations representing current (post-construction) conditions are shown on Figures 3 and 4 and in general geologic cross-sections on Figures 5 through 8. Chemical analytical results for soil samples representing current site conditions are summarized in Table 1.

2.3.2. Post-Construction Groundwater Conditions

In-situ groundwater treatment is being conducted by the Seattle Center to prevent the off-property migration of gasoline-related contaminants and to reduce the overall contaminant mass for this Site. Groundwater monitoring activities related to the Gasoline Contamination Site (from historic City of Seattle bus barn operations), and operation and maintenance of the in-situ groundwater treatment system and long-term natural attenuation performance monitoring details are described in Shannon & Wilson's Post-Construction Groundwater Monitoring Plan (Shannon & Wilson, 2017). In accordance with this plan, components of the in-situ treatment system will be decommissioned following eight quarters of rebound monitoring where results indicate continued compliance with cleanup standards (Section 3.2) in compliance monitoring wells and performance wells show a continued stable and/or shrinking plume status. Once eight quarters of rebound monitoring are complete, monitoring will be conducted on a biannual frequency for two years. After the two years of biannual monitoring is complete and there is continued compliance with the monitoring objectives, performance monitoring will occur on an annual five-year frequency. Four quarters of closure monitoring will then occur after performance monitoring results indicate that the cleanup standards are met in both performance and compliance wells. Groundwater monitoring will end once four quarters of data

in all monitoring wells are in compliance with the cleanup standards. Components of the in-situ treatment system and monitoring wells are shown on Figure 9. Chemical analytical results for recent groundwater samples representing current site conditions are summarized in Table 2.

2.4. Engineering Controls

Engineering controls have been installed at the Property to address residual soil and/or groundwater contamination associated with the Gasoline Contamination Site, Contaminated Fill Site, Gasoline UST Contamination Site No.1 and Stoddard Solvent Contamination Site. These controls are summarized in the following sections (Section 4.1 through 4.3).

2.4.1. Soil Cap for Residual Contaminated Fill and Native Soil

Residual contamination in fill and native soil associated with the Gasoline Contamination Site, Gasoline UST Contamination Site No. 1, Stoddard Solvent Contamination Site and/or Contaminated Fill Site remaining in-place at the limits of the 5th Avenue North Parking Garage, Phase 1 Campus and Phase 2 Campus construction excavations are being isolated by protective caps. The extent of the soil cap is shown relative the Property on Figure 10. Protective caps consist of:



Diagram 5: Visual marker (orange construction type plastic fence material) located at the beneath imported topsoil within landscaped areas (typical construction). See Figure 10 for additional explanation.

- Concrete building walls and floors,
- Concrete sidewalks,
- Asphalt paved roads,
- Topsoil overlying a visual marker (non-woven geotextile fabric, orange construction type plastic fence material or similar; see Diagram 5) within landscaped areas adjacent to the campus buildings. The purpose of the visual marker is to assist future workers in identifying the boundary between the topsoil cap and potentially contaminated fill which is subject to special handling and disposal requirements described in Section 5.0.
- Vegetated soil cover isolating residual soil contamination in the eastern portion of the Property (vegetated slope west of Sixth Avenue North) and southern portion of the Property (recently acquired Triangle Property).

2.4.2. Chemical Vapor Barrier for Gasoline Vapor Migration Mitigation



Diagram 6: Typical Liquid Boot® application for the 5th Avenue North Parking Garage and Phase 1 Campus shoring walls. See Figure 10 for additional explanation.

Based on the existing soil and groundwater characterization data, the potential for chemical soil vapors to migrate into the occupied spaces of the 5th Avenue North Parking Garage and Phase 1 Campus were evaluated using the Johnson and Ettinger (J&E) vapor intrusion model (Version 3.1, February 2004). The results of the J&E vapor modeling predicted that that indoor gasoline-related vapor concentrations sourcing from the Gasoline Contamination Site would be greater than the MTCA indoor air cleanup levels for the Phase 1 Campus. For the 5th Avenue North Parking Garage, the J&E vapor modeling predicted that indoor gasoline-related vapor concentrations sourcing from the Gasoline UST Contamination Site and Stoddard Solvent Contamination Site would be less than MTCA indoor air cleanup levels.

Based on the results of the vapor modeling for the Phase 1 Campus, a spray-on chemical vapor membrane (Liquid Boot®) was installed to protect occupants from potential exposure from gasoline-related contaminants sourcing from the Gasoline Contamination Site, Gasoline UST Contamination Site and/or Stoddard Solvent Contamination Site. Liquid Boot® was applied to portions of the subsurface 5th Avenue North Parking Garage and Phase 1 Campus structures as described below:

- Liquid Boot® was applied to the entire south subgrade wall and portions of the west and east subgrade walls of the 5th Avenue North Parking Garage; and
- Liquid Boot® was applied to all of the subgrade walls and below the basement floor of the Phase 1 Campus.

The Liquid Boot application for the 5th Avenue North Parking Garage and Phase 1 Campus is shown relative the Property on Figure 10.

2.5. Institutional Controls

A deed restriction (environmental covenant) compliant with the Uniform Environmental Covenants Act and with Ecology's model environmental covenant is being implemented for the Property to address residual contamination remaining in-place. The environmental covenant (1) identifies the location of remaining contaminants associated with the Stoddard Solvent Contamination Site, Contaminated Fill Site, Gasoline Contamination Site and Gasoline UST Contamination Site no. 1, and (2) restricts use of groundwater as drinking and/or irrigation water.

3.0 MONITORING AND MAINTENANCE OF SITE CONTROLS

Monitoring and maintenance of site controls will consist of at least one annual reconnaissance visit and performing corrective actions as necessary to address conditions that may compromise the integrity of the protective barriers that are being utilized to isolate residual site contamination at the Property. Monitoring and maintenance of site controls for the Property including restricted activities, corrective actions and requirements for the disturbance of potentially contaminated material is presented in the following sections (Sections 3.1 through 3.4). The location of the protective barriers and existing contamination sites are shown relative to the Property on Figure 10.

3.1. Monitoring and Maintenance Program

Purpose: Annual monitoring will be performed to evaluate the integrity of the protective barriers and/or the stability of the vegetated slope located in the eastern portion of the Property. Monitoring and maintenance of the protective barriers will be performed until which time the residual contaminated soil and/or groundwater is removed or is otherwise remediated. Additional monitoring activities may be required during non-routine activities such as maintenance work that disturbs subsurface soil or other activities or events that could potentially compromise the integrity of the protective barriers at the Property. Evidence of damage to the protective surfaces or instability of the vegetated slope must be reported to IRIS so that arrangements for corrective actions/repairs, as necessary, are implemented to maintain the integrity of the protective barriers. Corrective actions are further discussed in Section 3.3. In-situ groundwater treatment system components and protective barriers isolating residual contamination are shown on Figures 9 and 10, respectively. Groundwater monitoring will continue and the in-situ groundwater treatment system will remain in place until confirmation of plume stability.

Monitoring Activities to Be Performed: The monitoring program will consist of an annual review of this Plan and as-built plans and/or base maps showing the current layout of the Property, contaminated sites and barrier systems. The monitoring program will also consist of conducting annual visual reconnaissance of the protective barriers (in this case, soil erosion and the concrete slabs and surface pavements as the vapor barrier and orange markers in landscape areas will not be accessible) to identify potential areas requiring maintenance and/or repair. During the visual reconnaissance, evidence of the following will be evaluated:

- Breaching, cracking, deformation and/or erosion within landscaped and/or paved areas.
- Signs of invasive plant species (i.e., weeds) within the paved areas causing cracks that could decrease the life span of the paved surface.
- Evidence of any other anomalies or non-routine activities that may compromise the integrity of the protective barriers or result in the release of Site contaminants.

If conditions are observed that may lead to damage of the protective barriers, IRIS will implement corrective actions within a reasonable time frame to ensure that the function of the existing caps (i.e., asphalt and concrete paved areas; including floor slabs of structures, top soil with underlying visual marker in landscaped areas and vegetated topsoil cover) and chemical vapor barriers at the Property will be maintained to prevent exposure to the underlying soil contamination to wildlife and the general public, and to prevent chemical vapor intrusion into the occupied portions of the 5th Avenue North Parking Garage and Phase 1 Campus structures. Additionally, if soil disturbance activities are planned within the Property, IRIS

and their contractors will review the details of the proposed action to ensure that the elements of this EMP are followed, obtain written approval from Ecology to proceed, and submit a summary report to Ecology documenting restoration of the protective barriers.

Maintenance Activities to Be Performed: Activities for maintaining the existing protective barriers at the Property include but are not limited to the following:

- Repairs to the asphalt and/or concrete paved surfaces where cracks and/or breaches of the barrier that expose the underlying soil regardless of whether they are attributed to natural or man-made activities.
- Maintenance of the vegetative cover in areas where topsoil serves as a protective barrier.
- Maintenance of the established stormwater management systems to ensure that stormwater on the surface of the pavement caps drain freely.
- Protective barriers located on steep slopes (i.e., vegetated hillside within the eastern portion of the Property) will be maintained to prevent erosion.
- The Liquid Boot® vapor barrier should never be compromised. Therefore, a mitigation plan is necessary prior to utility installation or repair work that entails building penetration; or work such as drilling through parking garage walls (see additional instructions in Section 3.2).

Documentation and Record Keeping: Each monitoring event must be documented by completing a written report that includes a description of the observed Site conditions noting areas of interest on a log or map. Additionally, photographs documenting the current Site condition as well as any areas of interest that may require a corrective action should be obtained. Monitoring reports must be retained by IRIS or their authorized agents and made available for regulatory review upon request.

- If conditions are observed that may lead to damage of the protective barriers, IRIS or their authorized agents will implement corrective actions (see Section 3.3) to prevent damage to the protective barriers.
- If damage is observed to the protective barriers, IRIS or their authorized agents will promptly implement repairs to restore the function of the protective barriers and document the repair by completing a written report that includes a description of the observed damage and restoration/repair actions implemented.
- If soil disturbance activities are performed within the restricted portions of the Property, IRIS or their authorized agents will review the details of the proposed action to ensure that the elements of this EMP are followed, provide a 30-day advance notice to Ecology of the proposed action, and prepare a written report documenting restoration of the protective barriers.

3.2. Restricted Activities

In order to maintain the integrity and function of the protective barriers, any activity that results in exposing residual contaminated soil and/or groundwater including drilling, digging, piercing the Liquid Boot®, concrete or soil cap with a sampling device (i.e., post, stake or similar device), or grading, excavation, installation of underground utilities, that may result in uncontrolled soil erosion or removal of a protective barrier is not permitted without prior written approval from Ecology with the following exceptions:

- Maintenance activities within the landscape areas including the removal and replacement of dead or dying vegetation, replacement of healthy vegetation by a different species, weeding, installation or removal of existing irrigation lines, soil grading, etc. that do not extend below the visual contamination marker (orange construction fencing, geotextile or similar) are permitted. Please note that the use of vegetation with a deep root (i.e., tap root) system that would penetrate into potentially contaminated soil is not acceptable unless special design precautions are used.
- Maintenance activities within the vegetated soil cover areas (i.e., vegetated slope within the eastern portion of the Property and vegetated area in the southern portion of the Property) including mowing, weeding, and general housekeeping activities that do not expose the underlying Contaminated Fill Site are permitted.
- Gravel access paths and/or roads overlying contaminated soil may be maintained by grading and/or adding aggregate material. Grading activities however, must be surficial (less than a few inches) in nature.
- Maintenance activities within asphalt or concrete paved areas to fix and/or restore broken, damaged and/or worn areas.

3.3. Corrective Actions

Purpose: If a monitoring event identifies existing or potential conditions or activities that may threaten the integrity of the protective barriers at the Property, corrective actions may be required. Corrective actions will be evaluated and determined on a case-by-case basis. These actions may involve providing reminders to on-site workers and/or maintenance crews of the activities that are prohibited in the protected areas. Corrective actions for physical problems with the chemical vapor barrier, landscaped or paved areas will be managed by IRIS. Any corrective action that results in the exposure of contaminated media (i.e. soil, water and/or chemical vapor) or permanent modification to the current Site control is not permitted without prior written approval from Ecology.

Corrective Actions to Be Conducted: Correcting physical problems with the protective barriers may involve but are not limited to the following:

- Placing and compacting new fill or subgrade materials;
- Re-grading, reseeding, or replanting activities;
- Modifying drainage patterns or repairing the stormwater drainage system; and,
- Replacing, patching or sealcoating paved surfaces.

3.4. Emergency Maintenance Activities

Purpose: It is possible that soil excavation may be required at the Property in the future for emergency maintenance activities. For example, it may be necessary to excavate soil to repair a broken water line or other existing infrastructure.

Emergency Maintenance Notification Actions to Be Performed: In the event that emergency activities within the restricted areas penetrate one or more protective barriers exposing contaminated soil and/or groundwater, Ecology will be notified as soon as possible following the incident and corrective actions/repairs will be taken (as necessary) to ensure that the protective barriers (if disturbed) are restored to their original function. Materials generated by these activities will be managed following the guidelines presented below (Section 4.0).

4.0 PROCEDURES FOR SOIL AND GROUNDWATER MANAGMENT – FOR FUTURE DEVELOPMENT, MAINTENANCE, UTILITY WORK OR EXCAVATION ACTIVITIES

As discussed in Section 3.0, residual contamination associated with the Contaminated Fill Site, Gasoline Contamination Site, Gasoline UST Contamination Site No. 1 and Stoddard Solvent Contamination Site remains in-place on the Property and may be encountered during future development, maintenance, utility work and/or excavation activities. The following sections (Sections 4.1 through 4.6) describe the handling and disposal of soil and groundwater generated during future Property work. As previously indicated, any activity that results in exposing residual contaminated soil and/or groundwater including drilling, digging, piercing the cap with sampling device (i.e., post, stake or similar device), grading, excavation, installation of underground utilities, resulting in uncontrolled soil erosion or removal of a protective barrier is not permitted without prior written approval from Ecology with the exception of general maintenance activities described in Section 3.2.

4.1. Soil Excavation and Stockpiling Management Procedure

Before any excavation work is conducted IRIS and/or their authorized agents must be notified, health and safety credentials verified and approval issued. IRIS and/or their authorized agents should also be consulted to facilitate communication of existing chemical analytical results and remediation systems that are in place at the Property.

Fill soil and native soil generated outside the 5th Avenue North Parking Garage and/or Phase 1 Campus construction footprints and/or below the protective barriers must be considered contaminated until characterized for off-property disposal or on-property reuse in accordance with MTCA, Washington State Dangerous Waste regulations and/or the selected disposal facility requirements. Details regarding stockpile sampling for chemical characterization are further discussed in Section 4.3.



Diagram 7: Residual contamination at the 500 Fifth Avenue North Property. See Figure 10 for additional explanation.

Best management practices (BMPs) will be used to minimize the potential for cross-contamination of soil during excavation, handling, stockpiling, loading and transporting. At a minimum, these practices shall include minimizing tracking of equipment between contaminated and clean soil areas, and minimizing contact between excavated contaminated soil and clean soil. In the event that contaminated soil comes into contact with clean soil (i.e. vegetated topsoil cap and/or clean native soil), the contractor shall over-excavate these areas in coordination with IRIS.

Segregation and stockpiling of excavated soil will be conducted on-site and as close as practicable to the excavation areas**.** Stockpiles should be placed on and covered by durable plastic sheeting and bermed to control runoff, or in roll-off or other covered and labeled containers. Access to the temporarily stockpiled/secured soil will be restricted by a properly labeled fence or other barrier pending chemical analysis and a decision on its disposition. Handling procedures and testing requirements for landscaping topsoil, fill soil, native soil, and construction demolition debris are described in the following table.

MATERIAL MANAGEMENT AND TESTING REQUIREMENTS

Media	Handling Procedure/Analytical Testing Requirements
Landscape Soil/Topsoil	Soil excavated in landscaped areas (i.e. topsoil cap) located above the visual marker (non-woven geotextile fabric, orange construction type plastic fence material or similar) shall be segregated for cap reuse/restoration. No additional analytical testing required.
Fill Soil	Excavated fill soil which is geotechnically suitable for reuse shall be segregated, temporarily stockpiled and sampled to confirm that contaminant concentrations are less than MTCA cleanup levels listed in Table 1. • If contaminant concentrations are greater than MTCA cleanup levels, soil shall be transported from the Property for permitted disposal. • If contaminants are not detected or detected at concentrations less than MTCA cleanup levels, soil shall be reused as backfill to the extent possible. • If unused/excess soil remains following backfill activities, soil shall be transported from the Property for Permitted disposal.
	Excavated soil which is not geotechnically suitable for reuse on the Property as backfill shall be segregated for characterization and/or loaded directly into trucks and transported from the Property for permitted disposal.
Native Soil	Native soil excavated in areas in which contaminants either were not detected or detected at concentrations less than MTCA cleanup levels listed in Table 1 (based on previous sampling data), has no physical evidence of contamination (staining, sheen, odor, USTs, etc.) and is geotechnically suitable for reuse shall be segregated and temporarily stockpiled for reuse. No additional analytical testing required. If unusable/excess soil remains following backfill activities, soil shall be transported from the Property to an appropriate soil receiving facility at the discretion of IRIS.
	Native soil excavated in known areas to contain contaminant concentrations exceeding MTCA cleanup levels (based on previous sampling data), has physical evidence of contamination (staining, sheen, odor, USTs, etc.) or is not geotechnically suitable for reuse shall be segregated for characterization. • If contaminant concentrations are greater than MTCA cleanup levels, soil shall be transported from the Property for permitted disposal. • If contaminants are not detected or detected at concentrations less than MTCA cleanup levels, soil shall be reused (if geotechnically suitable) as backfill to the extent possible. • If unused/excess soil remains following backfill activities, soil shall be transported from the Property for Permitted disposal.
Construction Demolition Debris	Construction debris (concrete or other building materials) shall be transported to an appropriate construction debris landfill at the discretion of IRIS.

Note:

Excavated soil must be characterized for disposal or on-site reuse as required by MTCA, Washington State Dangerous Waste regulations and/or the selected disposal facility (see Section 4.3.2 for additional explanation).

As indicated above, soil generated from areas beyond the limits of the Gasoline Contamination Site, Gasoline UST Contamination Site No. 1 and/or Stoddard Solvent Contamination Site in which physical evidence of contamination is not observed and is geotechnically suitable for reuse will be segregated and stockpiled for use as backfill to the extent practical. Soil generated within the limits of the Gasoline Contamination Site, Gasoline UST Contamination Site No. 1 and/or Stoddard Solvent Contamination Site in which physical evidence of contamination is observed or is not geotechnically suitable for reuse will be

segregated and stockpiled for off-property disposal to a receiving facility permitted to receive such material (i.e., Subtitle C or D landfill). The approximate extent of the Gasoline Contamination Site, Contaminated Fill Site, Stoddard Solvent Contamination Site and Gasoline UST Contamination Site are shown relative to the Property on Figure 2. Soil sample locations representing current fill and native soil conditions are shown on Figures 3 and 4. The Contaminated Fill Site, Gasoline Contamination Site, Stoddard Solvent Contamination Site and Gasoline UST Contamination Site No. 1 are depicted in geologic cross-section on Figures 5 through 8. Chemical analytical results for soil and groundwater samples representing current Property conditions are summarized in Tables 1 and 2, respectively.

4.2. Dewatering and Wastewater Management

Any contractor conducting future development, maintenance, utility work or excavation activities shall establish contingency measures to address stormwater and/or other excavation water that accumulates in an excavation and comes into contact with contaminated soil (i.e. the Contaminated Fill Site, Gasoline Contamination Site, Stoddard Solvent Contamination Site and/or Gasoline UST Contamination Site No. 1) during future work. Based on existing subsurface information, it is unlikely that groundwater from the deep aquifer will be encountered in subsurface excavations.

If dewatering is necessary, any recovered stormwater and/or excavation water will be collected by the contractor for permitted disposal (i.e. King County sanitary sewer and/or liquid waste receiving facility [Emerald Services, Marine Vacuum Services, Lafarge, Philips Services or similar]). BMPs shall be employed to prevent leaks, spills or releases of the recovered excavation water.

4.3. Chemical Characterization of Excavated Soil for Disposal or Reuse

Excavated soil must be characterized for disposal or on-site reuse as required by MTCA, Washington State Dangerous Waste regulations and/or the selected disposal facility. Sampling and data evaluation must be completed by a qualified environmental consultant or individual with appropriate sampling credentials per Ecology and Occupational Safety and Health Administration (OSHA) guidelines. Procedures for stockpile soil characterization and dangerous waste evaluation are summarized in the following sections (Sections 4.3.1 and 4.3.2).

4.3.1. Stockpile Characterization Sampling

Where stockpile characterization sampling is necessary, stockpile sampling must be performed at a frequency consistent with Table 1 of Ecology's Guidance for Remediation of Petroleum Contaminated Soils (Ecology, 1995 or equivalent revision), as follows:

SOIL STOCKPILE SAMPLING REQUIREMENTS

Cubic Yards of Soil	Minimum Number of Samples
0-100	3
101-500	5
501-1000	7
1001-2000	10
>2000	10 + 1 for each additional 500 cubic yards

Discrete grab samples should be collected from various zones and/or depth horizons within the stockpiles as the stockpiles are being constructed to obtain spatially representative samples of the stockpiled material. The stockpile samples should be collected from locations that are generally representative of the soils and where physical evidence of contamination (sheen, odor, staining, etc.) may be present. If physical evidence of contamination is not observed, the stockpile should be divided into relatively equal sections and each section sampled. To evaluate whether stockpiled soil can be reused at the Property as backfill, the stockpile samples should be analyzed for the Site indicator hazardous substances presented in Table 3 and the results compared to the cleanup levels listed in Table 1.

4.3.2. Dangerous Waste Evaluation

The Dangerous Waste Regulations also require that contaminants be evaluated for the toxicity "characteristic" if they are included on the toxicity characteristic list (WAC 173-303-090[8]). A contaminant has the potential to designate as a dangerous waste if its concentration in soil is greater than 20 times[2] the associated toxicity characteristic threshold listed in WAC 173-303-090(8). In this case, representative samples of the soil need to be tested by the toxicity characteristic leaching procedure (TCLP). The results from the TCLP test are then compared directly to the toxicity characteristic threshold. The "trigger value" for potential dangerous waste designation (i.e., 20 times the toxicity characteristic threshold) for arsenic, lead and chromium is 100 milligrams per kilogram (mg/kg), cadmium is 20 mg/kg and mercury is 4 mg/kg.

Excavated soil determined to exceed MTCA cleanup levels will fall into one of two categories: 1) non-hazardous waste suitable for disposal at a Subtitle D facility; or 2) Washington-defined dangerous/hazardous waste requiring either disposal at a Subtitle C facility, or treatment followed by disposal at a Subtitle D facility. Before any stockpiled soil is transported off-property for disposal, chemical characterization data for this soil shall be reviewed to evaluate potential dangerous or non-dangerous waste status, and follow-up TCLP analyses shall be performed if the detected metals concentration exceeds the "trigger value" to confirm waste designation as appropriate.

All dangerous waste soil must be handled, transported and disposed of in accordance with state (WAC 173-303) and federal regulations (40 CFR 261).

4.4. Approved Waste Disposal Facilities

Facilities approved by IRIS for the disposal of hazardous and non-hazardous materials include the following. However, verification of a current disposal permit is necessary before transporting soil to any of these facilities.

- Waste Management's Columbia Ridge Landfill located in Arlington, Oregon (Non-Hazardous Subtitle D facility). Non-hazardous contaminated soil was transported to this facility by rail from Waste Management's transfer facility located at 70 South Alaska Street in Seattle, Washington.
- Republic Services' (formerly Allied Waste's) Roosevelt Landfill located in Klickitat County, Washington (Non-hazardous Subtitle D facility). Non-hazardous contaminated soil was transported to this facility by rail from Allied Waste's transfer facility located at 2722 Third Avenue South in Seattle, Washington.

[2] This is referred to as the "20-times rule" and is described in a September 21, 1992 EPA letter titled "Calculation of TCLP Concentrations from Total Concentrations". This reference is available at:
http://yosemite.epa.gov/osw/rcra.nsf/ea6e50dc6214725285256bf00063269d/95e9e57b91ea2e9f8525670f006c0acd!OpenDocument

- Waste Management's Chemical Waste Landfill located in Arlington, Oregon (Hazardous Waste Subtitle C facility). Hazardous contaminated soil was transported directly to this facility by truck and trailer.

Soil in which contaminants of concern (COCs) either are not detected or are detected at concentrations less than Natural Background[3] may be transported from the Property for unrestricted end use as approved by IRIS.

4.5. Possible Underground Storage Tanks

It is possible that undocumented USTs could be encountered during future development, maintenance, utility work and/or excavation activities. If USTs are encountered, the contents of the tank should be emptied and the tank removed in accordance with state and local regulations by a certified tank removal contractor. Additionally, at the time of the tank closure, a site assessment must be completed to investigate for the presence of a release of a regulated substance by a qualified environmental professional registered with Ecology to conduct such site investigations as required under WAC 173-360.

4.6. Chemical Vapors

Chemical vapors associated with the Gasoline Contamination Site, Stoddard Solvent Contamination and/or Gasoline UST Contamination Site No.1 may be encountered during excavation activities in the vicinity of the petroleum-contaminated native soil located in the north portion of the Phase 1 Campus and southeast and southwest portions of the 5th Avenue North Parking Garage. Soil disturbance activities within these areas area must be conducted in accordance with the requirements of the Washington Industrial Safety and Health Act (WISHA; RCW 49.17) and the federal Occupational Safety and Health Act (OSHA; 29 CFR 1910, 1926). Regulations include requirements that workers are to be protected from exposure to chemical vapors and/or contaminants in soil.

5.0 OWNER AND CONTRACTOR RESPONSIBILITIES

The following sections address the specific roles/tasks of the owner (IRIS) and the contractor relative to the proper handling and disposal of soil and groundwater encountered during future development, maintenance, utility work and/or excavation activities.

5.1. Owner and/or Authorized Agents

Owner and/or autherized agents will provide copies of available environmental and geotechnical reports to the contractor for review prior to any subsurface disturbance activities. As indicated in Section 4.4, facilities approved for the disposal of non-hazardous waste includes Waste Management's Columbia Ridge Landfill and Republic Services Roosevelt Landfill (Subtitle D Landfills). Facilities approved for the disposal of hazardous waste includes Waste Management's Chemical Waste Landfill (Subtitle C Landfill).

[3] Natural Background for the Property is defined as not detected, except for metals at concentrations at or less than natural background concentrations per Ecology publication 94-115 "Natural Background Soil Metals Concentrations in Washington State," dated October 1994 for arsenic , cadmium, lead and site-specific background concentrations for chromium (110 mg/kg) and mercury (0.13 mg/kg).

5.2. Contractor

- **Communicate –** The contractor must communicate with IRIS and/or their authorized agent to understand the areas in which residual contamination remains and the elements of the in-situ remediation systems, protective barriers and whether soil sampling and chemical analytical testing will be necessary.
- **Report Review –** Review this document and previous environmental reports to become familiar with the characterization and location of known or suspected contaminated soil and groundwater, prior to beginning excavation activities.
- **Health and Safety –** Prepare a site safety plan for use by the contractor's employees and subcontractors. Personnel working in areas of known or suspected contaminated soil and/or groundwater shall comply with provisions of WAC 173-340-810 (MTCA Cleanup Regulation, Worker Safety and Health). WAC 173-340-810 states that requirements under OSHA and WISHA are applicable to the type of remedial activities that will be conducted at this property (excavation and handling of contaminated soil). Personnel working in areas of known or suspected contaminated soil and/or groundwater shall be in compliance with Hazardous Waste Operations and Emergency Response (HAZWOPER) Training in accordance with WAC 296-62. Contractor's health and safety plan should include precautionary health and safety measures to address potential exposure to chemical vapors present in the subsurface at the Property.
- **Discharge Permits –** Obtain necessary permits for disposal of recovered excavation water. Depending on the location and amount of water requiring disposal, and logistical and/or construction schedule considerations, the contractor can choose to pump and temporarily store the water in one or more temporary storage tanks prior to chemical analytical testing. If the water does not meet permitted discharge criteria, the contractor will arrange for water to be treated in tanks and allow for re-sampling prior to discharge or have water removed and disposed of at a permitted disposal facility.
- **Site Meetings –** Attend site meetings as necessary to discuss the planned excavation locations/depths relative to the location/depths of the Contaminated Fill Site, Gasoline UST Contamination Site, Gasoline Contamination Site and/or Stoddard Solvent Contamination Site.
- **Soil Identification –** Soil generated during future development, maintenance, utility work and/or excavation activities must be considered contaminated until characterized for disposal or on-property reuse as required by MTCA, Washington State Dangerous Waste regulations and/or the selected disposal facility.
- **Contaminated Soil Excavation and Transport –** Excavate, handle and transport contaminated soil to an appropriate soil disposal facilities identified by owner. The contactor will record soil disposal trucking activity for contaminated soil. Trucking records should include: trucking company, truck number, solo or truck and trailer loaded, driver name and name of disposal facility soil was brought. The contractor will also provide documentation of delivery of all contaminated materials to the selected disposal facility.
- **Clean Soil Excavation and Transport –** Excavate, handle and transport the clean native soil (as identified by the Consultant in the field and based on previously adopted management procedures) to pre-approved (by consultant and owner) clean soil receiving site. The contactor will record clean soil export trucking activity. Trucking records should include: trucking company, truck number, solo or truck and trailer loaded, driver name and name of clean soil receiving site soil was brought. Soil generally will be transported to the clean soil receiving site without stockpiling or performing additional chemical testing (dig and haul approach).

- **Temporary Stockpiling –** The contractor should be prepared to accommodate a temporary soil stockpile at the Property, if necessary. Stockpiles should be placed on and covered by durable plastic sheeting and bermed to control runoff, or in roll-off or other covered and labeled containers. Access to the temporarily stockpiled/secured soil will be restricted by a properly labeled fence or other barrier pending chemical analysis and a decision on its disposition.
- **Undocumented Contaminant Sources –** Immediately report to the owner and/or authorized agents any undocumented contaminant sources, such as drums, USTs or batteries, when encountered during excavation. Temporarily suspend excavation until the owner and/or authorized agents have had time to evaluate the condition and make recommendations for disposal.
- **Soil Sampling –** Obtain soil samples from the excavation and/or temporary stockpiles for characterization.
- **Waste Profile –** Provide the analytical data that characterizes the soil and/or excavation water to the parties accepting this material for disposal.
- **Decontamination –** Decontaminate equipment after excavation and provide associated excavation equipment decontamination facilities as necessary. Equipment decontamination shall consist of removing (by brushing or shaking) residual soil from excavation equipment which exhibits odors, staining or sheen. In the event that free product (i.e., diesel, oil, gasoline, etc.) is encountered during excavation, equipment decontamination shall include power washing. The associated decontamination fluids shall be contained by the contractor and tested as necessary prior to disposal to the combined sewer or off-site treatment/disposal facility. Truck tires shall be cleaned prior to leaving the site to minimize tracking of contaminated soil outside of the excavation area. Off-property decontamination of trucks leaving the Property and disposal facilities are the responsibility of the contractor. Cover soil being transported to the disposal facilities if there is a potential for residual soil to be blown from the trucks during transport.
- **BMPs –** Use best management to minimize the potential for cross-contamination of contaminated and clean soil during excavation, handling, stockpiling, loading and transporting. At a minimum, these practices shall include minimizing tracking of equipment between contaminated and clean soil areas, and minimizing contact between excavated contaminated soil and clean soil. Plastic sheeting shall be used to provide a contact/visual barrier beneath load-out piles when there is potential for cross-contamination between the piles and underlying soil. In the event that contaminated soil comes into contact with clean underlying soil, the contractor shall over-excavate these areas in coordination with the owner and/or their authorized agent and, and dispose of the soil at the permitted disposal facility.
- **Equipment Leaks and Spills –** Use BMPs to prevent and contain leaks and spills of hazardous substances from construction equipment during operation and fueling.
- **Chemical Vapor Barrier –** Immediately report to the owner and/or authorized agents, any damage to the spray on chemical vapor barrier (Liquid Boot®).
- **Cap Restoration –** Protective soil caps (detailed in Section 2.4) affected by future development, maintenance, utility work and/or excavation activities shall be restored/finished to their original condition. Reusable excavated soil (soil generated from excavation activities in which contaminants are detected at concentration less than MTCA cleanup levels and is geotechnically suitable for reuse), clean imported fill, crushed rock surfacing, concrete and/or pavement shall be used as appropriate to

restore removed/damaged roadways and/or sidewalks. Reusable excavated soil (soil generated from excavation activities in which contaminants are detected at concentration less than MTCA cleanup levels and is geotechnically suitable for reuse), clean imported fill and/or topsoil shall be used as appropriate to restore landscaped areas. Additionally, the damaged/removed visual marker (non-woven geotextile fabric, orange construction type plastic fence material or similar) located at the base of the topsoil cap shall be restored.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of the IRIS Holdings, LLC and the Bill & Melinda Gates Foundation, their authorized agents and regulatory agencies in their evaluation of environmental conditions at the 500 Fifth Avenue North Property located in Seattle, Washington. No other party may rely on the product of our services unless we agree in advance and in writing to such reliance.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

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

Please refer to Appendix A titled "Report Limitations and Guidelines for Use" for important additional information pertaining to use of this document.

7.0 REFERENCES

Washington State Department of Ecology, "Natural Background Soil Metals Concentrations in Washington State," Publication 91-115 dated October 1994.

Washington State Department of Ecology, "Guidance for Remediation of Petroleum Contaminated Soils," Publication 91-30 dated November 1995.

GeoEngineers, Inc., 2005a. "Phase I Environmental Site Assessment, SC Site, Seattle, Washington," dated January 12, 2005.

GeoEngineers, Inc., 2005b, "Phase I Environmental Site Assessment, Assessment Update, Seattle Center Parking Lot Site, Seattle, Washington," dated August 10, 2005.

GeoEngineers, Inc., 2005c, "Phase II Environmental Site Assessment and Geotechnical Engineering Study, Seattle Center Parking Lot Site," dated June 6, 2005.

GeoEngineers, Inc., 2006a, "Phase I Environmental Site Assessment – Second Update, Seattle Center Parking Lot Property, Seattle, Washington," dated October 11, 2006.

GeoEngineers, Inc., 2006b, "Limited Fill Characterization Study, Seattle Center Lot No. 2, Former Bus Barn Area," dated June 29, 2006.

GeoEngineers, Inc., 2006c, "Cleanup Action Plan, Stoddard Solvent and Contaminated Fill Sites, Seattle Center Lot No. 2, Parking Garage Location, Seattle, Washington," dated August 11, 2006.

GeoEngineers, Inc., "Updated Handling and Disposal Plan for Soil and Groundwater, Seattle Center Fifth Avenue North Garage, Seattle Center Lot No. 2, Seattle, Washington," dated January 26, 2007.

GeoEngineers, Inc., 2008a. "Handling and Disposal Plan for Soil and Groundwater, Seattle Center Lot No. 2, Phase I Campus Location, Seattle, Washington," dated April 18, 2008.

GeoEngineers, Inc., 2008b, "Cleanup Action Plan, Seattle Center Lot No. 2, Phase I Campus Location, Seattle, Washington," dated April 18, 2008.

GeoEngineers, Inc., 2008c. "Cleanup Action Report, 5th Avenue North Parking Garage Location, Seattle Center Lot No. 2, Seattle, Washington," dated August 20, 2008.

GeoEngineers, Inc., "Phase 2 Campus Soil and Groundwater Characterization Report, 500 5th Avenue North, Seattle, Washington," dated August 20, 2010.

GeoEngineers, Inc., "Cleanup Action Report, Phase I Campus, 500 5th Avenue North Property, Seattle, Washington," dated June 7, 2011.

GeoEngineers, Inc. "Property-Wide Cleanup Action Report, 500 Fifth Avenue North Property, Seattle, Washington, VCP No. NW1493," dated June 15, 2017.

Shannon & Wilson, Inc., 2004a, "Site Remediation and Current Conditions Report, Former Metro Bus Barn Site," dated September 21, 2004.

Shannon & Wilson, Inc., 2004b, "Limited Groundwater Investigation, Former Metro Bus Barn Site," dated December 14, 2004.

Shannon & Wilson, Inc., "Supplemental Site Characterization Report, Seattle Center Lot No. 2," dated December 19, 2005.

Shannon & Wilson, Inc., "Groundwater Remediation Plan, Seattle Center Lot No. 2, Seattle Center Lot No. 2," dated May 23, 2006.

Shannon & Wilson, Inc., "As-Built Report, Phase 1 Remediation System Installation, Seattle Center Lot No. 2, Seattle, Washington," dated August 15, 2007.

Shannon & Wilson, Inc., "Groundwater Remediation Plan, Phase II Remediation Design, Seattle Center Lot No. 2, Seattle, Washington," dated June 11, 2009.

Shannon & Wilson, Inc. (2017b), "Post-Construction Groundwater Monitoring Plan, Seattle Center Lot Number 2 (IRIS Holdings LLC 500 5th Avenue North), Seattle, Washington," dated June 9, 2017.

TABLES

GeoEngineers

Table 1

Summary of Soil Chemical Analytical Data

500 Fifth Avenue North Property

Seattle, Washington

Sample Identification[1]	BH-2-55.5	BH-2-45.5	BH-3-55	BH-3-45	BH-7-55	GP-21-1	MW-1-50	MW-2-55.5	MW-2-40.5	MW-3-55	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	**Hong West**	**Hong West**	**SCS Engineers**	**SCS Engineers**	**SCS Engineers**	**SCS Engineers**	**SCS Engineers**	**SCS Engineers**	**SCS Engineers**	**SCS Engineers**		
Sample Date	**9/28/1989**	**9/28/1989**	**9/28/1989**	**9/28/1989**	**9/28/1989**	**10/6/1994**	**12/13/1994**	**12/14/1994**	**12/14/1994**	**12/14/1994**		
Sample Depth (feet bgs)	**5**	**15**	**5**	**15**	**5**	**3**	**50**	**5.0**	**20.0**	**5.0**		
Sample Elevation (feet)[3]	**55.5**	**45.5**	**55**	**45**	**55**	**69.0**	**11.4**	**55.5**	**40.5**	**55**		
Soil Type	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	--	--	--	--	--	--	--	--	--	--	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	**5,200[5]**	**14,000[5]**	**1,500[5]**	**400[5]**	**710[5]**	--	3 U	3 U	3 U	3 U	30/100[5]	NE
Diesel-Range						25 U	25 U	25 U	25 U	25 U	2,000	NE
Heavy Oil-Range						25 U	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	ND	ND	ND	ND	ND	--	--	--	--	--	0.03	NE
Toluene	ND	ND	ND	ND	ND	--	--	--	--	--	6	NE
Ethylbenzene	ND	ND	ND	ND	ND	--	--	--	--	--	7	NE
Total Xylenes	ND	ND	ND	ND	ND	--	--	--	--	--	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	`	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	MW-3-40	MW-4-55	MW-4-30	1014-1-97-72	1014-2-97-72	1015-2-70	1017-1-71	1020-1-72	1020-3-72	1020-5-63.5	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	**SCS Engineers**	**SCS Engineers**	**SCS Engineers**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**		
Sample Date	**12/14/1994**	**12/14/1994**	**12/14/1994**	**9/1/1997**	**9/1/1997**	**9/1/1997**	**9/1/1997**	**9/1/1997**	**9/1/1997**	**9/1/1997**		
Sample Depth (feet bgs)	**20.0**	**5.0**	**30.0**	**3**	**2.0**	**5.0**	**2.0**	**2.0**	**2.0**	**10.5**		
Sample Elevation (feet)[3]	**40**	**55**	**30**	**72**	**72**	**70**	**71**	**72**	**72**	**63.5**		
Soil Type	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	--	--	--	--	--	--	--	--	--	--	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	3 U	3 U	3 U	3 U	**1,000**	3 U	3 U	3 U	3 U	**13**	30/100[5]	NE
Diesel-Range	25 U	25 U	25 U	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	25 U	**6,400**	25 U	25 U	25 U	25 U	25 U	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	--	--	--	0.02 U	0.02 U	--	--	--	--	0.02 U	0.03	NE
Toluene	--	--	--	0.05 U	0.05 U	--	--	--	--	0.05 U	6	NE
Ethylbenzene	--	--	--	0.05 U	**0.36**	--	--	--	--	0.05 U	7	NE
Total Xylenes	--	--	--	0.05 U	**1.75**	--	--	--	--	0.05 U	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	1020-6-72	1020-7-69	1020-8-67	SW-3 S9-39.7	SW-7 S14-14.6	SW-8 S16-10.4	SW-9 S15-12.4	GEI-6-73.5	GEI-7-49.5	GEI-8-73.5	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	**N/A**	**N/A**	**N/A**	**Shannon & Wilson**	**Shannon & Wilson**	**Shannon & Wilson**	**Shannon & Wilson**	**Geo Engineers**	**Geo Engineers**	**Geo Engineers**		
Sample Date	**9/1/1997**	**9/1/1997**	**9/1/1997**	**8/13/2004**	**10/6/2004**	**10/5/2004**	**10/4/2004**	**3/14/2005**	**3/23/2005**	**3/24/2005**		
Sample Depth (feet bgs)	**4.0**	**3.0**	**7.0**	**45.0**	**69.0**	**79.0**	**75.0**	**7.5**	**42.5**	**22.5**		
Sample Elevation (feet)[3]	**72**	**69**	**67**	**39.7**	**14.6**	**10.4**	**12.4**	**73.5**	**49.5**	**73.5**		
Soil Type	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Fill**	**Native**	**Native**		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	SS	NS	NS	NE	NE
Headspace Vapors (ppm)	--	--	--	0	--	0	0	6.2	<1	<1	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	ND	ND	--	NE	NE
Gasoline-Range	3 U	3 U	**770**	5.4 U	6 U	6 U	5.8 U	--	--	--	30/100[5]	NE
Diesel-Range	--	--	--	27 U	30 U	30 U	29 U	--	--	--	2,000	NE
Heavy Oil-Range	25 U	**66**	**4,900**	**290**	60 U	60 U	58 U	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	--	--	0.02 U	--	--	--	--	--	--	--	0.03	NE
Toluene	--	--	0.05 U	--	--	--	--	--	--	--	6	NE
Ethylbenzene	--	--	**0.31**	**--**	--	--	--	--	--	--	7	NE
Total Xylenes	--	--	**0.66**	**--**	--	--	--	--	--	--	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	0.02 U	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	0.02 U	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	0.02 U	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	0.02 U	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	0.02 U	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	0.02 U	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	0.02 U	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	0.02 U	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	0.02 U	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	0.02 U	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	0.02 U	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	0.02 U	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	0.02 U	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	0.02 U	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	0.02 U	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	0.02 U	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	0.02 U	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	0.1 U	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	**9.3**	--	**9.6**	20	7
Cadmium	--	--	--	--	--	--	--	0.5 U	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	21	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	4 U	--	--	250	24
Mercury	--	--	--	--	--	--	--	0.02 U	--	--	2	0.13[14]

Sample Identification[1]	GEI-8-68.5	GEI-9-93.5	GEI-9-88.5	GEI-9-83.5	GEI-9-78.5	GEI-11-66	SE-1-S5-65.1	SE-1-S8-54.1	SE-3-S7-54.3	SE-3-S8-48.8	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	**Geo Engineers**	**Geo Engineers**	**Geo Engineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**Shannon & Wilson**	**Shannon & Wilson**	**Shannon & Wilson**	**Shannon & Wilson**		
Sample Date	**3/24/2005**	**3/14/2005**	**3/17/2005**	**3/17/2005**	**3/17/2005**	**3/15/2005**	**8/8/2005**	**8/8/2005**	**8/8/2005**	**8/8/2005**		
Sample Depth (feet bgs)	**27.5**	**5.0**	**10.0**	**15.0**	**20.0**	**10.0**	**18.5**	**29.5**	**25.5**	**31.0**		
Sample Elevation (feet)[3]	**68.5**	**93.5**	**88.5**	**83.5**	**78.5**	**66**	**65.1**	**54.1**	**54.3**	**48.8**		
Soil Type	**Native**	**Fill**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**	**Native**		
Field Screening Results												
Sheen	NS	NS	NS	NS	NS	NS	--	--	--	--	NE	NE
Headspace Vapors (ppm)	<1	<1	5.5	4.6	3.9	5.9	--	0	0	0	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	ND	ND	ND	--	ND	ND	--	--	--	--	NE	NE
Gasoline-Range	--	--	--	--	--	--	3 U	3 U	3 U	3 U	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	--	--	--	--	--	--	ND	ND	ND	ND	0.03	NE
Toluene	--	--	--	--	--	--	ND	ND	ND	ND	6	NE
Ethylbenzene	--	--	--	--	--	--	ND	ND	ND	ND	7	NE
Total Xylenes	--	--	--	--	--	--	ND	ND	ND	ND	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	0.02 U	--	--	--	0.02 U	--	--	--	--	5	NE
Acenaphthylene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	NE	NE
Acenaphthene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	4,800[9]	NE
Fluorene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	3,200[9]	NE
Phenanthrene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	NE	NE
Anthracene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	24,000[9]	NE
Fluoranthene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	3,200[9]	NE
Pyrene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	0.137[9]	NE
Chrysene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	0.02 U	--	--	--	0.02 U	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	0.02 U	--	--	--	0.02 U	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	0.1 U	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	**23**	--	**16**	--	--	--	--	--	--	20	7
Cadmium	--	0.54	--	--	--	0.52 U	--	--	--	--	2	1
Total Chromium	--	17	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	5.1	--	--	--	11	--	--	--	--	250	24
Mercury	--	0.02 U	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SE-4-S4-66.1	SE-4-S8-50.	SE-6-S6-60.1	SE-7-S5-62.7	SE-7-S7-51.7	SE-8-S5-61.3	SE-8-S7-53.3	SE-9-S8-53.4	SE-10-S9-47.1	SE-11-S9-45.4	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson		
Sample Date	8/8/2005	8/8/2005	8/8/2005	8/8/2005	8/8/2005	8/8/2005	8/8/2005	8/9/2005	8/9/2005	8/9/2005		
Sample Depth (feet bgs)	13.5	29.5	21.5	17.5	28.5	17.5	25.5	29.5	34.5	35.0		
Sample Elevation (feet)[3]	66.1	50.1	60.1	62.7	51.7	61.3	53.3	53.4	47.1	45.4		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	0	69.5	0	0	0	0	74.3	0.1	0	0	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	3 U	3 U	3 U	3 U	**1,100**	3 U	**140**	3 U	**1,300**	3 U	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	ND	ND	ND	ND	**0.5**	ND	**0.059**	ND	**0.21**	ND	0.03	NE
Toluene	ND	ND	ND	ND	**0.83**	ND	**0.069**	ND	**0.27**	ND	6	NE
Ethylbenzene	ND	ND	ND	ND	**1.8**	ND	**0.28**	ND	**3.2**	ND	7	NE
Total Xylenes	ND	**0.24**	ND	ND	**2.6**	ND	**0.68**	ND	**8.7**	ND	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SE-12-S4-46.1	SE-12-S7-33.1	SE-13-S6-34.6	SE-14-S6-36.1	SE-15-S6-38.1	SE-16-S3-46.1	SE-16-S5-36.1	SE-16-S6-31.1	SE-17-S6-32.6	SE-18-S4-45	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson		
Sample Date	9/21/2005	9/21/2005	9/21/2005	9/21/2005	9/22/2005	9/22/2005	9/22/2005	9/22/2005	9/22/2005	9/22/2005		
Sample Depth (feet bgs)	36.0	49.0	49.0	49.0	49.0	34.0	44.0	49.0	49.0	39.0		
Sample Elevation (feet)[3]	46.1	33.1	34.6	36.1	38.1	46.1	36.1	31.1	32.6	45		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	0	0	0	--	--	0	370	260	--	54	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	3 U	3 U	3 U	3 U	3 U	3 U	**500**	**660**	3 U	3 U	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	ND	ND	**0.024**	ND	ND	ND	**0.45**	**0.95**	ND	**0.92**	0.03	NE
Toluene	ND	ND	ND	ND	ND	ND	**2.4**	**6**	ND	ND	6	NE
Ethylbenzene	ND	ND	ND	ND	ND	ND	**1.9**	**2.8**	ND	ND	7	NE
Total Xylenes	ND	ND	ND	ND	ND	ND	**9.2**	**14.2**	ND	ND	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SE-19-S3-47.7	SE-19-S5-36.7	SE-19-S6-31.7	SE-20-S3-49	SE-20-S5-39	SE-21-S3-47	SE-21-S6-32	SE-22-S4-43.4	SW-12-12.4	SW-13-40.5	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson		
Sample Date	9/24/2005	9/24/2005	9/24/2005	9/24/2005	9/24/2005	9/24/2005	9/24/2005	9/24/2005	10/18/2005	10/19/2005		
Sample Depth (feet bgs)	34.0	44.0	49.0	34.0	44.0	34.0	49.0	39.0	75.0	40.0		
Sample Elevation (feet)[3]	46.7	36.7	31.7	49	39	47	32	43.4	12.4	40.5		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	110	303	--	10	8.3	7	99	0	--	--	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	3 U	**850**	3 U	3 U	3 U	3 U	**1,900**	3 U	3 U	**17**	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	ND	**0.74**	**0.024**	ND	ND	ND	**1.1**	ND	ND	ND	0.03	NE
Toluene	ND	**5.4**	**0.07**	ND	ND	ND	**7.1**	ND	ND	**0.058**	6	NE
Ethylbenzene	ND	**3.3**	**0.69**	ND	ND	ND	**5**	ND	ND	ND	7	NE
Total Xylenes	ND	**17.3**	**0.37**	ND	ND	ND	**25.9**	ND	ND	**0.245**	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SW-13-33	SW-13-28	SW-14-42	SW-14-39.5	SW-15-55	SW-15-50	SW-15-37.5	SW-16-35.6	SW-16-28.1	SW-17-40.9	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson		
Sample Date	10/19/2005	10/19/2005	10/20/2005	10/20/2005	10/21/2005	10/21/2005	10/21/2005	10/27/2005	10/27/2005	10/28/2005		
Sample Depth (feet bgs)	47.5	52.5	40.0	42.5	25.0	30.0	42.5	44.0	51.5	41.0		
Sample Elevation (feet)[3]	33	28	42	39.5	55	50	37.5	35.6	28.1	40.9		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	--	--	--	--	--	--	--	19.6	0	556	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	3 U	3 U	3 U	3 U	**56**	**42**	3 U	**1,300**	3 U	**560**	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	ND	ND	ND	ND	ND	ND	**0.0055**	**1.5**	ND	**0.16**	0.03	NE
Toluene	ND	ND	**0.0027**	**0.0012**	ND	**0.56**	ND	**2.2**	ND	**1.3**	6	NE
Ethylbenzene	**0.051**	ND	**0.014**	**0.0056**	**0.084**	**0.34**	ND	**4.3**	ND	**1.2**	7	NE
Total Xylenes	**0.297**	ND	**0.081**	**0.0319**	**0.36**	**2.01**	ND	**22.7**	ND	**7**	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	5 U	5 U	5 U	5 U	5 U	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SW-17-34.9	SW-18-40.8	SW-18-33.3	SW-19-43.7	SW-19-41.2	SW-19-43.7	SW-19-41.2	SW-20-41.2	SW-20-38.7	SW-21-31.5	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson		
Sample Date	10/28/2005	10/28/2005	10/28/2005	11/1/2005	11/1/2005	11/1/2005	11/1/2005	11/3/2005	11/3/2005	11/4/2005		
Sample Depth (feet bgs)	46.0	40.0	47.5	37.5	40.0	37.5	40.0	36.0	38.5	56.0		
Sample Elevation (feet)[3]	34.9	40.8	33.3	43.7	41.2	43.7	41.2	41.2	38.7	31.5		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	1.9	11.3	8.6	217	101	217	101	0.8	8.5	11.2	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	**2,100**	3 U	**5**	**760**	**1,900**	**760**	**1,900**	3 U	3 U	3 U	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	**2.3**	ND	**0.09**	**0.073**	**1.4**	**0.073**	**1.4**	--	--	ND	0.03	NE
Toluene	**13**	**0.05**	**0.26**	**1.3**	**8.7**	**1.3**	**8.7**	--	--	ND	6	NE
Ethylbenzene	**7.3**	ND	**0.89**	**1.7**	**6.4**	**1.7**	**6.4**	--	--	ND	7	NE
Total Xylenes	**40**	**0.061**	**0.52**	**10.3**	**40.3**	**10.3**	**40.3**	--	--	ND	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SW-21-26.5	SW-22-40.3	SW-23-41.1	SW-24-37	SW-24-29.5	GEI-19-84.5	GEI-19-72	GEI-20-84.5	GEI-20-77	GEI-20-72	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	**Shannon & Wilson**	**Shannon & Wilson**	**Shannon & Wilson**	**Shannon & Wilson**	**Shannon & Wilson**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**		
Sample Date	**11/4/2005**	**11/8/2005**	**11/9/2005**	**11/10/2005**	**11/10/2005**	**4/4/2006**	**4/4/2006**	**4/4/2006**	**4/4/2006**	**4/4/2006**		
Sample Depth (feet bgs)	**61.0**	**38.5**	**41.0**	**46.0**	**53.5**	**6.0**	**18.5**	**6.0**	**13.5**	**18.5**		
Sample Elevation (feet)[3]	**26.5**	**40.3**	**41.1**	**37**	**29.5**	**84.5**	**72**	**84.5**	**77**	**72**		
Soil Type	**Native**	**Native**	**Native**	**Native**	**Native**	**Fill**	**Fill**	**Fill**	**Fill**	**Fill**		
Field Screening Results												
Sheen	--	--	--	--	--	NS	HS	NS	NS	SS	NE	NE
Headspace Vapors (ppm)	7.1	--	--	--	--	<1	<1	<1	<1	<1	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	ND	**D, HO**	ND	--	ND	NE	NE
Gasoline-Range	3 U	3 U	**720**	3 U	3 U	--	--	--	--	--	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	**30,000**	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	**31,000**	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	ND	ND	**0.093**	ND	ND	--	--	--	--	--	0.03	NE
Toluene	ND	ND	**0.45**	ND	ND	--	--	--	--	--	6	NE
Ethylbenzene	ND	**0.053**	**2.4**	ND	ND	--	--	--	--	--	7	NE
Total Xylenes	ND	**0.225**	**10.8**	ND	ND	--	--	--	--	--	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	0.06 U	**0.06**	0.06 U	--	**0.17**	5	NE
Acenaphthylene	--	--	--	--	--	0.02 U	**0.03**	0.02 U	--	**0.02**	NE	NE
Acenaphthene	--	--	--	--	--	0.02 U	**0.04**	0.02 U	--	**0.09**	4,800[9]	NE
Fluorene	--	--	--	--	--	0.02 U	**0.03**	0.02 U	--	**0.06**	3,200[9]	NE
Phenanthrene	--	--	--	--	--	0.02 U	**0.07**	0.02 U	--	**0.87**	NE	NE
Anthracene	--	--	--	--	--	0.02 U	**0.05**	0.02 U	--	**0.17**	24,000[9]	NE
Fluoranthene	--	--	--	--	--	0.02 U	**0.17**	0.02 U	--	**1.4**	3,200[9]	NE
Pyrene	--	--	--	--	--	0.02 U	**1.0**	0.02 U	--	**1.5**	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	0.02 U	**0.08**	0.02 U	--	**0.62**	0.137[9]	NE
Chrysene	--	--	--	--	--	0.02 U	**0.08**	0.02 U	--	**0.68**	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	0.02 U	**0.95**	0.02 U	--	**0.75**	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	0.02 U	**0.29**	0.02 U	--	**0.58**	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	0.02 U	**0.11**	0.02 U	--	**0.50**	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	0.02 U	**0.10**	0.02 U	--	**0.75**	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	0.02 U	**0.05**	0.02 U	--	**0.50**	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	0.02 U	**0.05**	0.02 U	--	**0.20**	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	**0.02**	**0.17**	0.02 U	--	**1.0**	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	6 U	6	6 U	--	6	20	7
Cadmium	--	--	--	--	--	0.26 U	0.31 U	0.26 U	--	0.27 U	2	1
Total Chromium	--	--	--	--	--	44	23	34	--	23	2,000[13]	110[14]
Lead	--	--	--	--	--	7.4	**1,000**	3.4	--	**180**	250	24
Mercury	--	--	--	--	--	0.06	**0.24**	0.03	**--**	**0.44**	2	0.13[14]

Sample Identification[1]	GEI-21-82	GEI-21-77	GEI-23-71	AS-1-47.5	AS-2-46	AS-3-47.5	AS-4-54.5	AS-5-47.5	AS-6-48.5	AS-7-44.5	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	GeoEngineers	GeoEngineers	GeoEngineers	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson		
Sample Date	4/5/2006	4/5/2006	4/6/2006	9/7/2006	9/6/2006	9/13/2006	9/13/2006	9/13/2006	9/13/2006	9/13/2006		
Sample Depth (feet bgs)	6.0	11.0	5.0	33.5	33.5	33.5	28.5	33.5	33.5	38.5		
Sample Elevation (feet)[3]	82	77	71	47.5	46	47.5	54.5	47.5	48.5	44.5		
Soil Type	Fill	Fill	Fill	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	NS	NS	NS	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	<1	<1	<1	1.8	320	21	58	317	532	0	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	ND	ND	**HO**	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	--	--	--	4.2 U	**7**	3.9 U	**720**	**860**	**3,300**	3.9 U	30/100[5]	NE
Diesel-Range	--	--	**36**	--	--	--	--	--	**2,800**	--	2,000	NE
Heavy Oil-Range	--	--	**200**	--	--	--	--	--	170	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	--	--	--	--	0.02 U	0.02 U	**0.28**	**0.25**	**0.97**	--	0.03	NE
Toluene	--	--	--	--	0.072 U	0.039 U	**0.74**	**0.97**	**0.89**	--	6	NE
Ethylbenzene	--	--	--	--	**0.19**	**0.047**	**0.73**	**2.2**	**5.6**	--	7	NE
Total Xylenes	--	--	--	--	**0.42**	**0.11**	**2.64**	**11.9**	**31.7**	--	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	0.06 U	0.06 U	0.06 U	--	--	--	--	--	--	--	5	NE
Acenaphthylene	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	NE	NE
Acenaphthene	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	**0.07**	**0.02**	0.02 U	--	--	--	--	--	--	--	NE	NE
Anthracene	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	**0.08**	**0.04**	**0.03**	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	**0.09**	**0.05**	**0.04**	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	**0.03**	0.02 U	0.02 U	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	**0.04**	**0.02**	0.02 U	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	**0.04**	**0.03**	**0.02**	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	**0.03**	0.02 U	0.02 U	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	**0.02**	0.02 U	0.02 U	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	**0.03**	**0.02**	0.02 U	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	**0.02**	0.02 U	0.02 U	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	0.02 U	0.02 U	0.02 U	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	**0.04**	**0.03**	**0.02**	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	0.1 U	0.1 U	0.1 U	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	6 U	6 U	6 U	--	--	--	--	--	--	--	20	7
Cadmium	0.25 U	0.24 U	0.25 U	--	--	--	--	--	--	--	2	1
Total Chromium	23	29	27	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	**29**	11	18	--	--	--	--	--	--	--	250	24
Mercury	0.04	0.04	0.03	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	AS-8-47	AS-9-43.5	AS-10-40.5	AS-9-43.5	AS-10-40.5	AS-11-37	AS-12-43.5	AS-13-43.5	AS-14-45	AS-15-44.5	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson		
Sample Date	9/18/2006	9/18/2006	9/15/2006	9/18/2006	9/15/2006	9/18/2006	9/15/2006	9/15/2006	9/15/2006	9/15/2006		
Sample Depth (feet bgs)	33	37.5	42.5	37.5	42.5	43.5	38.5	38.5	38.5	38.5		
Sample Elevation (feet)[3]	47	43.5	40.5	43.5	40.5	37	43.5	43.5	45	44.5		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	1158	2532	0.2	2532	0.2	32.8	852	441	23	12.5	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	**740**	**510**	4.8 U	**510**	4.8 U	**59**	**1,400**	**2,800**	3.5 U	11 U	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	**0.12**	**0.068**	--	**0.068**	--	**0.11**	**0.41**	**1.2**	--	--	0.03	NE
Toluene	**2.1**	**1.7**	--	**1.7**	--	**0.58**	**4.3**	**8.7**	--	--	6	NE
Ethylbenzene	**2.1**	**1.7**	--	**1.7**	--	**0.2**	**4.7**	**7.5**	--	--	7	NE
Total Xylenes	**11.9**	**9.1**	--	**9.1**	--	**1.25**	**24.4**	**41**	--	--	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	AS-16-41.5	AS-17-40.5	AS-18-38	AS-19-37	AS-20-16.5	AS-21-39	AS-22-36.5	AS-23-37	AS-22-36.5	AS-23-37	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson		
Sample Date	9/25/2006	9/25/2006	9/18/2006	9/15/2006	9/25/2006	9/19/2006	9/25/2006	9/25/2006	9/25/2006	9/25/2006		
Sample Depth (feet bgs)	38.5	38.5	43	44	62.5	44	43	44	43	44		
Sample Elevation (feet)[3]	41.5	40.5	38	37	16.5	39	36.5	37	36.5	37		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	1400	0	1800	752	1.2	17	1425	1268	1425	1268	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	**1,900**	4.6 U	**720**	**270**	5.2 U	4.7 U	**1,400**	**2,000**	**1,400**	**2,000**	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	**1.1**	--	**0.098**	**0.25**	--	0.02 U	**0.38**	**1.3**	**0.38**	**1.3**	0.03	NE
Toluene	**0.29**	--	**3**	**1.5**	--	0.047 U	**2.2**	**13**	**2.2**	**13**	6	NE
Ethylbenzene	**3.9**	--	**2.1**	**0.75**	--	0.047 U	**2.8**	**8.4**	**2.8**	**8.4**	7	NE
Total Xylenes	**19.7**	--	**11.9**	**4.6**	--	**0.12**	**15.7**	**42**	**15.7**	**42**	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	AS-24-35.5	AS-25-40	AS-26-36.5	AS-27-18.5	AS-28-36.5	AS-29-38.5	SVE-1-29	SVE-2-58.2	SVE-2-49.4	SVE-3-49	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson		
Sample Date	9/25/2006	9/27/2006	9/27/2006	10/2/2006	10/2/2006	10/2/2006	10/9/2006	10/4/2006	10/2/2006	10/4/2006		
Sample Depth (feet bgs)	43.5	42.5	43.5	63.5	43.5	43.5	29	22.8	29.6	33		
Sample Elevation (feet)[3]	35.5	40	36.5	18.5	36.5	38.5	52	58.2	49.4	49		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	--	--	NE	NE
Headspace Vapors (ppm)	0	10	1300	43.9	1500	68	--	--	--	--	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	4.6 U	5.1 U	**2,300**	5.8 U	**390**	4.5 U	5.7 U	**24**	**1,100**	**500**	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	--	--	**0.44**	--	**1.2**	0.02 U	**0.027**	0.028 U	**0.32**	**0.39**	0.03	NE
Toluene	--	--	**11**	--	**3.6**	0.045U	**0.078**	**0.16**	0.38 U	0.8 U	6	NE
Ethylbenzene	--	--	**7.2**	--	**1.6**	0.045 U	**0.1**	**0.23**	**2.8**	**0.82**	7	NE
Total Xylenes	--	--	**44**	--	**9.7**	**0.093**	**0.57**	**1.45**	**6.9**	**5.5**	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SVE-4-48	SVE-5-48	SVE-6-42.5	SVE-7-38.5	SVE-8-36.5	SVE-9-36.5	SVE-10-34.7	SVE-11-37	WW-1-88.5	WW-2-78	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	Shannon & Wilson	GeoEngineers	GeoEngineers		
Sample Date	10/2/2006	10/2/2006	10/4/2006	10/2/2006	10/9/2006	10/9/2006	10/3/2006	10/9/2006	2/15/2007	3/9/2007		
Sample Depth (feet bgs)	33	34	38.5	43.5	44	44.5	44.8	44.5	12.5	23		
Sample Elevation (feet)[3]	48	48	42.5	38.5	36.5	36.5	34.7	37	88.5	78		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	--	--	--	--	--	NS	NS	NE	NE
Headspace Vapors (ppm)	--	--	--	--	--	--	--	--	10.3	10.3	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--			--	--	NE	NE
Gasoline-Range	**1,600**	**63**	**1,800**	**79**	**2,300**	**2,800**	**2,800**	**2,000**	3 U	3 U	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	**0.29**	0.02 U	**1.8**	0.02 U	**0.84**	**2.7**	**2.7**	**1**	0.03 U	0.03 U	0.03	NE
Toluene	**0.94**	0.067 U	**8.5**	**0.36**	**10**	**18**	**18**	**3.4**	0.05 U	0.05 U	6	NE
Ethylbenzene	**3.4**	**0.096**	**4.9**	**0.2**	**8.1**	**13**	**13**	**5.1**	0.05 U	0.05 U	7	NE
Total Xylenes	**19.4**	**0.24**	**29.3**	**0.95**	**50**	**64**	**64**	**26**	0.2 U	0.2 U	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SW-1-87	SW-1-74	SW-1-71	SW-3-88.5	SW-4-90	SW-5-88.5	SW-4-90	SW-5-88.5	SW-6-86	SW-7-90	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers		
Sample Date	2/15/2007	3/27/2007	3/30/2007	2/15/2007	2/15/2007	2/15/2007	2/15/2007	2/15/2007	2/15/2007	2/15/2007		
Sample Depth (feet bgs)	14	27	30	12.5	11	12.5	11	12.5	15	11		
Sample Elevation (feet)[3]	87	74	71	88.5	90	88.5	90	88.5	86	90		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	NS	HS	NS	NS	NS	NS	NS	NS	NS	NS	NE	NE
Headspace Vapors (ppm)	<1	>2,000	1.4	23.6	21.7	285	21.7	285	45.3	3.8	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	3 U	**8,000**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	**4.6**	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	--	**13**	0.03 U	--	--	--	--	--	--	--	0.03	NE
Toluene	--	**27**	0.05 U	--	--	--	--	--	--	--	6	NE
Ethylbenzene	--	**82**	0.05 U	--	--	--	--	--	--	--	7	NE
Total Xylenes	--	**110**	0.2 U	--	--	--	--	--	--	--	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SW-7-88.5	SW7-83	SW-7-78	SW-7-68	SW-8-78	SW-9-72	EW-1-87	EW-1-74	EW-2-87	EW-3-80	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers		
Sample Date	2/15/2007	2/20/2007	3/9/2007	3/30/2007	3/9/2007	3/27/2007	2/27/2007	3/30/2007	2/27/2007	3/27/2007		
Sample Depth (feet bgs)	12.5	18	23	33	23	29	14	27	14	21		
Sample Elevation (feet)[3]	88.5	83	78	68	78	72	87	74	87	80		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	MS	NS	MS	NS	NS	NS	MS	NS	MS	NS	NE	NE
Headspace Vapors (ppm)	308	5.6	115	2.4	1.3	<1	279	1.3	6.6	<1	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	**2,500**	3 U	**22**	3 U	3 U	3 U	**1,100**	3 U	3 U	3 U	30/100[5]	NE
Diesel-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Heavy Oil-Range	--	--	--	--	--	--	--	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	0.03 U	--	--	--	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03	NE
Toluene	0.05 U	--	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	6	NE
Ethylbenzene	0.05 U	--	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	7	NE
Total Xylenes	0.2 U	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	--	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs			--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic			--	--	--	--	--	--	--	--	20	7
Cadmium			--	--	--	--	--	--	--	--	2	1
Total Chromium			--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead			--	--	--	--	--	--	--	--	250	24
Mercury			--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	G1-81.5	G1-76.5	G1-71.5	H2-57.5	K1-74.5	K1-69.5	K1-62	L1-70	M1-65.5	M1-B-68.5	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**		
Sample Date	**8/13/2007**	**8/13/2007**	**8/13/2007**	**8/14/2007**	**8/13/2007**	**8/13/2007**	**8/13/2007**	**8/14/2007**	**8/14/2007**	**11/15/2007**		
Sample Depth (feet bgs)	**7.5**	**12.5**	**17.5**	**30**	**5.0**	**10.0**	**17.5**	**7**	**10**	**7.5**		
Sample Elevation (feet)[3]	**81.5**	**76.5**	**71.5**	**57.5**	**74.5**	**69.5**	**62**	**70**	**65.5**	**68.5**		
Soil Type	**Fill**	**Fill**	**Fill**	**Native**	**Fill**	**Fill**	**Native**	**Fill**	**Native**	**Fill**		
Field Screening Results												
Sheen	1.5	2	1.3	<1	NS	SS	NS	NS	<1	--	NE	NE
Headspace Vapors (ppm)	NS	NS	NS	MS	<1	<1	<1	<1	NS	--	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--								NE	NE
Gasoline-Range	--	--	--	**4**	--	--	3 U	--	6 U	--	30/100[5]	NE
Diesel-Range	25 U	25 U	25 U	25 U	25 U	**130**	25 U	25 U	35 U	--	2,000	NE
Heavy Oil-Range	50 U	50 U	**110**	**63**	50 U	**600**	50 U	50 U	70 U	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	--	--	--	0.03 U	--	--	--	--	--	--	0.03	NE
Toluene	--	--	--	0.05 U	--	--	--	--	--	--	6	NE
Ethylbenzene	--	--	--	0.05 U	--	--	--	--	--	--	7	NE
Total Xylenes	--	--	--	0.2 U	--	--	--	--	--	--	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U	--	--	5	NE
Acenaphthylene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U	--	--	NE	NE
Acenaphthene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U	--	--	4,800[9]	NE
Fluorene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U	--	--	3,200[9]	NE
Phenanthrene	0.02 U	**0.04**	**0.07**	0.02 U	0.02 U	**0.03**	--	**0.07**	--	--	NE	NE
Anthracene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U	--	--	24,000[9]	NE
Fluoranthene	0.02 U	**0.11**	**0.10**	0.02 U	0.02 U	**0.03**	--	**0.13**	--	--	3,200[9]	NE
Pyrene	0.02 U	**0.14**	**0.11**	0.02 U	0.02 U	**0.04**	--	**0.17**	--	--	2,4009[9]	NE
Benzo[a]anthracene	0.02 U	**0.05**	**0.04**	0.02 U	0.02 U	0.02 U	--	**0.05**	--	--	0.137[9]	NE
Chrysene	0.02 U	**0.05**	**0.04**	0.02 U	0.02 U	0.02 U	--	**0.06**	--	--	0.137[9]	NE
Benzo[b]fluoranthene	0.02 U	**0.06**	**0.06**	0.02 U	0.02 U	**0.03**	--	**0.08**	--	--	0.137[9]	NE
Benzo[k]fluoranthene	0.02 U	**0.04**	**0.03**	0.02 U	0.02 U	0.02 U	--	**0.04**	--	--	0.137[9]	NE
Benzo[a]pyrene	0.02 U	**0.05**	**0.03**	0.02 U	0.02 U	0.02 U	--	**0.04**	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	0.02 U	**0.05**	**0.04**	0.02 U	0.02 U	0.02 U	--	**0.06**	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	0.02 U	**0.04**	**0.03**	0.02 U	0.02 U	0.02 U	--	**0.04**	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U	--	--	NE	NE
Total cPAH - TEQ[10]	0.02 U	**0.07**	**0.06**	0.02 U	0.02 U	**0.02**	--	**0.08**	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U	5 U	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	39	27	25	37	32	52	--	28	34	--	2,000[13]	110[14]
Lead	6.7	**34**	**28**	5.7	16	17	--	**46**	20	8.1	250	24
Mercury	0.03	0.06	0.03	0.04	0.03	0.05	--	0.03	0.13	**--**	2	0.13[14]

Sample Identification[1]	M1-C-68.5	M1-D-68.5	M1-E-68.5	M2-74	M2-71.5	GEI-TP-15-69	GEI-TP-8-59	GEI-TP-14-67	A2-1-59	A2-2-59	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers		
Sample Date	11/15/2007	11/15/2007	11/15/2007	8/15/2007	8/15/2007	8/20/2008	10/7/2008	8/20/2008	11/20/2008	11/20/2008		
Sample Depth (feet bgs)	7.5	7.5	7.5	2.5	5	20	27	23	23	23		
Sample Elevation (feet)[3]	68.5	68.5	68.5	74	71.5	69	59	67	59	59		
Soil Type	Fill	Fill	Fill	Fill	Fill	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	--	--	--	3.3	3	NS	NS	NS	NS	NS	NE	NE
Headspace Vapors (ppm)	--	--	--	NS	NS	<1	<1	<1	<1	<1	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification						--	--	--	--	--	NE	NE
Gasoline-Range	--	--	--	--	--	--	--	--	3 U	3 U	30/100[5]	NE
Diesel-Range	--	--	--	25 U	25 U	25 U	25 U	25 U	25 U	25 U	2,000	NE
Heavy Oil-Range	--	--	--	50 U	50 U	50 U	50 U	50 U	50 U	50 U	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	--	--	--	--	--	--	--	--	0.03 U	0.03 U	0.03	NE
Toluene	--	--	--	--	--	--	--	--	0.05 U	0.05 U	6	NE
Ethylbenzene	--	--	--	--	--	--	--	--	0.05 U	0.05 U	7	NE
Total Xylenes	--	--	--	--	--	--	--	--	0.2 U	0.2 U	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	0.02 U	0.02 U	--	--	--	0.02 U	0.02 U	5	NE
Acenaphthylene	--	--	--	0.02 U	0.02 U	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	0.02 U	0.02 U	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	0.02 U	0.02 U	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	**0.02**	0.02 U	--	--	--	--	--	NE	NE
Anthracene	--	--	--	0.02 U	0.02 U	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	**0.05**	0.02 U	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	**0.06**	0.02 U	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	**0.03**	0.02 U	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	0.02 U	0.02 U	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	**0.03**	0.02 U	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	0.02 U	0.02 U	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	**0.02**	0.02 U	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	**0.02**	0.02 U	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	0.02 U	0.02 U	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	0.02 U	0.02 U	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	**0.03**	0.02 U	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	5 U	5 U	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	19	24	--	--	--	--	--	2,000[13]	110[14]
Lead	**27**	23	9.6	11	8.5	--	--	--	--	--	250	24
Mercury	**--**	**--**	**--**	0.02 U	0.02 U	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	A2-3-50	A2-4-59	A2-5-50	A2-5-50dup	A3-1-50	A3-2-49	A3-3-50	A3-4-49	A3-5-58	A3-6-59	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers		
Sample Date	1/8/2009	11/20/2008	11/21/2008	11/21/2008	12/4/2008	12/9/2008	12/9/2008	12/9/2008	2/25/2009	12/31/2008		
Sample Depth (feet bgs)	30	21	31	31	31	32	33	33	33	25		
Sample Elevation (feet)[3]	50	59	50	50	50	49	50	49	58	59		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	NS	SS	NS	NS	NS	NS	NS	NS	NS	NS	NE	NE
Headspace Vapors (ppm)	<1	90	<1	<1	<1	<1	<1	<1	<1	<1	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	3 U	**210**	3 U	3 U	3 U	3 U	3 U	3 U	3 U	**7**	30/100[5]	NE
Diesel-Range	25 U	**1,400**	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	2,000	NE
Heavy Oil-Range	50 U	**68**	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	0.03 U	**1.8**	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	**0.04**	0.03	NE
Toluene	0.05 U	**4.3**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	6	NE
Ethylbenzene	0.05 U	**1.4**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.1**	7	NE
Total Xylenes	0.2 U	**7.6**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.5**	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	0.02 U	**11.6**	0.02 U	0.02 U	--	--	--	--	--	--	5	NE
Acenaphthylene	--	0.02 U	--	--	--	--	--	--	--	--	NE	NE
Acenaphthene	--	**0.6**	--	--	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	**0.25**	--	--	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	**0.19**	--	--	--	--	--	--	--	--	NE	NE
Anthracene	--	0.02 U	--	--	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	0.02 U	--	--	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	0.02 U	--	--	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	0.02 U	--	--	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	0.02 U	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	0.02 U	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	0.02 U	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	0.02 U	--	--	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	0.02 U	--	--	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	0.02 U	--	--	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	0.02 U	--	--	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	0.02 U	--	--	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	8.8	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	A3-6-59dup	A3-7-59	A3-8-59	A3-9-50	A3-10-49	A3-11-58	A3-12-49	A3-13-49	A3-12-49	A3-13-49	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers		
Sample Date	12/31/2008	12/31/2008	1/9/2009	2/10/2008	1/16/2009	2/26/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009		
Sample Depth (feet bgs)	25	26	25	34	35	29	37	37	37	37		
Sample Elevation (feet)[3]	59	59	59	50	49	58	49	49	49	49		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	NS	NS	NS	HS	NS	NS	NS	NS	NS	NS	NE	NE
Headspace Vapors (ppm)	<1	<1	<1	160	<1	<1	<1	<1	<1	<1	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	--	--	--	--	--	--	--	NE	NE
Gasoline-Range	3 U	3 U	3 U	**1,000**	3 U	3 U	3 U	3 U	3 U	3 U	30/100[5]	NE
Diesel-Range	25 U	25 U	25 U	**2,000**	25 U	25 U	25 U	25 U	25 U	25 U	2,000	NE
Heavy Oil-Range	50 U	50 U	50 U	**340**	50 U	50 U	50 U	50 U	50 U	50 U	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03	NE
Toluene	0.06 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	6	NE
Ethylbenzene	0.06 U	0.05 U	0.05 U	**1.6**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	7	NE
Total Xylenes	0.2 U	0.2 U	0.2 U	**2.9**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	--	--	--	**1.46**	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	--	**0.06**	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	--	**0.08**	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	--	**0.09**	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	--	**0.22**	--	--	--	--	--	--	NE	NE
Anthracene	--	--	--	**0.07**	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	--	**0.19**	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	--	**0.13**	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	--	0.02 U	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	--	**0.07**	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	--	**0.06**	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	--	**0.03**	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	--	**0.04**	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	--	**0.04**	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	--	**0.02**	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	--	0.02 U	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	--	**0.06**	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	5 U	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	SC-2-Ex-1-60	SC-3-Ex-1-56	SC-4-Ex-1-51	SC-6-Ex-1-63	SC-7-Ex-2-49.5	SC-7-Ex-2-50	SC-7-Ex-3-50	SC-8-Ex-4-82	SC-8-Ex-5-82	SC-8-Ex-6-82	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers	GeoEngineers		
Sample Date	10/30/2008	11/18/2008	9/6/2008	3/13/2009	3/23/2009	3/23/2009	3/24/2009	9/2/2009	9/2/2009	9/2/2009		
Sample Depth (feet bgs)	29	33	37	27	38.5	38	38	15	15	15		
Sample Elevation (feet)[3]	60	56	51	63	49.5	49.5	49.5	82	82	82		
Soil Type	Native	Native	Native	Native	Native	Native	Native	Native	Native	Native		
Field Screening Results												
Sheen	NS	NS	NS	HS	NS	NS	NS	NS	NS	NS	NE	NE
Headspace Vapors (ppm)	<1	<1	<1	30	<1	<1	<1	<1	<1	<1	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	--	--	--	**Diesel**	--	--	--	--	--	--	NE	NE
Gasoline-Range	--	--	--	--	--	--	--	3 U	3 U	3 U	30/100[5]	NE
Diesel-Range	25 U	25 U	25 U	**340**	25 U	25 U	25 U	--	--	--	2,000	NE
Heavy Oil-Range	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	--	--	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	--	--	--	0.03 U	--	--	--	0.03 U	0.03 U	0.03 U	0.03	NE
Toluene	--	--	--	0.05 U	--	--	--	0.05 U	0.05 U	0.05 U	6	NE
Ethylbenzene	--	--	--	0.05 U	--	--	--	0.05 U	0.05 U	0.05 U	7	NE
Total Xylenes	--	--	--	0.2 U	--	--	--	0.2 U	0.2 U	0.2 U	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	0.02 U	--	0.02 U	**2.4**	--	--	--	--	--	--	5	NE
Acenaphthylene	--	--	0.02 U	**0.04**	--	--	--	--	--	--	NE	NE
Acenaphthene	--	--	0.02 U	**0.11**	--	--	--	--	--	--	4,800[9]	NE
Fluorene	--	--	0.02 U	**0.33**	--	--	--	--	--	--	3,200[9]	NE
Phenanthrene	--	--	0.02 U	**0.41**	--	--	--	--	--	--	NE	NE
Anthracene	--	--	0.02 U	**0.03**	--	--	--	--	--	--	24,000[9]	NE
Fluoranthene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	3,200[9]	NE
Pyrene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	2,4009[9]	NE
Benzo[a]anthracene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	0.137[9]	NE
Chrysene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	0.137[9]	NE
Benzo[b]fluoranthene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	0.137[9]	NE
Benzo[k]fluoranthene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	0.137[9]	NE
Benzo[a]pyrene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	0.137[9]	NE
Dibenz[a,h]anthracene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	0.137[9]	NE
Benzo[g,h,i]perylene	--	--	0.02 U	0.02 U	--	--	--	--	--	--	NE	NE
Total cPAH - TEQ[10]	--	--	0.02 U	0.02 U	--	--	--	--	--	--	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	--	--	--	--	--	--	--	--	--	--	1	NE
Metals (mg/kg)[12]												
Arsenic	--	--	--	--	--	--	--	--	--	--	20	7
Cadmium	--	--	--	--	--	--	--	--	--	--	2	1
Total Chromium	--	--	--	--	--	--	--	--	--	--	2,000[13]	110[14]
Lead	--	--	--	--	--	--	--	--	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	2	0.13[14]

Sample Identification[1]	GEI-29-68	GEI-MW-2-15	GEI-101-2-5.0	GEI-101-4-10.0	GEI-105-1-2.5	GEI-105-3-5.0	GEI-105-9-15.0	GEI-109-2-2.5	GEI-109-6-8.0	GEI-109-10-12.5	MTCA Method A Cleanup Level	Natural Background Concentration[2]
Sampled By	**GeoEngineers**	**GeoEngineers**	**6/14/2010**	**6/14/2010**	**6/15/2010**	**6/15/2010**	**6/15/2010**	**GeoEngineers**	**GeoEngineers**	**GeoEngineers**		
Sample Date	**5/7/2009**	**5/18/2010**	**5.0**	**10.0**	**2.5**	**5.0**	**15.0**	**6/15/2010**	**6/15/2010**	**6/15/2010**		
Sample Depth (feet bgs)	**25**	**15**	**77.1**	**77.1**	**80.8**	**80.8**	**80.8**	**2.5**	**8**	**12.5**		
Sample Elevation (feet)[3]	**68**	**82**	**72.1**	**67.1**	**78.3**	**75.8**	**65.8**	**74.1**	**68.6**	**64.1**		
Soil Type	**Native**	**Native**	**Fill**	**Native**	**Fill**	**Fill**	**Native**	**Fill**	**Fill**	**Native**		
Field Screening Results												
Sheen	NS	NS	NS	NS	SS	NS	NS	SS	NS	NS	NE	NE
Headspace Vapors (ppm)	<1	<1	–	–	5	<1	<1	<1	<1	<1	NE	NE
Petroleum Hydrocarbons (mg/kg)[4]												
Petroleum Identification	–	–	–	–	–	–	–	–	–	–	NE	NE
Gasoline-Range	3 U	3 U	–	–	–	–	–	–	–	–	30/100[5]	NE
Diesel-Range	25 U	–	25 U	25 U	**290**	25 U	25 U	25 U	25 U	25 U	2,000	NE
Heavy Oil-Range	50 U	–	**290**	50 U	**150**	**65**	<50	50 U	50 U	50 U	2,000	NE
Volatile Organic Compounds (VOCs; mg/kg)[7]												
Benzene	0.03 U	0.03 U	–	–	–	–	–	–	–	–	0.03	NE
Toluene	0.05 U	0.05 U	–	–	–	–	–	–	–	–	6	NE
Ethylbenzene	0.05 U	0.05 U	–	–	–	–	–	–	–	–	7	NE
Total Xylenes	0.2 U	0.2 U	–	–	–	–	–	–	–	–	9	NE
Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)[8]												
Naphthalenes	–	–	0.02 U	0.02 U	**22.70**	**0.75**	0.02 U	0.02 U	0.02 U	0.02 U	5	NE
Acenaphthylene	–	–	0.02 U	0.02 U	**0.15**	0.04 U	0.02 U	0.02 U	0.02 U	0.02 U	NE	NE
Acenaphthene	–	–	0.02 U	0.02 U	**9.7**	**0.61**	0.02 U	0.02 U	0.02 U	0.02 U	4,800[9]	NE
Fluorene	–	–	0.02 U	0.02 U	**10**	**0.66**	0.02 U	0.02 U	0.02 U	0.02 U	3,200[9]	NE
Phenanthrene	–	–	0.02 U	0.02 U	**27**	**2.2**	0.02 U	**0.33**	0.02 U	0.02 U	NE	NE
Anthracene	–	–	0.02 U	0.02 U	**5.1**	**0.39**	0.02 U	0.02 U	0.02 U	0.02 U	24,000[9]	NE
Fluoranthene	–	–	0.02 U	0.02 U	**12**	**1.1**	0.02 U	**0.086**	0.02 U	0.02 U	3,200[9]	NE
Pyrene	–	–	0.02 U	0.02 U	**5.8**	**0.7**	0.02 U	**0.12**	0.02 U	0.02 U	2,4009[9]	NE
Benzo[a]anthracene	–	–	0.02 U	0.02 U	**10**	**0.66**	0.02 U	0.02 U	0.02 U	0.02 U	0.137[9]	NE
Chrysene	–	–	0.02 U	0.02 U	**1.60**	**0.18**	0.02 U	**0.063**	0.02 U	0.02 U	0.137[9]	NE
Benzo[b]fluoranthene	–	–	0.02 U	0.02 U	**1.50**	**0.21**	0.02 U	**0.076**	0.02 U	0.02 U	0.137[9]	NE
Benzo[k]fluoranthene	–	–	0.02 U	0.02 U	**0.36**	**0.057**	0.02 U	**0.1**	0.02 U	0.02 U	0.137[9]	NE
Benzo[a]pyrene	–	–	0.02 U	0.02 U	**0.36**	**0.02**	0.02 U	**0.066**	0.02 U	0.02 U	0.137[9]	NE
Indeno(1,2,3-c,d)pyrene	–	–	0.02 U	0.02 U	**0.31**	**0.042**	0.02 U	**0.081**	0.02 U	0.02 U	0.137[9]	NE
Dibenz[a,h]anthracene	–	–	0.02 U	0.02 U	**0.09**	**0.02**	0.02 U	**0.057**	0.02 U	0.02 U	0.137[9]	NE
Benzo[g,h,i]perylene	–	–	0.02 U	0.02 U	**0.062**	**0.02**	0.02 U	**0.024**	0.02 U	0.02 U	NE	NE
Total cPAH - TEQ[10]	–	–	0.02 U	0.02 U	**0.57**	**0.0738**	0.02 U	**0.11**	0.02 U	0.02 U	0.1	NE
Polychlorinated Biphenyls (PCBs; mg/kg)[11]												
Total PCBs	–	–	–	–	–	–	–	–	–	–	1	NE
Metals (mg/kg)[12]												
Arsenic	–	–	3	2.2	2.6	5.6	3	2.2	2.4	**9.5**	20	7
Cadmium	–	–	1 U	1 U	1 U	1 U	1 U	1 U	0.02 U	1 U	2	1
Total Chromium	–	–	34	78	17	58	99	17	9.6	49	2,000[13]	110[14]
Lead	–	–	11	11	**30**	5.9	12	6.4	3.1	6.8	250	24
Mercury	–	–	0.02 U	0.062	0.02 U	0.02 U	0.053	0.02 U	0.047	0.065	2	0.13[14]

Notes

[1]The approximate sample locations are shown in Figures 3 and 4. Sample ID have been translated to reference the elevation in which the sample was obtained.

[2]Per Ecology Publication No. 94-115 "Natural Background Soil Metals Concentrations in Washington State," dated October 1994.

[3]Sample elevations are interpolated surface topography contours (NAVD-88) shown on Figure 2.

[4]Analyzed using NWTPH-HCID, NWTPH-G or NWTPH-Dx.

[5]Total petroleum hydrocarbons analyzed using TPH Method 418.1.

[6]MTCA Method A cleanup level is 30 mg/kg when benzene is detected.

[7]Analyzed using EPA Method 8260 or 8021.

[8]Analyzed by EPA Method 8270SIM.

[9]MTCA Method B cleanup level.

[10]Total carcinogenic PAHs (cPAHs) calculated using toxic equivalent (TEQ) methodology relative to benzo(a)pyrene. cPAHs that were not detected were assigned a value of one half of the detection limit for these calculations.

[11]Analyzed using EPA Method 8082.

[12]Analyzed using EPA Method 6000/7000 series.

[13]MTCA Method A cleanup level has not been established for total chromium. The MTCA Method A cleanup levels for chromium VI and III are 19 and 2,000 mg/kg, respectively. Chromium VI is produced during industrial processes (however, not likely produced at this property), and chromium III is a naturally occurring metal present in the Puget Sound region.

[14]Site-specific background concentrations were established for these analytes.

bgs = below the ground surface

HS = Heavy Sheen

mg/kg = milligrams per kilogram

MS = Moderate Sheen

MTCA = Model Toxics Control Act

N/A = Not Available

ND = Not detected

NE = Not Established

NS = No Sheen

ppm = parts per million

SS = Slight Sheen

U = not detected above the laboratory reporting limit.

-- = not tested

Bolding indicates analyte was detected at a concentration greater than Natural Background.

Green shading indicated analyte was detected at a concentration greater than the MTCA Method A Cleanup level.

Table 2

Summary of Groundwater Chemical Analytical Data

500 Fifth Avenue North Property

Seattle, Washington

Monitoring Well	Monitoring Event	Sample Date	Sampled By	Petroleum Hydrocarbons (µg/L)[1]	Volatile Organic Compounds (VOCs; µg/L)[2]			
				Gasoline-Range	Benzene	Toluene	Ethylbenzene	Total Xylenes
SVE-13 (Upgradient Point of Compliance)	Q22	5/26/2016	Shannon & Wilson	**780**	1 U	1 U	1 U	**9.2**
	Q23	8/29/2016	Shannon & Wilson	**520**	1 U	**1.9**	**14**	**19**
	Q24	11/18/2016	Shannon & Wilson	400 U	4 U	4 U	4 U	**4**
	Q25	2/24/2017	Shannon & Wilson	400 U	4 U	4 U	4 U	**6.3**
SVE-16	Q22	5/26/2016	Shannon & Wilson	**420**	1 U	6.2	4 U	**3.6**
	Q23	8/29/2016	Shannon & Wilson	100 U	2 U	7.2	4 U	**13**
	Q24	11/18/2016	Shannon & Wilson	**260**	**2**	1 U	**3**	1 U
	Q25	2/24/2017	Shannon & Wilson	400 U	4 U	4 U	4 U	4 U
SVE-17	Q22	5/26/2016	Shannon & Wilson	100 U	1 U	**3.2**	1 U	2 U
	Q23	8/29/2016	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
	Q24	11/18/2016	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
	Q25	2/24/2017	Shannon & Wilson	400 U	4 U	4 U	4 U	4 U
SVE-19	Q22	5/26/2016	Shannon & Wilson	**160**	1 U	1 U	1 U	2 U
	Q23	8/29/2016	Shannon & Wilson	400 U	4 U	4 U	4 U	4 U
	Q24	11/17/2016	Shannon & Wilson	400 U	4 U	4 U	4 U	4 U
	Q25	2/24/2017	Shannon & Wilson	400 U	4 U	4 U	4 U	4 U
SVE-20	Q22	5/26/2016	Shannon & Wilson	**340**	**1**	**3**	**5.4**	**3.6**
	Q23	8/29/2016	Shannon & Wilson	400 U	4 U	4 U	**6.3**	4 U
	Q24	11/17/2016	Shannon & Wilson	400 U	4 U	4 U	**4.9**	4 U
	Q25	2/23/2017	Shannon & Wilson	400 U	4 U	4 U	**6.1**	4 U
SVE-23	Q22	5/26/2016	Shannon & Wilson	**3,700**	**3.2**	**11**	**78**	**185**
	Q23	8/29/2016	Shannon & Wilson	**3,100**	4 U	**12**	**86**	**218**
	Q24	11/17/2016	Shannon & Wilson	**3,100**	4 U	**11**	**89**	**218**
	Q25	2/23/2017	Shannon & Wilson	**2,700**	4 U	**10**	**86**	**117**
MTCA Method A Cleanup Level				800/1000[3]	5	1,000	700	1,000

Monitoring Well	Sample Date	Sample Date	Sampled By	Petroleum Hydrocarbons (µg/L)[1]	Volatile Organic Compounds (VOCs; µg/L)[2]			
				Gasoline-Range	Benzene	Toluene	Ethylbenzene	Total Xylenes
SVE-24	Q22	5/26/2016	Shannon & Wilson	100 U	1 U	**1**	1 U	1 U
	Q23	8/29/2016	Shannon & Wilson	**440**	**13**	1 U	**6.3**	4 U
	Q24	11/17/2016	Shannon & Wilson	**680**	**38**	4.5	**18**	**20.5**
	Q25	2/22/2017	Shannon & Wilson	**160**	**2.9**	4 U	**2.3**	4 U
SVE-25	Q22	5/26/2016	Shannon & Wilson	**270**	**4**	**1.2**	**14**	1.6
	Q23	8/29/2016	Shannon & Wilson	100 U	1 U	1 U	**1.9**	1 U
	Q24	11/17/2016	Shannon & Wilson	100 U	1 U	1 U	**1.4**	1 U
	Q25	2/23/2017	Shannon & Wilson	400 U	**10**	4 U	**7.8**	**8.1**
SVE-26	Q22	5/26/2016	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
	Q23	8/29/2016	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
	Q24	11/16/2016	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
	Q25	2/23/2017	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
SW-25 (Downgradient Point of Compliance)	Q22	5/26/2016	Shannon & Wilson	100 U	**2.9**	1 U	1 U	1 U
	Q23	8/29/2016	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
	Q24	11/18/2016	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
	Q25	2/23/2017	Shannon & Wilson	--	--	--	--	--
SW-26 (Downgradient Point of Compliance)	Q22	5/26/2016	Shannon & Wilson	100 U	**2.9**	1 U	1 U	1 U
	Q23	8/29/2016	Shannon & Wilson	100 U	4 U	1 U	1 U	1 U
	Q24	11/16/2016	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
	Q25	2/22/2017	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
SW-27 (Downgradient Point of Compliance)	Q22	5/26/2016	Shannon & Wilson	100 U	1 U	1 U	1 U	2 U
	Q23	8/29/2016	Shannon & Wilson	400 U	4 U	4 U	4 U	4 U
	Q24	11/17/2016	Shannon & Wilson	400 U	4 U	4 U	4 U	4 U
	Q25	2/22/2017	Shannon & Wilson	100 U	1 U	1 U	1 U	1 U
MTCA Method A Cleanup Level				800/1000[3]	5	1,000	700	1,000

Notes

[1]Analyzed using NWTPH-G.

[2]Analyzed using EPA Method 8260 or 8021.

[3]MTCA Method A cleanup level is 800 mg/L when benzene is detected.

mg/L = milligrams per liter.

MTCA = Model Toxics Control Act

U = not detected above the laboratory reporting limit

µg/L = micrograms per liter

VOCs = volatile organic compounds

Bolding indicates analyte was detected at a concentration above MTCA Cleanup Levels

Green shading indicated analyte was detected at a concentration greater than the MTCA Method A Cleanup level.

Table 3

Sampling and Chemical Analytical Testing Plan[1]

500 Fifth Avenue North Property
Seattle, Washington

Soil Stockpile Characterization Sampling	Contaminated Fill Site	Stoddard Solvent Contamination Site	Gasoline Contamination Site	Gasoline UST Contamination Site No. 1	Previously Undocumented Soil Contamination
Petroleum Hydrocarbons					
Gasoline-Range		X	X	X	X
Diesel-Range	X				X
Heavy Oil-Range	X				X
Volatile Organic Compounds (VOCs)					
Benzene		X	X	X	X
Toluene		X	X	X	X
Ethylbenzene		X	X	X	X
Total Xylenes		X	X	X	X
Polycyclic Aromatic Hydrocarbons (PAHs)					
PAHs	X				
Polychlorinated Biphenyls (PCBs)					
PCBs					X
Total Metals					
Arsenic	X				X
Cadmium	X				X
Total Chromium	X				X
Lead	X				X
Mercury	X				X
TCLP Metals					
Arsenic	X[2]				X[2]
Cadmium	X[3]				X[3]
Chromium	X[4]				X[4]
Lead	X[5]				X[5]
Mercury	X[6]				X[6]

Notes:

[1]This table is intended to be used as guidance for soil stockpile characterization for the 500 5th Avenue North Property. Excavated soil must be characterized for disposal or on-site reuse as required by MTCA, Washington State Dangerous Waste regulations and/or the selected disposal facility. Where stockpile characterization sampling is necessary, stockpile sampling must be performed at a frequency consistent with Table 1 of Ecology's Guidance for Remediation of Petroleum Contaminated Soils (Ecology, 1995).

[2]Run follow-up TCLP-arsenic analysis if total arsenic > 100 mg/kg (20x TCLP criterion).

[3]Run follow-up TCLP-cadmium analysis if total cadmium > 20 mg/kg (20x TCLP criterion).

[4]Run follow-up TCLP-chromium analysis if total chromium > 110 mg/kg (site-specific background for total chromium).

[5]Run follow-up TCLP-lead analysis if total lead > 100 mg/kg (20x TCLP criterion).

[6]Run follow-up TCLP-mercury analysis if total mercury > 4 mg/kg (20x TCLP criterion).

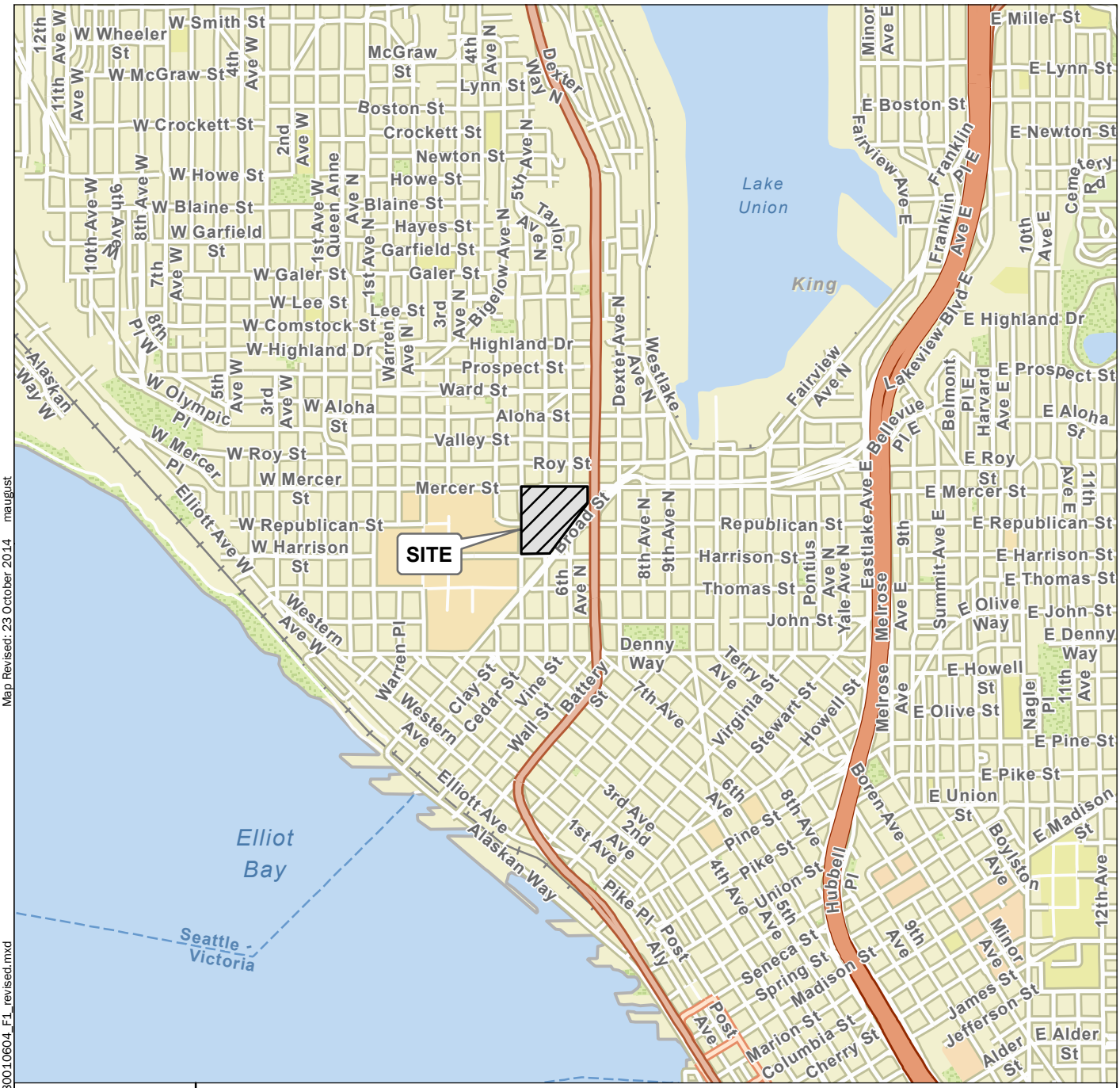
MTCA = Model Toxics Cleanup Act

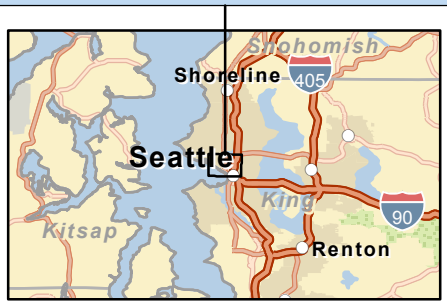
TCLP = Toxicity Characteristic Leaching Procedure

UST = underground storage tank

FIGURES

GeoEngineers





N
W E
S

2,000 0 2,000
Feet

Data Sources: ESRI Data & Maps

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

Seattle Center Lot No. 2 Property
Seattle, Washington

GeoEngineers

Figure 1

Office:
Path: \\sea\projects\12\12068001\06\GIS\MXDs\120680010604_F1_revised.mxd
Map Revised: 23 October 2014 maugust

MERCER STREET

NORTH BUILDING

PHASE 1 CAMPUS

PLAZA

ENTRY COURT

5TH AVENUE N

SEATTLE CENTER 5TH AVENUE NORTH GARAGE

SOUTH BUILDING

6TH AVE N

TES TANK

HARRISON STREET

GASOLINE UST CONTAMINATION SITE No. 1 DETAIL

LEGEND:

- Property Boundary
- Phase 1 Campus Construction Excavation Limit
- Phase 2A Campus Construction Excavation Limit
- 5th Avenue North Parking Construction Excavation Limit
- TES — Thermal Energy Storage

Contamination Sites:

- Stoddard Solvent Contamination Site (Approximate Extent) (Source is south of the subject property, across Harrison Street)
- Gasoline UST Contamination Site No. 1 (Approximate Extent)
- Contaminated Fill Site (Random Distribution, Conceptual Extent)
- Gasoline Contamination Site (Soil Portion, Approximate Extent)
- Gasoline Contamination Site (Groundwater Portion, Approximate Extent)

N W E S

100 0 100

FEET

NOTES:

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Reference: IC2xEX-0.dwg provided by KPFF on 11-07-11.

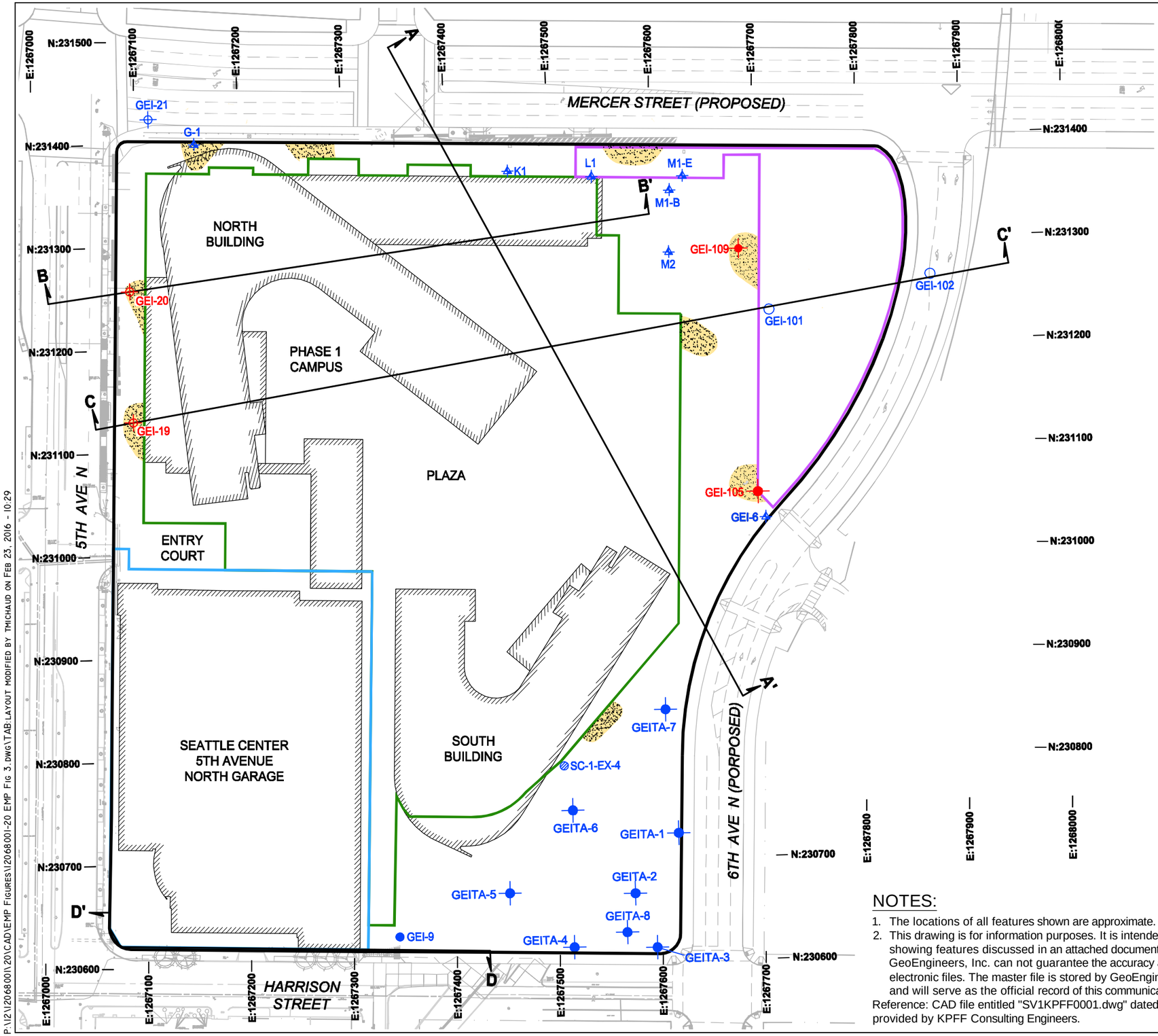
Current/Future Property Layout

500 Fifth Avenue North Property
Seattle, Washington

GeoEngineers

Figure 2

P:\21\2068001\20\CAD\EMP Figures\2068001-20 EMP Fig 2.dwg\TAB:Fig 2 modified by tmichaud on Feb 24, 2016 - 15:14



LEGEND:

- Reconveyed Property Boundary
- Phase 1 Campus Construction Excavation Limit
- Phase 2A Campus Construction Excavation Limit
- 5th Avenue North Parking Construction Excavation Limit
- M7 — Contaminants detected at concentrations greater than MTCA cleanup levels (See Table 13)
- K7 — Contaminants either not detected or detected at concentration less than MTCA cleanup levels (See Table 13)
- GEI-101 — Monitoring Well by GeoEngineers (2010)
- GEI-105 — Boring by GeoEngineers (2010)
- GEI-8-EX-2 — GeoEngineers Soil Sample (2007 through 2009)
- G1 through M7 — GeoEngineers Boring (2007 Fill Characterization)
- GEI-19 — GeoEngineers Boring (2006)
- GEI-11 — GeoEngineers Boring (2005)
- GEI-9 — GeoEngineers Monitoring Well (2005)
- A A' — Cross-Section Location

Contamination Sites:
- Contaminated Fill Site (Random Distribution, Conceptual Extent)

N
W E
S

100 0 100
FEET

NOTES:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: CAD file entitled "SV1KPFF0001.dwg" dated 01/06/06, provided by KPFF Consulting Engineers.

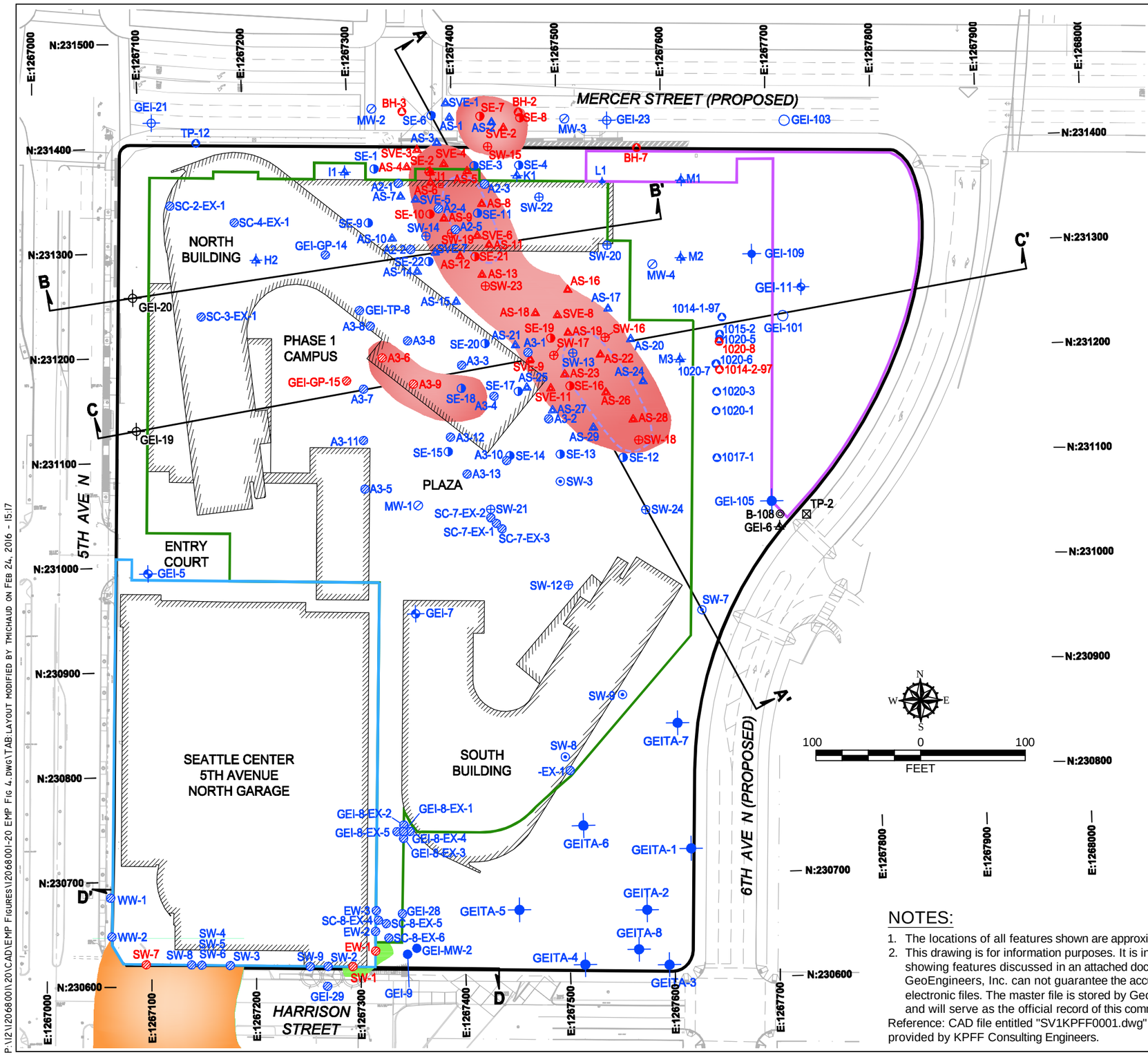
Current Fill Soil Conditions

500 Fifth Avenue North Property
Seattle, Washington

GeoEngineers

Figure 3

P:\12\120680001\20\CAD\EMP Figures\120680001-20 EMP Fig 3.dwg\TAB:LAYOUT MODIFIED BY TMICHAUD ON FEB 23, 2016 - 10:29



LEGEND:

- Reconveyed Property Boundary
- Phase 1 Campus Construction Excavation Limit
- Phase 2A Campus Construction Excavation Limit
- 5th Avenue North Parking Construction Excavation Limit
- M7 — Contaminants detected at concentrations greater than MTCA cleanup levels (See Table 13)
- K7 — Contaminants either not detected or detected at concentration less than MTCA cleanup levels (See Table 13)
- G1 — No sample data in native soil
- GEI-101 — Monitoring Well by GeoEngineers (2010)
- GEI-105 — Boring by GeoEngineers (2010)
- GEI-8-EX-2 — GeoEngineers Soil Sample (2007 through 2009)
- G1 through M7 — GeoEngineers Boring (2007 Fill Characterization)
- GEI-19 — GeoEngineers Boring (2006)
- GEI-11 — GeoEngineers Boring (2005)
- GEI-9 — GeoEngineers Monitoring Well (2005)
- SW-25 — Shannon & Wilson Monitoring Well (2007)
- AS-1, SVE-1 — Shannon & Wilson Boring (2007)
- SE-11 — Shannon & Wilson Geoprobe (2005)
- SW-2 — Shannon & Wilson Monitoring Wells (2004)
- SW-13 — Shannon & Wilson Monitoring Wells (2005)
- B-110 — Shannon & Wilson Geotechnical Boring (1969, 1970)
- MW-2 — SCS Abandoned Monitoring Well (1994, 1996)
- TP-1 — SCS Test Pit (1994)
- A A' — Cross-Section Location

Contamination Sites:

- Stoddard Solvent Contamination Site (Approximate Extent) (Source is south of the subject property, across Harrison Street)
- Gasoline UST Contamination Site No. 1 (Approximate Extent)
- Gasoline Contamination Site (Soil Portion, Approximate Extent)
- Gasoline Contamination Site (Groundwater Portion, Approximate Extent)

NOTES:

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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: CAD file entitled "SV1KPFF0001.dwg" dated 01/06/06, provided by KPFF Consulting Engineers.

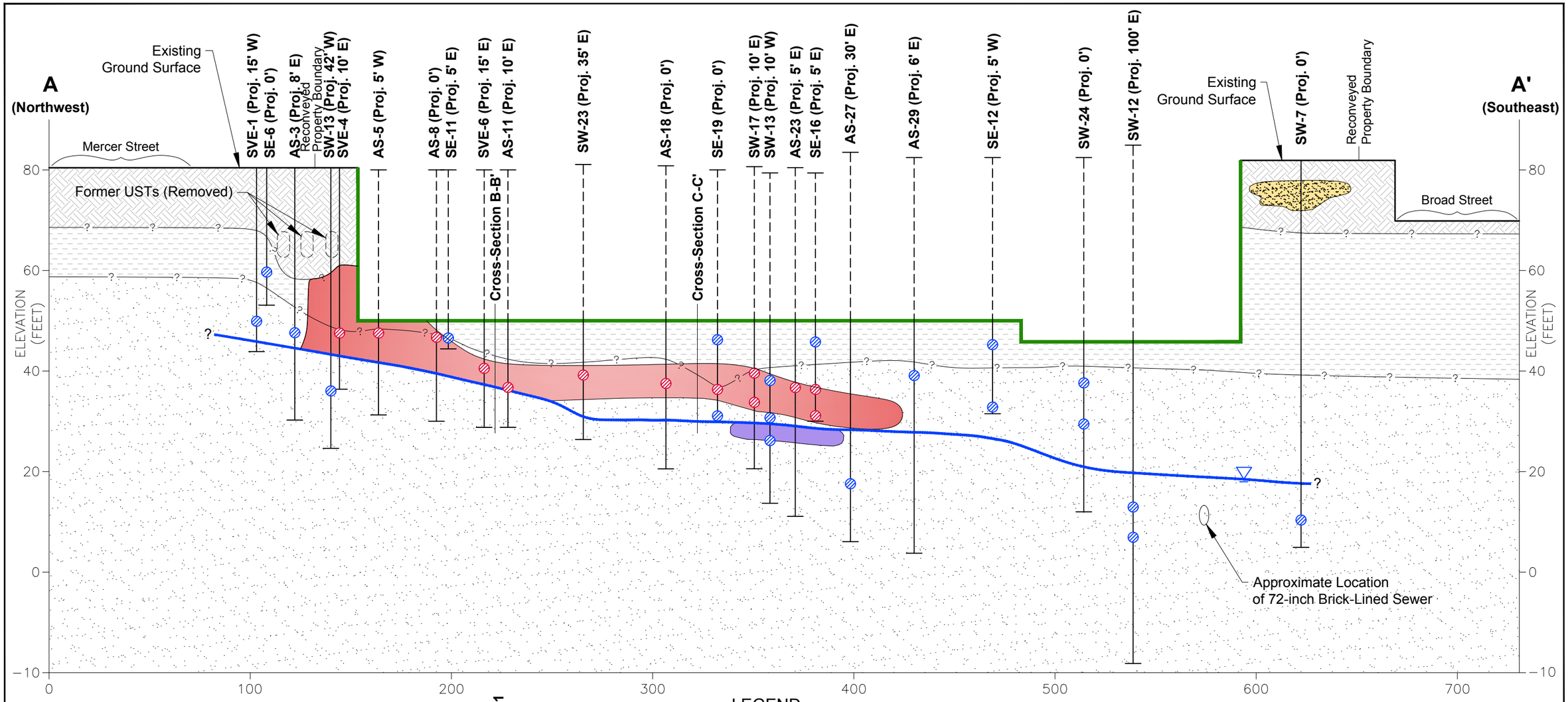
Current Native Soil Conditions

500 Fifth Avenue North Property
Seattle, Washington

GeoEngineers

Figure 4

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LEGEND

- AS-11 — Boring number
- Inferred Soil Contact
- Groundwater Table (Shannon & Wilson, 2008)
- Phase 1 Campus Construction Excavation Limit
- UST — Underground Storage Tank
- Fill
- Lacustrine Deposits
- Glacial Deposits

- Soil sample with analyte concentration(s) greater than MTCA cleanup levels (See Table 13)
- Soil sample with analyte concentration(s) less than MTCA Method cleanup levels (See Table 13)

Contamination Sites:

- Gasoline Contamination Site (Soil Portion, Approximate Extent)
- Gasoline Contamination Site (Groundwater Portion, Approximate Extent)
- Contaminated Fill Site (Random Distributions, Conceptual Extent)

Analytes tested include one or more of the following: gasoline-range hydrocarbons, benzene, and polycyclic aromatic (PAHs).

Notes

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. Datum: NAVD 88, unless otherwise noted.

HORIZONTAL SCALE: 1"= 50'
VERTICAL SCALE: 1"= 20'
VERTICAL EXAGGERATION: 2.5X

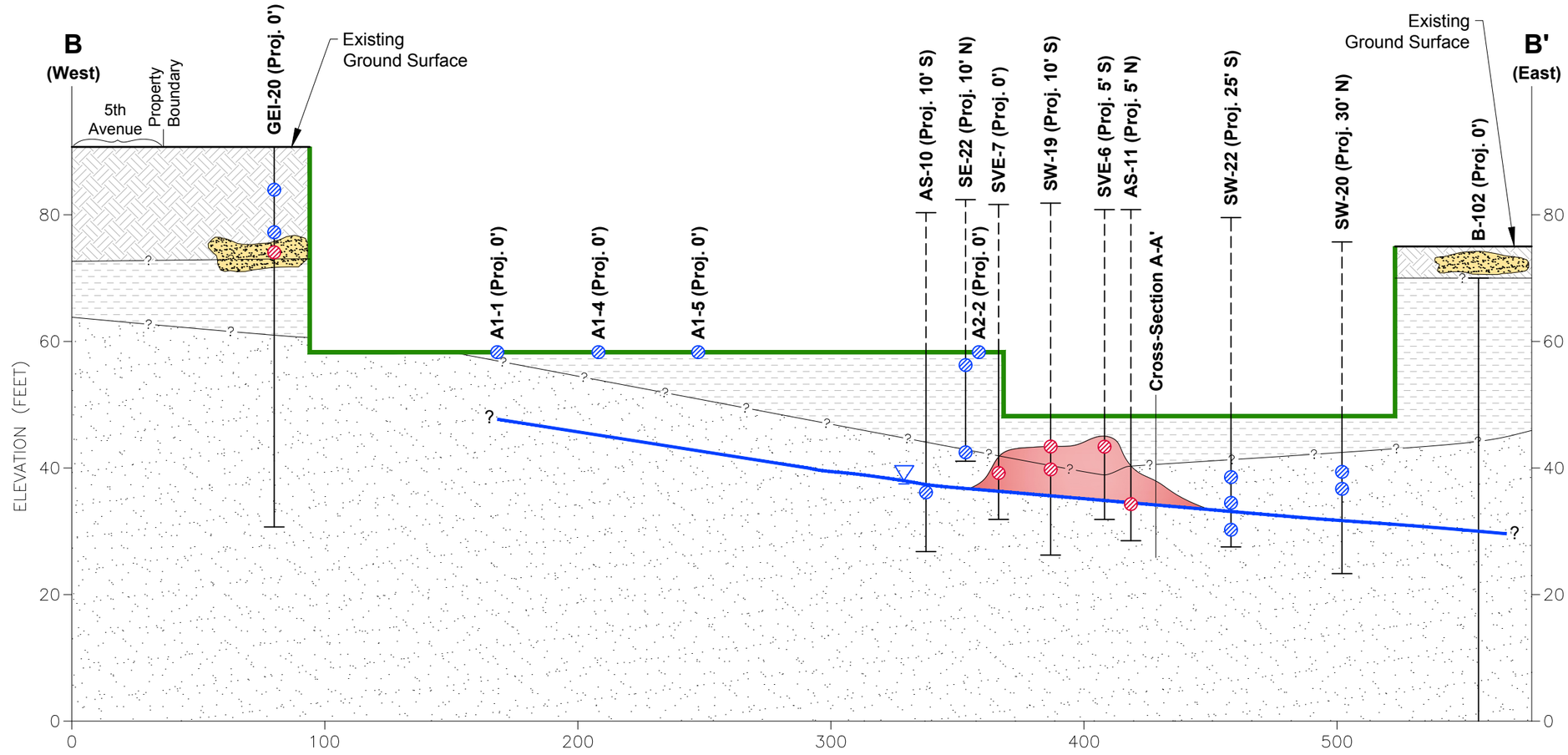
Cross-Section A - A'

500 5th Avenue North Property
Seattle, Washington

GeoEngineers

Figure 5

P:\I2\I206800\I20\CAD\I206800I-20 CAR FIGS 33.DWG\TAB:LAYOUT MODIFIED BY TMICHAUD ON OCT 26, 2016 - 15:53



Notes

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
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3. Datum: NAVD 88, unless otherwise noted.

LEGEND

- AS-11 — Boring number
- ? — Inferred Soil Contact
- Groundwater Table (Shannon & Wilson, 2008)
- Phase 1 Campus Construction Excavation Limit
- UST — Underground Storage Tank
- Fill
- Lacustrine Deposits
- Glacial Deposits

- Soil sample with analyte concentration(s) greater than MTCA cleanup levels (See Table 13)
- Soil sample with analyte concentration(s) less than MTCA Method cleanup levels (See Table 13)

Contamination Sites:

- Gasoline Contamination Site (Soil Portion, Approximate Extent)
- Contaminated Fill Site (Random Distributions, Conceptual Extent)
- Gasoline Contamination Site (Groundwater Portion, Approximate Extent)

Analytes tested include one or more of the following: gasoline-range hydrocarbons, benzene, and polycyclic aromatic (PAHs).

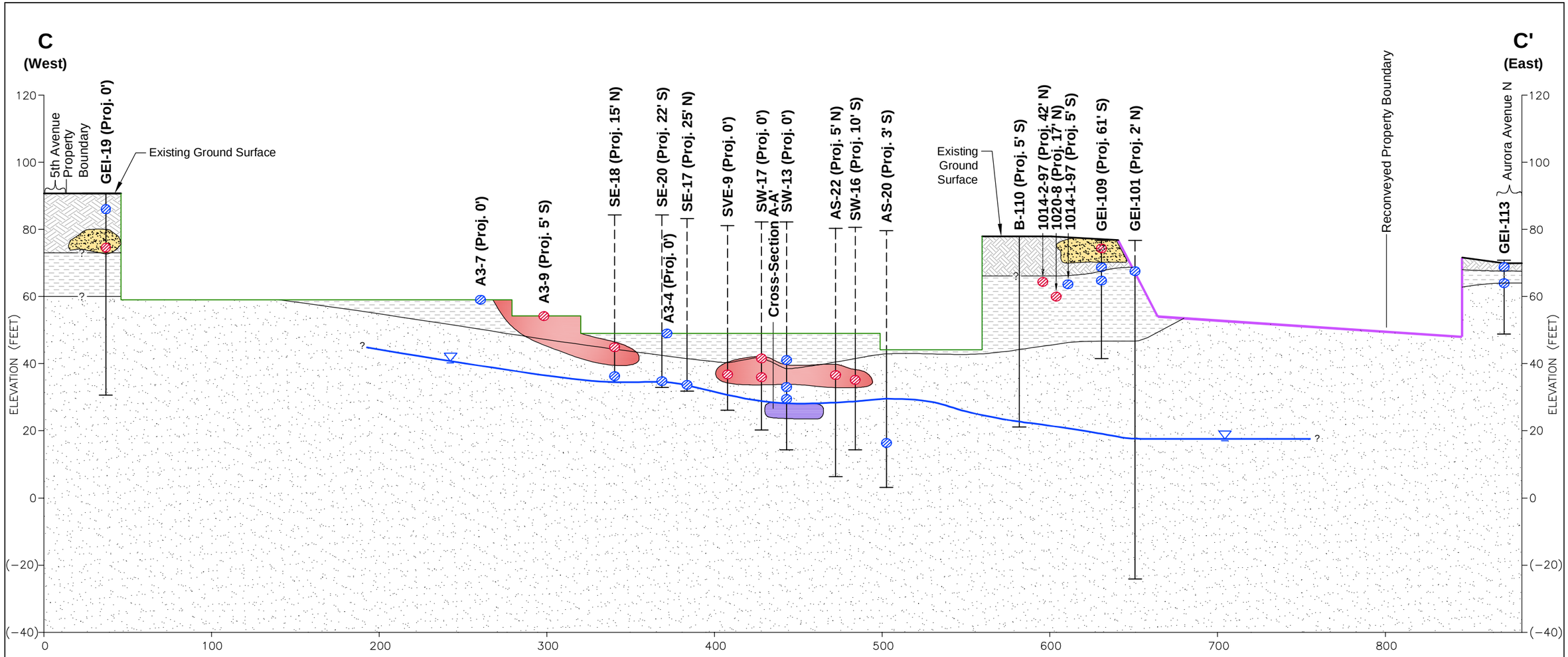
HORIZONTAL SCALE: 1"= 50'
VERTICAL SCALE: 1"= 20'
VERTICAL EXAGGERATION: 2.5X

Cross-Section B - B'

500 5th Avenue North Property
Seattle, Washington

GeoEngineers | **Figure 6**

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LEGEND

- AS-22 — Boring number
- ? — Inferred Soil Contact
- Groundwater Table (Approximate)
- Phase 1 Campus Construction Excavation Limit
- Phase 2A Campus Construction Excavation Limit
- UST — Underground Storage Tank
- Fill
- Lacustrine Deposits
- Glacial Deposits
- Soil sample with analyte concentration(s) greater than MTCA cleanup levels (See Table 13)
- Soil sample with analyte concentration(s) less than MTCA Method cleanup levels (See Table 13)

Contamination Sites:

- Gasoline Contamination Site (Soil Portion, Approximate Extent)
- Gasoline Contamination Site (Groundwater Portion, Approximate Extent)
- Contaminated Fill Site (Random Distributions, Conceptual Extent)

Analytes tested include one or more of the following: gasoline-range hydrocarbons, benzene, and polycyclic aromatic (PAHs).

Notes

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
3. Datum: NAVD 88, unless otherwise noted.

HORIZONTAL SCALE: 1"= 60'
VERTICAL SCALE: 1"= 30'
VERTICAL EXAGGERATION: 2X

Cross Section C -C'

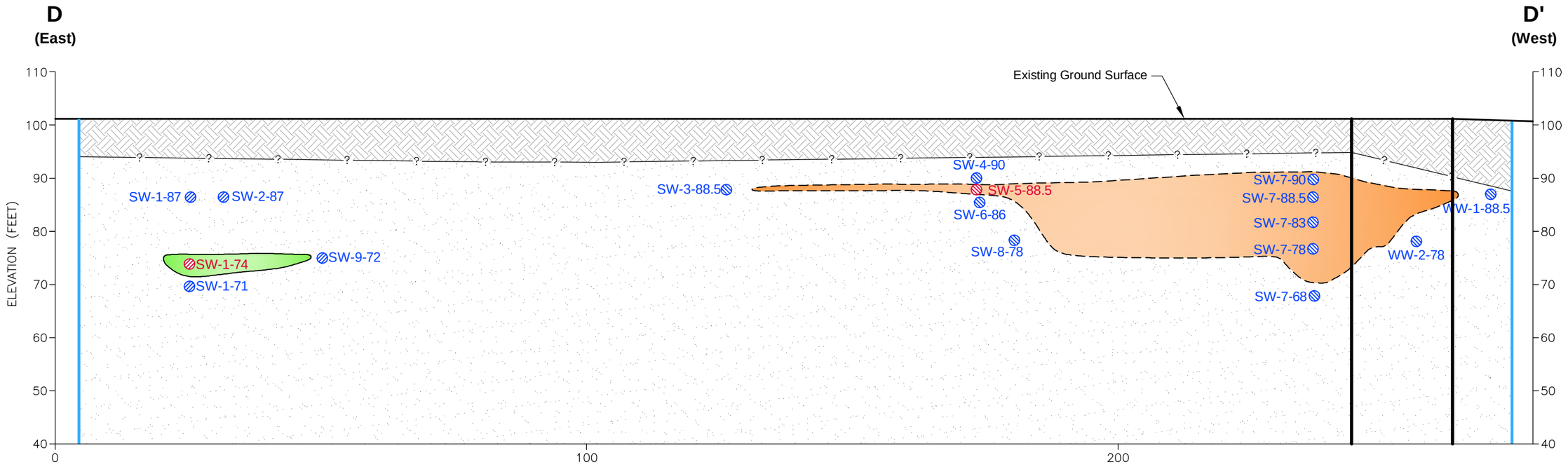
500 5th Avenue North Property
Seattle, Washington

GeoEngineers

Figure 7

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LEGEND

AS-22 — Boring number

? — Inferred Soil Contact

Groundwater Table (Approximate)

5th Avenue North Parking Construction Excavation Limit

Fill

Glacial Deposits

Soil sample with analyte concentration(s) greater than MTCA cleanup levels (See Table 13)

Soil sample with analyte concentration(s) less than MTCA Method cleanup levels (See Table 13)

Contamination Sites:
Stoddard Solvent Contamination Site
(Off-Property Site / Source, Approximate Extent)

Gasoline UST Contamination Site No. 1
(Approximate Extent)

Analytes tested include one or more of the following: gasoline-range hydrocarbons, benzene, polycyclic aromatic (PAHs), and selected metals.

Notes

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
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3. Datum: NAVD 88, unless otherwise noted.

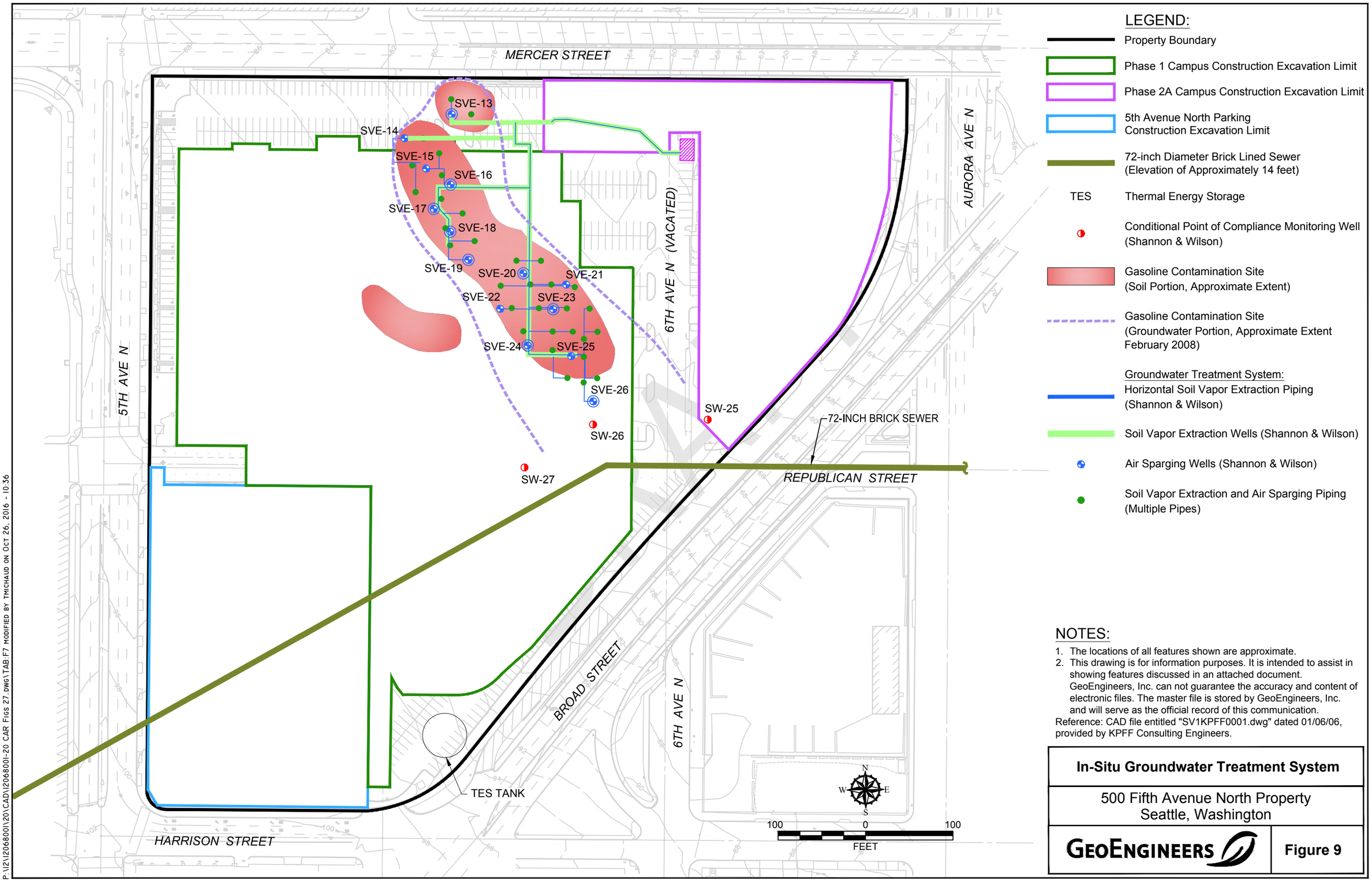
HORIZONTAL SCALE: 1"= 20'
VERTICAL SCALE: 1"= 20'
VERTICAL EXAGGERATION: 1X

Cross-Section D-D'

500 5th Avenue North Property
Seattle, Washington

GeoEngineers

Figure 8



LEGEND:

- Property Boundary
- Phase 1 Campus Construction Excavation Limit
- Phase 2A Campus Construction Excavation Limit
- 5th Avenue North Parking Construction Excavation Limit
- 72-inch Diameter Brick Lined Sewer (Elevation of Approximately 14 feet)
- TES — Thermal Energy Storage
- Conditional Point of Compliance Monitoring Well (Shannon & Wilson)
- Gasoline Contamination Site (Soil Portion, Approximate Extent)
- Gasoline Contamination Site (Groundwater Portion, Approximate Extent February 2008)
- Groundwater Treatment System: Horizontal Soil Vapor Extraction Piping (Shannon & Wilson)
- Soil Vapor Extraction Wells (Shannon & Wilson)
- Air Sparging Wells (Shannon & Wilson)
- Soil Vapor Extraction and Air Sparging Piping (Multiple Pipes)

NOTES:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: CAD file entitled "SV1KPFF0001.dwg" dated 01/06/06, provided by KPFF Consulting Engineers.

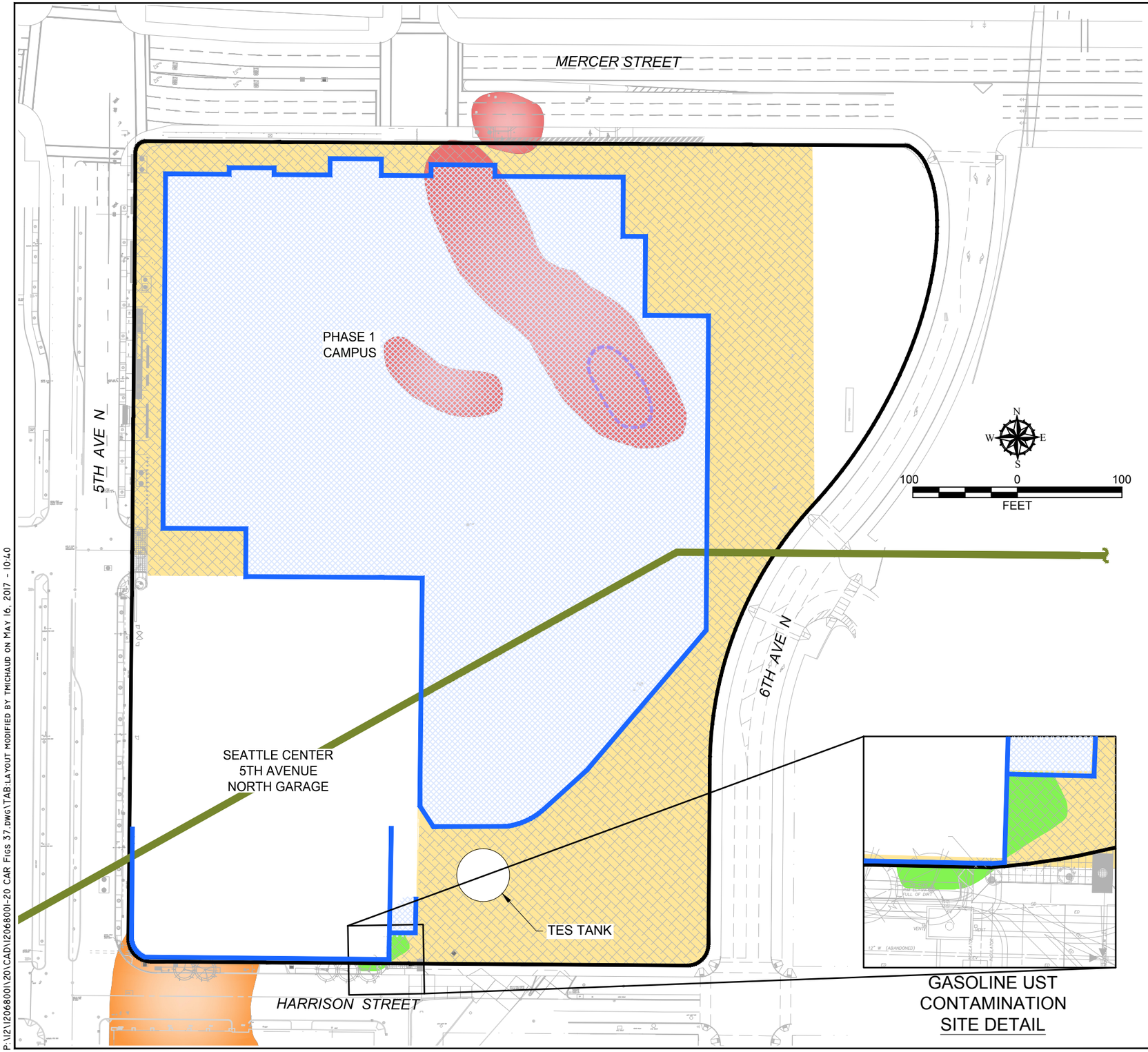
In-Situ Groundwater Treatment System

500 Fifth Avenue North Property
Seattle, Washington

GeoEngineers

Figure 9

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LEGEND:

- Property Boundary
- 72-inch Diameter Brick Lined Sewer (Elevation of Approximately 14 feet)
- TES — Thermal Energy Storage
- Conditional Point of Compliance Monitoring Well (Shannon & Wilson)

Contamination Sites:

- Stoddard Solvent Contamination Site (Approximate Extent) (Source is south of the subject property, across Harrison Street)
- Gasoline UST Contamination Site No. 1 (Approximate Extent)
- Contaminated Fill Site (Random Distribution, Conceptual Extent)
- Gasoline Contamination Site (Soil Portion, Approximate Extent)
- Gasoline Contamination Site (Groundwater Portion, Approximate Extent February 2017)

Engineering Controls:

- Concrete, Asphalt Surfaces, Soil over Geotextile, and/or Vegetated Soil Cover
- Chemical Vapor Barrier (Liquid Boot®, Approximate Horizontal Under Slab Extent)
- Chemical Vapor Barrier (Liquid Boot®, Approximate Vertical Under Slab Extent
- Underslab Drainage Piping (Passive Venting System)

NOTES:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: CAD file entitled "SV1KPFF0001.dwg" dated 01/06/06, provided by KPFF Consulting Engineers.

Engineering Controls

500 Fifth Avenue North Property
Seattle, Washington

GeoEngineers | **Figure 10**

P:\I2\I206800\I20\CAD\I206800I-20 CAR Figs 37.dwg\TAB:Layout modified by tmichaud on May 16, 2017 - 10:40

APPENDICES

GeoEngineers

APPENDIX A
Report Limitations and Guidelines for Use

APPENDIX A
REPORT LIMITATIONS AND GUIDELINES FOR USE[4]

General

This appendix provides information to help you manage your risks with respect to the use of this report.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

GeoEngineers has completed this Post-Construction Environmental Management Plan for the 500 Fifth Avenue North Property located in Seattle, Washington in general accordance with our agreement dated March 8, 2005. This report has been prepared for the exclusive use of IRIS Holdings, LLC, the Bill & Melinda Gates Foundation, their authorized agents and regulatory agencies. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. No one except IRIS Holdings, LLC, The Bill & Melinda Gates Foundation, their authorized agents and regulatory agencies should rely on this environmental report without first conferring with GeoEngineers. Use of this report is not recommended for any purpose or project except the one originally contemplated.

This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the 500 Fifth Avenue North Property located in Seattle, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

If important changes are made to the project or property after the date of this report, we recommend that GeoEngineers be given the opportunity to review our interpretations and recommendations. Based on that review, we can provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

Our report was prepared for the exclusive use of our Client. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise

[4] Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Historical Information Provided By Others

GeoEngineers makes no warranties or guarantees regarding the accuracy or completeness of information provided by others. The information presented in this report is based on the above-described research. GeoEngineers has relied upon information provided by others in our descriptions of historical conditions and in our review of regulatory databases and files. The available data do not provide definitive information with regard to all past uses, operations or incidents at the property or adjacent properties.

Environmental Uncertainty

No study can wholly eliminate uncertainty regarding the potential for environmental conditions or contamination in connection with a property. There is always a potential that areas with contamination that were not identified during this study exist at the site or in the study area. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely-spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

Environmental Regulations Are Always Evolving

Some substances may be present in the vicinity of the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

Subsurface Conditions Can Change

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

Soil and Groundwater End Use

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. We are unable to assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location or its reuse on-site in instances that we did not know or could not control.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ, sometimes significantly, from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

An Environmental Report Could be Subject to Misinterpretation

Misinterpretation of this plan by other design team members can result in costly problems. You could lower that risk by having GeoEngineers confer with appropriate members of the design team after submitting the plan. Also retain GeoEngineers to review pertinent elements of the design team's plans and specifications. contractors can also misinterpret an environmental plan. Reduce that risk by having GeoEngineers participate in pre-bid and preconstruction conferences, and by providing construction observation.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

Contractors are Responsible for Site Safety on Their Own Construction Projects

Our environmental recommendations are not intended to direct the contractor's procedures, methods, schedule or management of the work site. The contractor is solely responsible for job site safety and for managing construction operations to minimize risks to on-site personnel and to adjacent property.

Read These Provisions Closely

It is important to recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. Without this understanding, there may be expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you need to know more about how these "Report Limitations and Guidelines for Use" apply to your project or property.