

Revised Corrective Action Plan

Proposed Spokane Convention Center Completion
Project
Spokane, Washington

for
Spokane Public Facilities District

January 8, 2013



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Project
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1.0 INTRODUCTION

This Corrective Action Plan (CAP) summarizes the existing Site contaminant conditions and preferred environmental remedy for the proposed Spokane Convention Center Completion (CCC) project located northwest of the intersection of Division Street and Spokane Falls Boulevard in Spokane, Washington, herein referred to as the "Site." This document was requested by Kevin Twohig, CFE, Executive Director of the Spokane Public Facilities District (SPFD). The approximate location of the Site is shown in the Vicinity Map, Figure 1.

This CAP includes: summary findings of a prior predevelopment subsurface investigation conducted by GeoEngineers, Inc. (GeoEngineers) on March 17 and 18, 2004 for the adjacent Exhibit Hall Site and the Site; description of prior remediation activities completed during construction of the Exhibit Hall; plans for supplemental environmental Site assessment of the CCC Site; the selected remedial approach for the Site during planned construction activities; and tentative remediation schedule. CAP implementation will be concurrent with proposed Site redevelopment activities (CCC construction); the remediation schedule will be dependent on the development schedule.

The SPFD has solicited statements of qualifications from design and construction teams interested in providing services for redevelopment of the Site under the design-build delivery method pursuant to Revised Code of Washington (RCW) 39.10.300-.320. Until such time that a design-build team (D-B) is selected and the design process is initiated, the final locations of the proposed CCC addition to the Exhibit Hall and associated underground utilities, appurtenances and landscaping will not be known. For this reason, a supplemental environmental Site assessment (ESA) of the Site will not be undertaken until preliminary plans (at the 30 or 60 percent design level) are developed by the selected D-B.

2.0 SUMMARY OF SITE CONDITIONS

2.1. Location And Site Description

The proposed CCC Site is located immediately north of the Spokane Convention Center Exhibit Hall and DoubleTree Hotel and bounded on the west by the old Convention Center. The Site also is bounded on the north by the Centennial Trail and Spokane River, and immediately on the east by Division Street.

The Site currently is occupied by the former C.I. Shenanigans Restaurant and parking lot (Shenanigans) on the east, and Arbor area and stormwater swale on the west. The physical address of the Site is 332 North Spokane Falls Court, Spokane, Washington, 99201.

The Site encompasses roughly 0.6 acres. The east portion of the Site, defined by the former Shenanigans development, is generally level, and paved with asphalt concrete and minimal landscaping around the existing building. The approximate west half of the Site (generally west of the former Shenanigan's restaurant building) is improved with some asphalt concrete paving, landscaping and sidewalks,. The entrance to the Site is from the Exhibit Hall property on the south

and Spokane Falls Boulevard. The Site and surrounding surface features are shown in the Site Plan, Figure 2.

2.2. Site History

Historical uses of the Site and adjacent Exhibit Hall property and DoubleTree Hotel properties (jointly referred to in this Section as “properties”) to the south include: residential, industrial, commercial, and medical services. The W.R. Marvin’s Planing Mill (also called King Sash and Door) was present in the north portion of the properties. The original Sacred Heart Hospital was located in the western portion of the properties. By 1901, the planing mill was removed and the Great Northern Railroad (GNR) had constructed a long, narrow building for use as a railroad freight off-loading terminal in the central and northern portion of the properties. In addition, the GNR constructed its mainline across the northern portion of the Site. The northern extent of the properties might have been extended into the river by shoreline filling during this period. This mainline entered the Site east of the former Shenanigans restaurant building, crossed the Site east to west, and exited the Site across a railroad trestle that crossed the Spokane River near the northwest portion of the Site.

By about 1910, a junkyard and a paint shop (Richfield Oil Paint) were present along the southern portion of the properties. Later, in about 1914, the GNR purchased and demolished the Sacred Heart Hospital and laid railroad tracks south of the freight terminal. At about this same time, Union Pacific (UP), Oregon Washington Railroad and Navigation (OWR&N) and the Milwaukee Railroad constructed a jointly-owned set of railroad tracks across the southern portion of the property. A portion of these tracks led to an elevated railroad viaduct that passed west through Spokane to the Union Station depot formerly located west of the current Convention Center. Other tracks stayed at grade beneath the viaduct.

At about this same time, Washington Water Power (WWP) constructed a small electrical substation near the western portion of the properties. Also, the Division Street Spokane River crossing was elevated such that railroad traffic could pass beneath the bridge. From the mid-1910’s until 1974, the Site was used primarily by the railroads and supporting industry for purposes that included freight loading and off-loading and mainline rail pass-through for GNR, UP, OWR&N, and Milwaukee Railroad. Several small businesses that specialized in freight distribution operated on the properties during this period.

In the early 1970’s, railroad use ended. Former railroad property was acquired by private and public transactions. Railroad infrastructure was removed or buried and construction started on the Sheraton Hotel (now the DoubleTree Hotel). The Spokane Convention Center (West Convention Center on Figure 2), was constructed in about 1974. The western and northern portions of the properties were used for carnival grounds during the 1974 World’s Fair (Expo 74). Following Expo 74, most of the carnival grounds were converted to parking areas.

In about 1980, the Shenanigans restaurant building was constructed. Site use has remained relatively unchanged with the exception of the early 1990s demolition of the WWP substation, and the addition of the Ag-Trade center expansion to the Spokane Convention Center in the late-1980s. As a condition of this earlier convention center expansion, the City of Spokane constructed a park-like area in the northwest portion of the Site and placed an art work titled the “East-West Arbor” in

this location. The Arbor occupies a portion of the Site west of the former Shenanigan's Restaurant building.

In the early to middle 1990s, several environmental investigations were performed (by others) to identify on-site environmental impacts related to historical property use. These investigations identified soil and groundwater contamination on-site at concentrations greater than applicable cleanup levels; a summary of these investigations is presented in **Section 2.3**.

The existing Exhibit Hall was completed in 2006. Environmental remediation of contaminated soil was conducted in conjunction with construction of the Exhibit Hall. Remediation activities included partial removal of contaminated soil and capping remaining contaminated soil with structures and pavements. At the conclusion of construction activities the SPFD recorded a Restrictive Environmental Covenant (Covenant) on the Exhibit Hall property to address contamination that remained in-place and received a "no further action" determination (dated November 20, 2007) from the Washington State Department of Ecology (Ecology) under Ecology's Voluntary Cleanup Program (VCP).

2.3. Summary of Previous Work

Multiple Phase I and Phase II environmental Site assessments (ESAs) have been completed on the existing Exhibit Hall property, including soil and groundwater sampling. Only one prior Phase II ESA (GeoEngineers, 2004) included explorations and analytical testing of soil and groundwater on the proposed CCC Site. Results of these investigations indicated that petroleum hydrocarbons-, carcinogenic polycyclic aromatic hydrocarbon- (cPAH), and metals-contaminated soil were present in the central portion of the existing Exhibit Hall Site. Concentrations of petroleum hydrocarbons (principally as oil-range petroleum hydrocarbons [ORPH]), the cPAH benzo(a)pyrene, lead, and arsenic were the primary compounds identified above cleanup levels as set forth in the Washington State Model Toxics Control Act (MTCA, Chapter 173-340 Washington Administrative Code [WAC]). Also, a groundwater sample from Site monitoring well MW-213 contained concentrations of cPAHs exceeding MTCA Method A groundwater cleanup levels, primarily benzo(a)pyrene. Analytical results also indicated that cPAHs and metals (arsenic, cadmium, and lead) were the primary contaminants of concern (COC) detected on the Site.

Historical Subsurface Exploration Map, Figure 3, shows approximate locations of soil boring, test pit and monitoring well locations completed during the referenced GeoEngineers Phase II ESA along with approximate locations of explorations completed during previous evaluations by others. Summaries of soil and groundwater analytical results are shown in Summary of Historic Chemical Analytical Results-Subsurface Soil, Table 1 and Summary of Historic Chemical Analytical Results-Groundwater, Table 2, respectively. Site plans depicting exploration locations and summarizing COC concentrations relative to MTCA Method A cleanup levels for unrestricted land use are provided for the Exhibit Hall property in Figure 4 and the Site in Figure 5. A list of the previous reports reviewed for the Site while preparing this CAP is included as Appendix A.

2.4. Predevelopment Site Investigation Study

GeoEngineers has proposed to undertake, on behalf of the SPFD, a supplemental Phase II ESA within the limits of the Site in order to assess the vertical and horizontal extent of previously identified COC. The subsurface assessment element of this proposed supplemental Phase II ESA

will consist of drilling borings and completing direct-push, continuously-sampled probes in the area of the proposed CCC. The assessment will focus in areas of the proposed building footprint and utility corridors where excavation might potentially encounter contaminated soil. Exploration locations will be selected based on: location of previous explorations on the Site; location of the proposed CCC building and proposed foundations; locations of existing and proposed underground utilities; and proposed landscaped areas. Results of this supplemental Phase II ESA will be submitted under separate cover.

2.4.1. Previously Observed Site Soil Conditions

GeoEngineers assessed subsurface conditions at the Exhibit Hall property and Site in March 2004 by excavating 22 test pits. Shallow subsurface soil located in the central portion of the existing Exhibit Hall property and on the Site generally consisted of dark brown, fine to coarse gravel with sand, trace silt, and various amounts of construction debris consisting of concrete, bricks, black cinder material, and railroad ties to about 4 feet below grade. Below approximately 4 feet, the soil graded to tan, fine to coarse gravel with sand and trace silt to about 9 feet below grade where our prior explorations terminated. Soil conditions located on the western portion of the Site, north of the DoubleTree Hotel, consisted of dark brown, fine to coarse gravel with sand, trace silt and bricks to about 3 feet below grade. From 3 to 9 feet, the soil consisted of brown, fine sand with trace silt. Soil conditions encountered across the remainder of the existing Exhibit Hall property consisted of varying depths of fill material consisting of dark brown, fine to coarse gravel with sand and trace silt ranging from 2 feet to 4 feet below ground surface and overlying in-place basalt rock.

Soil samples were obtained from the prior explorations and field-screened to evaluate the potential presence of petroleum hydrocarbons. Field-screening consisted of soil water-sheen tests and soil vapor headspace readings using a photoionization detector (PID) calibrated to 100 parts per million (ppm) isobutylene. Results of the soil water-sheen testing indicated no sheen was observed in the collected samples. PID readings ranged from 0.2 to 0.9 ppm, indicating low volatile organic vapor concentrations at the sample locations. Field-screening results are summarized in Table 3.

2.4.2. Previously Observed Groundwater Conditions

Perched groundwater was encountered in some of the explorations beneath the existing Exhibit Hall property and the Site, at variable depths, but generally near the contact between overlying fill or natural soil deposits, and underlying basalt rock. The depth to groundwater will vary seasonally and could be higher than reported at the time of completion of the previous explorations. Depth to groundwater also might be influenced by the water level in the Spokane River in those portions of the site where rock depth below ground surface increases, generally on the north side of the property.

2.4.3. Analytical Test Results From 2004 Assessment

One to three soil samples from each prior exploration was submitted to SVL Analytical, Inc. of Kellogg, Idaho for analysis of DRPH, PAHs, and metals (arsenic, cadmium, lead, and mercury). Thirty-five soil samples were submitted for analysis. One sample from the upper 4 feet, or fill depth, of each test pit was analyzed. Additionally, one or more representative samples of observed conditions below 4 feet were submitted for analysis.

Analytical testing indicated metals concentrations in 10 samples were above MTCA Method A cleanup levels. Arsenic was detected at concentrations greater than MTCA Method A cleanup levels in five samples, cadmium was present above MTCA Method A cleanup levels in four samples and lead was detected in nine samples at concentrations greater than MTCA Method A cleanup levels. Concentrations of arsenic and cadmium generally were associated with the elevated concentrations of lead. One exception was identified, with arsenic concentrations exceeding cleanup criteria and lead concentrations less than cleanup criteria. Metal concentrations above MTCA Method A cleanup levels were primarily identified in the upper 5 feet of soil. Elevated concentrations of metal impacts above MTCA Method A cleanup levels were located sporadically across the Exhibit Hall property and Site with the majority of the samples located along Division Street and Spokane Falls Boulevard. Analytical results of the metal analysis are summarized in Table 3. Analytical testing reports are presented in Appendix C.

Results of petroleum hydrocarbon and PAH analysis indicated concentrations of diesel-range petroleum hydrocarbons (DRPH) and ORPH were below MTCA Method A cleanup levels for the soil samples analyzed and concentrations of cPAHs were greater than MTCA Method A cleanup levels in 10 soil samples. Elevated concentrations of cPAHs above MTCA Method A primarily were located in the central portion of the Exhibit Hall property and extended northeast to Division Street. A summary of analytical results of the PAH analysis is presented in Summary of PAH Results, 2004 Site Assessment-Soil, Table 4. Analytical testing reports are presented in Appendix C.

Three samples (TP-G4/S-1@2.5', TP-G6/S-1@3', and TP-C7/S-1@3') containing lead concentrations between 389 and 2,860 milligrams per kilogram (mg/kg) were selected for leachable-lead analysis using the Toxicity Characteristic Leaching Procedure (TCLP). Leachable-lead analysis was conducted to assess if the soil would be designated as a Washington State Dangerous Waste or US Federal Hazardous Waste. The samples were selected because they represent high, medium, and low concentrations of lead from the soil samples analyzed. Leachable-lead results indicate concentrations were below the Dangerous and Hazardous Waste criteria of 5.0 milligrams per liter (mg/L). Results of the TCLP analysis are presented in Table 3 and analytical testing reports are presented in Appendix C.

2.5. Nature of Contamination

Based upon the findings of previous Site assessments, the following COC and contaminated materials have been identified at the Site:

1. Analytical data indicates that near surface soil (0 to 5 feet deep) at various locations are impacted with cPAHs and metals (lead, arsenic, and cadmium) above MTCA Method A cleanup levels. The analytical soil data is summarized in Tables 1, 3, and 4 and Figure 5.
2. Areas of the Site contaminated with COCs appear to be associated with fill material; Site impacts are likely the result of a combination of contaminated fill brought to the Site and historic Site activities that contaminated the fill following placement.

2.6. Potential Exposure Pathways

The exposure pathways evaluated for the Site and considered in development of this CAP are discussed below.

2.6.1. Soil to Groundwater Pathway

The results of previous ESAs indicate that groundwater beneath the Site contains concentrations of cPAHs at concentrations exceeding the MTCA groundwater cleanup standards. Therefore, the soil to groundwater pathway is of concern at this time.

2.6.2. Soil to Vapor Inhalation Pathway

The results of previous ESAs indicate that elevated concentrations of metals (lead, arsenic, cadmium, and mercury), cPAHs, and ORPH above MTCA Method A cleanup levels could be present on the Site. Metals and cPAHs are not volatile and therefore are not a concern for the vapor inhalation pathway. Hydrocarbons lighter than equivalent carbon-16 generally are considered to be volatile. Hydrocarbons in this carbon range were not identified on Site; therefore, the soil to vapor inhalation pathway is not a concern at this time.

2.6.3. Soil Direct Contact Pathway

The direct contact pathway is a concern for the Site because COCs exceeding MTCA cleanup levels are present in the upper 15 feet of Site soil (the point of compliance in MTCA). Under this exposure scenario, receptors can be exposed to Site contaminants through dermal contact, ingestion of dust containing COC, and/or inhalation of dust containing COC.

3.0 SUMMARY OF CLEANUP STANDARDS

This section discusses cleanup requirements during Site remediation activities, long-term remediation performance requirements, the application of appropriate MTCA cleanup levels (Method A, B or C) and contains an overview of Site remediation activities.

3.1. Cleanup And Performance Requirements

The primary requirements of a corrective action under MTCA are to protect human health and the environment. The corrective action should address the complete exposure pathways for the Site; in this case the soil to groundwater and direct contact pathways. The corrective action should also consider Site-use following remediation activities. The SPFD plans to operate the Site as a meeting/conference center after remediation activities are complete. Therefore the cleanup action performance requirements will be to:

- Prevent potential receptors (e.g., general public or on-Site workers) from contacting, inhaling or ingesting soil with concentrations of hazardous substances greater than cleanup levels.
- Prevent or minimize hazardous substances in soil from potentially migrating to groundwater where groundwater is not already impacted.

3.2. Site Cleanup And Remediation Levels

3.2.1. MTCA Cleanup Level Methods

MTCA provides three methods for determining cleanup levels. The three methods are briefly described below.

Method A applies to Sites undergoing routine interim cleanup actions or to Sites where numerical standards are available for all hazardous substances in all media of concern. Predetermined cleanup levels are provided for approximately 25 chemicals in tables in MTCA. These cleanup levels are easy to use, but often are extremely conservative. Method A Cleanup Levels have been developed for both residential and industrial site exposure scenarios. MTCA Method A cleanup levels are applicable to the Site.

Method B is the standard approach applicable to all sites. Cleanup levels are determined according to equations provided in the regulation and by using the most current toxicity data available on the United States Environmental Protection Agency (USEPA) Integrated Risk Information System (IRIS) database. The cleanup levels for soil are calculated assuming incidental ingestion of contaminated soil by a young child; this represents an overly conservative scenario for an industrial site. MTCA Method B cleanup levels are applicable to the Site.

Method C applies in cases where land use meets certain criteria and can be classified as industrial, in other special cases where Method A or B Cleanup Levels are below area background concentrations, or in cases where Method A or B Cleanup Levels are not technically possible to achieve. As with Method B, cleanup levels are calculated by using equations provided in the regulation and by using the most current toxicity data available on USEPA's IRIS database. The equations use less conservative assumptions and in some cases allow higher risk levels than Method B. Institutional controls (e.g., site fence, security, deed restrictions) are generally required when Method C Cleanup Levels are used. MTCA Method C cleanup levels are not applicable to the Site.

3.2.2. Site-Specific Cleanup Levels

Based on the findings of the previous Site investigation, cPAHs, arsenic (As), lead (Pb), and cadmium (Cd) were determined to be the Site-specific COCs. ORPH and mercury also were detected in soil at the adjacent Exhibition Hall property at concentrations greater than MTCA Method A cleanup levels and these COC might also be present at the Site.

MTCA Method B values were evaluated for the Site and determined to be nearly the same as MTCA Method A values, with the exception of mercury and cadmium. Calculated MTCA Method B cleanup values for mercury and cadmium are 20 and 80 mg/kg, respectively, which are greater than the MTCA Method A cleanup values. Based on this evaluation, MTCA Method B cleanup levels will be used for mercury and cadmium and MTCA Method A cleanup levels for unrestricted land use will be used for ORPH, cPAHs, and lead during remediation activities. Soil samples collected during remediation activities will be analyzed for COC and the analytical results will be compared to these cleanup values.

The applicable soil cleanup levels for the COCs identified at the Site are as follows:

- Lead: 250 mg/kg
- Arsenic: 20 mg/kg
- Cadmium: 80 mg/kg
- Mercury: 20 mg/kg

- ORPH: 2,000 mg/kg
- Benzo(a)pyrene: 0.1 mg/kg
- Other cPAHs: Toxic Equivalency Factors presented in WAC 173-340-900, Table 708-2 will be used to calculate total concentration of all detected cPAHs using the toxicity equivalency methodology in WAC 173-340-708(8) and compared to the cleanup level for benzo(a)pyrene.

3.2.3. Remediation Areas

As noted above, the COCs present at the Site are metals (Pb, Cd, and As); cPAHs; ORPH and mercury might also be present based on data from the adjacent Exhibit Hall property. The goal of the cleanup action is to consolidate and cap contaminated soil on-Site beneath planned structures and pavements to the maximum extent possible. Where necessary, excavated soil that cannot remain on-Site will be transported and disposed at an approved landfill facility. It is likely that contaminated soil will be excavated during installation of building foundations, select underground utility corridors (utilities not installed in conduit) and landscaped areas; soil excavated will be transported off-Site for disposal. The exact locations of excavations will not be known until final design plans are prepared by the selected D-B.

Based on a review of laboratory results associated with previous assessment activities, the following areas will require remedial action:

1. Sporadic metal and cPAH impacts were located in the southern portion of the Exhibit Hall property along Division Street and Spokane Falls Boulevard. It is anticipated that the excavations for the CCC building foundations, select underground utilities (utilities not installed in conduit), and landscaped areas will encounter contaminated soil and that such soil will be removed and transported to the Graham Road Subtitle D disposal facility. The actual quantity of soil that will be removed from proposed building foundation and utility excavations will depend on the number, type, locations and depths of such improvements.
2. Soil, generally fill material, visually identifiable as dark brown to black fine to coarse gravel with sand, trace silt, and construction debris is impacted with metals and cPAHs. The thickness of fill material varies across the Site and with basalt bedrock elevations. Locations where documented COCs exceed the cleanup levels are presented in Figure 5. For the purposes of the CAP, it is assumed that, the soil excavated from these areas either will be consolidated and capped on-site or will be removed from the Site.

4.0 SUMMARY OF CLEANUP ACTION

The approximate locations of the Site where COCs in soil exceed the cleanup levels are shown in Figure 5. This information will be augmented at the time that GeoEngineers completes a Site-specific Phase II ESA for the proposed CCC. Alternatives for cleanup of soil at the Site were evaluated with respect to criteria that determine if the cleanup action is permanent to the maximum extent practicable. The cleanup action selected is described below and generally consistent with MTCA (WAC 173-340-360). The selected cleanup option is:

- Protective of human health and the environment;

- compliant with cleanup standards defined in WAC 173-340-700 through -760;
- a permanent solution;
- attainable in a reasonable restoration time frame; and
- in accordance with the goals for the Site.

4.1. Selected Cleanup Action

The selected cleanup action for contaminated soil includes: (1) excavating soil from locations where concentrations of COCs exceed the cleanup levels and disposing of such soil at a regulated landfill; (2) optional screening of contaminated soil to remove uncontaminated coarse-grained particles (>4-inch) for volume reduction (ex. concrete, brick and other debris in existing on-site fill); (3) capping with structures, asphalt or portland cement concrete if contaminated material is not removed from the Site and has not been disturbed or has been consolidated; (4) managing groundwater that is removed during construction; and (5) implementing institutional controls by the Owner, in the form of post-construction soil management procedures and a restrictive covenant to be attached to the deed of the property. Because of limited Site area relative to the proposed building footprint and surrounding area that will be improved, large-scale soil stockpiling onsite will not be practical. For this reason, soil that will be excavated will be characterized during GeoEngineers' proposed supplemental Phase II ESA and before commencement of construction to facilitate off-site transport and disposal at the time of earthwork operations. However, if the selected D-B chooses to temporarily stockpile known or suspected contaminated soil on the Site, specific requirements are set forth in **Section 4.2**.

Institutional controls, in the form of a restrictive covenant, will also address the soil to groundwater pathway by restricting the use of groundwater beneath the Site.

4.2. Engineering Controls

This section presents the conceptual design, assumptions and construction specifications for a successful cleanup action at the Site.

4.2.1. Permits

It is not expected that remediation-specific permits, other than those required for Site development and groundwater discharge, will be required. The Site cleanup action will be performed as an independent remedial action under the VCP administered by Ecology's Toxics Cleanup Program.

4.2.2. Soil Excavation and Stockpiling

An overview of the sequencing and events associated with remedial activities conducted before and during construction is presented below.

- Demolish existing pavements and clear vegetation from areas planned for excavation. Construct temporary erosion and sediment control measures, as necessary.
- Prepare a temporary soil stockpile and soil screening area that will contain contaminated soil and protect the general public from contact, if such stockpiling and/or soil screening is envisioned by the D-B.

- Prepare an equipment staging area, decontamination station for workers, residuals storage area, and Site ingress and egress locations.
- Delineate health and safety-regulated areas (exclusion zone, contamination reduction zone and support zone).
- Excavate soil with documented COCs with a backhoe or track-mounted excavator. The contaminated soil will be removed from: foundation excavations; select utility trenches (see Section 3.2.3); areas where proposed subgrade elevation is below existing Site grades; and landscaped areas, as required. Such areas will be based on preliminary design information that will be developed by the selected D-B, on the results of the pre-construction supplemental Phase II ESA that will be completed by GeoEngineers, and results of the previous ESAs performed at the Site relative to the proposed CCC plans. The excavation for the building footings will comprise a portion of the source removal for that area. Other source removal areas will include utility trenches and proposed landscape areas.
- Soil containing concentrations of COC greater than cleanup levels in landscaped areas will be excavated until soil concentrations of COC are less than applicable cleanup levels, a maximum depth of 15 feet below grade (the minimum point of compliance for direct contact listed in MTCA), or until groundwater is encountered. Excavated soil will be removed from the Site and disposed at an appropriate landfill facility.
- Contaminated soil will be excavated around landscaped areas and select underground utilities (utilities not installed in conduit) a minimum of 5 feet horizontally beneath adjacent capped areas. Soil will be excavated in these areas to a depth equal to the depth of the planned feature (landscaping or underground utility) or until concentrations of COC in soil at the bottom of the excavation are less than applicable cleanup levels.
- Notify the SPFD immediately and suspend excavation activities if underground storage tanks, buried drums or other containers, unusual soil or other debris, or other unanticipated environmentally sensitive materials are encountered during Site work. This is to protect Site workers and to minimize potential for increased environmental risk.
- Cover areas where contaminated soil is left in place and workers might be exposed to environmental contaminants during construction with approximately 1 foot of non-contaminated, imported structural fill. This fill layer will be used to minimize exposure to environmental contaminants.
- Place the contaminated soil from the excavations directly into trucks for off-site disposal at a regulated landfill. Alternatively, temporarily place excavated soil in a lined, temporary stockpile and cover and secure following each work day.
- Collect confirmatory soil samples from stockpiles (if generated) for disposal requirements. This will be accomplished by the SPFD's environmental consultant.

4.2.2.1. TEMPORARY STOCKPILE LINER

The temporary stockpile liner will be constructed of sturdy plastic sheeting, to be approved by the SPFD Construction Manager. The liner will be constructed such that stormwater infiltrating through the stockpile will be contained on the liner, and such that run-on water is minimized. The stockpile will be covered with sturdy plastic sheeting at the end of each work day and secured to minimize

potential exposure to the general public and inclement weather. The location of the temporary liner will be mutually agreed upon by the owner and the contractor.

4.2.2.2. REFUSE REDUCTION (OPTIONAL)

As an option, the stockpiled soil may be screened, thereby removing the inert coarse-grained fraction exceeding 4-inch, for volume reduction purposes. Care will be exercised during this process to: (1) minimize the generation of fugitive dust; (2) remove fine-grained (contaminated) particles from the retained materials; and (3) minimize retaining potentially contaminated materials such as coal/ash pieces larger than ¾-inch. Screened, coarse-grained aggregate could be used for construction purposes at the Site, as needed, if it meets the design specifications and is not comprised of hazardous materials. Building materials such as bricks may be recycled as long as they are free of contaminated soil/hazardous materials. Railroad ties, wood, concrete, and other miscellaneous debris might be transported to and disposed at a landfill as construction debris at a reduced rate, with approval from the landfill. A cost savings might be realized if this option is utilized.

4.2.2.3. AIR QUALITY MONITORING

Excavation and screening activities are likely to create fugitive dust with COC levels exceeding Site-specific cleanup levels. Health and safety air quality monitoring will occur within the active work areas, and periodically at the downwind Site perimeter to ensure that workers and the public are not exposed to COCs. Engineering controls or specific work practices will be employed to reduce fugitive dust and/or nuisance odors if detected. Examples of engineering controls and work practices that shall be employed include (1) covering excavations and the stockpiles of soil with plastic sheeting at the end of each field day; (2) limiting the rate of excavation and movement of soil on a daily basis; (3) temporarily stopping work, if necessary; and (4) using water to minimize fugitive dust generation. Work practices will be modified as needed to reduce potential exposure to COCs. Air monitoring will be conducted by the SPFD's environmental consultant.

4.2.2.4. SOIL DISPOSAL

All soil with COC concentrations removed from the Site must be disposed of properly in accordance with applicable local, state, and federal laws. A waste manifest must accompany each load for disposal. The load must be covered during transport to its final destination.

4.2.3. Cap Implementation

Undisturbed soil with COC concentrations exceeding the site-specific cleanup levels remaining on Site will be contained and managed by capping beneath asphalt or portland cement concrete pavement and/or building structures in accordance with plans and specifications developed by the D-B. The Owner will file a restrictive covenant on the property and develop a post-construction soil management plan which will describe the requirements for disturbing contaminated soil that remains capped on site.

4.2.4. Groundwater Management

Construction of CCC building components will include either: (1) drilling shafts for support; or (2) excavating existing on-Site fill and natural soil deposits that overlie rock for construction of conventional spread foundations that will be supported on rock. These and other Site construction activities, such as excavation to move existing and install proposed underground utilities, have the

potential to bring contaminated groundwater to the ground surface. Such groundwater will require special management to minimize human and ecological exposure to potential contaminants. Groundwater will be stored and allowed to settle in large on-site storage tanks (such as Baker tanks) following generation. Samples of the settled groundwater will be collected by the environmental consultant for those parameters specified by the City of Spokane's Wastewater Treatment Plant. Results of analysis will be provided to wastewater treatment plant personnel and a discharge permit will be obtained if the water is acceptable for disposal. After the permit is obtained, the water will be discharged to the City of Spokane municipal sewer as directed by the City. Alternative uses of the water (if it is not contaminated), such as for dust suppression during Site grading, might be possible with approval from the SPFD. If the water is contaminated, treatment by granular activated carbon or filtration might be necessary before discharge. Saturated sediment that accumulates in the large storage tanks will be removed by appropriately trained personnel, sampled and tested to characterize the material for disposal, and transported off-site for disposal at an approved landfill.

4.3. Demonstration Of Compliance With Cleanup Requirements

4.3.1. Compliance Monitoring

Compliance with soil cleanup levels in landscaping and utility trench areas will be demonstrated by sampling and testing soil samples from the excavation limits. Soil samples will be collected from the bottom of the excavated area on a regular, non-biased 50-foot by 50-foot grid pattern or every 50 linear feet along utility corridors in areas where all impacted soil is suspected to have been removed. Because a majority of the contaminated material is expected to remain on-site and capped, sidewall samples will not be collected.

Soil samples will be submitted to an accredited laboratory approved by the SPFD and environmental consultant. The samples will be submitted on a standard turnaround time of 10 business days unless expedited results are required; a minimum turnaround time of 48 hours should be assumed for expedited results. The engineering justifications for these elements are based on past experience during construction and remediation of the existing Exhibit Hall.

4.4. Institutional Controls

4.4.1. Restrictive Covenant for Soil and Groundwater Use

COCs exceeding MTCA Method A and Method B cleanup levels will remain on Site and will be capped beneath paved parking lots and building structures; therefore, the SPFD will implement institutional controls at the Site, in the form of a restrictive covenant in the deed. The covenant will inform potential future property users or purchasers of the presence of contaminated material beneath the Site and prohibit domestic use of groundwater beneath the Site. The restrictive covenant will be recorded with the Spokane County Assessor's office.

4.4.2. Post-Construction Cap Maintenance and Soil Management Plan

The SPFD will develop a plan that specifies procedures to: (1) inspect and maintain the cover (cap) over the contaminated soil, (2) notify and protect utility and other workers that might encounter contaminated soil beneath the cap, (3) repair the cover/cap if breached, (4) requirements for managing soil removed from beneath the cap.

5.0 RATIONALE FOR SELECTION OF THE CLEANUP ACTION

The selected cleanup actions for soil at the Site are in general accordance with WAC 173-340-360, as summarized below.

5.1. Protection Of Human Health And Environment

The proposed remedial action for contaminated soil at the Site is protective of human health and the environment because the COCs in soil exceeding the cleanup levels will either be removed from the Site and disposed to an appropriate landfill or contained beneath a protective cap. The proposed remedial action will address the soil to groundwater exposure pathway by preventing or minimizing infiltration of surface water through the soil matrix. The direct contact exposure pathway also will be addressed by capping and/or removing soil with COC concentrations exceeding the referenced cleanup levels.

5.2. Attainment Of Standards

Cleanup standards will be attained by either removing contaminated soil to the cleanup levels listed in Section 3.2 or by capping contaminated soil beneath structures and/or pavements thereby removing the exposure pathways.

5.3. Long-Term Effectiveness

The remedial action will include capping with structures and/or pavements, some source removal, and institutional controls. Therefore, this option is expected to be an effective, long-term solution to minimize risks related to groundwater and direct exposure to COCs in soil.

5.4. Compliance Monitoring

Compliance monitoring during the corrective action will consist of the following: (1) a Site Safety Plan will be prepared by the D-B contractor to address protection monitoring of Site workers during construction of the proposed CCC; (2) soil samples will be obtained during the cleanup to document the effectiveness of the source removal (excavation) activities and; (3) construction quality assurance will be performed during cap construction to document the integrity of the asphalt or portland cement concrete cap.

6.0 SCHEDULE

Site redevelopment will commence in mid-2013. It is anticipated that the remediation activities will occur early during the Site development activities, and will last approximately 4 to 8 weeks. Final paving of the asphalt and/or portland cement concrete cap likely will occur later during the project, depending on the Site development schedule.

7.0 PUBLIC NOTICE AND PUBLIC COMMENT

Public notice and comment are not required because the SPFD is completing remedial activities as an independent remedial action under the VCP.

8.0 RESIDUALS MANAGEMENT

Residuals that are expected to be generated during remedial activities include:

- Decontamination wash and rinse water for personnel.
- Decontamination rinse water for heavy equipment.
- Used personal protective equipment (PPE), such as Tyvek™, gloves and respirator cartridges.
- Non-contaminated solid waste such as plastic bags, rope and plastic sheeting.

Residuals will be stored in a designated area. The residuals management area will be secured within the Site and labeled to prevent access by unauthorized personnel.

Wastewater will be drummed and temporarily stored on Site. Wastewater sampling will be conducted by the SPFD environmental consultant to determine proper disposal

Used PPE and non-contaminated solid waste residuals will be placed in the on-site trash dumpster, which will be serviced by a licensed solid waste disposal company for disposal.

9.0 HEALTH AND SAFETY CONSIDERATIONS

9.1. Site Safety Plan

A copy of the Site Safety Plan will be kept on Site and made available to authorized visitors to the Site for general information. The D-B contractor must maintain their own Site Safety Plan. Site personnel conducting activities in contaminated areas must have 40 hours of training for hazardous waste operations (OSHA HAZWOPER training).

9.2. Protection Monitoring During Remedial Activities

Excavation activities and movement of the soil to and from stockpiles, and including potential screening activities, should be monitored closely by the SPFD environmental consultant. The Site Safety Plan should contain a description of action levels for air monitoring.

9.3. Construction Procedures Pertinent To Health And Safety

The following measures will be employed to ensure that remedial activities conform to Site health and safety requirements:

- Site workers will be trained and medically monitored for hazardous waste operations consistent with the Washington State Industrial Safety and Health Act (WISHA), WAC 296-62-300 and others.
- Copies of the Site Safety Plan will be maintained on Site at all times during remedial activities.
- Site personnel will conduct a detailed pre-construction safety meeting. At that time, aspects of the Site Safety Plan will be reviewed.

- Brief safety meetings will take place before the start of work each day and as needed when field conditions change. The Site personnel will discuss safety issues related to the work to be performed.
- Daily field logs will be prepared that document Site safety meetings, events, and document the results of health and safety air monitoring.

Table 1
Summary of Historic Chemical Analytical Results - Subsurface Soil
Proposed Convention Center Completion Project
Spokane, Washington

Sample Name	Date Sampled	Sample Depth (feet)	GRPH ¹ (mg/kg)	DRPH ² (mg/kg)	ORPH ³ (mg/kg)	PCBs ⁴ (mg/kg)	PAH ⁵ (mg/kg)	Metals ^{6,7} (mg/kg)					Consultant
							BaP	As	Cd	Hg	Pb	Zn	
TP-1	12/10/92	0-4	-	NA	NA	ND	-	-	-	-	-	-	AGI
TP-2	12/10/92	0-4	-	150	130	-	0.5	-	-	-	-	-	
TP-3	12/10/92	0-4	-	1,700	1,900	-	0.72	-	-	-	-	-	
TP-4	12/10/92	0-4	-	180	210	-	0.63	-	-	-	-	-	
SH001-1	04/26/93	5	ND	ND	1,160	-	3.56	17.8	0.2	0.12	46.1	85.9	Lambert
SH001-2	04/26/93	9	ND	ND	ND	-	ND	15.5	ND	0.05	13.1	133	
SH002-1	04/26/93	5	ND	ND	ND	-	ND	18.4	ND	0.03	9.2	45.4	
SH003-1	04/26/93	2	ND	ND	ND	-	ND	20.6	ND	ND	12.2	60.4	
SH005-1	04/26/93	0-1	ND	ND	2,860	-	ND	19.1	ND	0.1	41.4	82	
SH006-1	04/26/93	6	ND	95	423	-	1.82	17.4	0.3	0.08	51.7	137	
SH007-1	04/27/93	5	ND	ND	ND	-	ND	17.7	ND	ND	13.7	43.8	
SH007-2	04/27/93	2	ND	ND	3,090	-	1.81	17.2	ND	0.09	37.7	68.1	
SH008-1	04/27/93	3	ND	ND	140	-	3.27	18.0	ND	0.12	62.8	84.6	
SH008-2	04/27/93	6	ND	ND	ND	-	-	23.8	ND	2.15	1,083	55.6	
SH009-1	04/27/93	2	ND	ND	16,000	-	ND	15.4	ND	0.06	13.6	70.6	
SH009-2	04/27/93	5	ND	ND	1,890	-	ND	17.5	ND	0.05	16.2	46.2	
SH10-1	04/27/93	5	ND	ND	ND	-	-	-	-	-	-	-	
SH11-1	04/28/93	2	ND	ND	ND	-	-	-	-	-	-	-	
SH11-2	04/28/93	5	ND	ND	ND	-	-	-	-	-	-	-	
SH12-1	04/28/93	5	ND	ND	ND	-	-	-	-	-	-	-	
SH12-2	04/28/93	8	ND	ND	ND	-	-	-	-	-	-	-	
SH13-1	04/28/93	2	ND	ND	ND	-	-	-	-	-	-	-	
SH13-2	04/28/93	2.5	ND	ND	ND	-	-	-	-	-	-	-	
SH14-1	04/28/93	2	ND	ND	ND	-	-	-	-	-	-	-	
SH15-1	04/28/93	2	ND	ND	ND	-	-	-	-	-	-	-	
SH16-1	04/28/93	2.5	ND	ND	ND	-	-	-	-	-	-	-	
SH16-2	04/28/93	4	ND	ND	ND	-	-	-	-	-	-	-	
SH17-1	04/28/93	2	ND	ND	ND	-	-	-	-	-	-	-	
SH17-2	04/28/93	3.4	ND	ND	ND	-	-	-	-	-	-	-	
SH18-1	04/29/93	3	ND	446	1,940	-	-	-	-	-	-	-	
SH18-2	04/29/93	5	ND	ND	ND	-	-	-	-	-	-	-	
SH19-1	04/29/93	2	ND	ND	ND	-	-	-	-	-	-	-	
SH19-2	04/29/93	5	ND	ND	ND	-	-	-	-	-	-	-	
SH19-3	04/29/93	8	ND	ND	ND	-	-	-	-	-	-	-	
SH20-1	04/29/93	2	ND	ND	ND	-	-	-	-	-	-	-	
SH20-2	04/29/93	5	ND	ND	ND	-	-	-	-	-	-	-	
BH-A2	04/13/95	3	ND	> 50.0	> 200	-	-	-	-	-	-	-	AGRA
BH-B1	04/13/95	2	ND	ND	ND	-	-	-	-	-	-	-	

Sample Name	Date Sampled	Sample Depth (feet)	GRPH ¹ (mg/kg)	DRPH ² (mg/kg)	ORPH ³ (mg/kg)	PCBs ⁴ (mg/kg)	PAH ⁵ (mg/kg)	Metals ^{6,7} (mg/kg)					Consultant	
							BaP	As	Cd	Hg	Pb	Zn		
BH-B2	04/13/95	8.5	ND	ND	ND	-	-	-	-	-	-	-	-	
BH-E1 ⁸	04/13/95	3	-	-	-	ND	-	-	-	-	-	-	-	
BH-F1	04/13/95	2.5	ND	ND	180	-	-	-	-	-	-	-	-	
BH-G1 ⁸	04/13/95	5	ND	ND	ND	-	-	-	-	-	-	-	-	
BH-H1 ⁸	04/14/95	3	ND	ND	260	-	-	-	-	-	-	-	-	
HA-1	07/19/95	3	-	-	-	ND	-	-	-	-	-	-	-	AGRA
HA-2	07/19/95	2	-	-	-	ND	-	-	-	-	-	-	-	
203	06/26/02	3.5	ND	ND	ND	-	-	-	-	-	-	-	-	GeoEngineers
205	06/26/02	2	0.608	45.0	272	-	-	-	-	-	-	-	-	
208	06/28/02	3	1.84	91.9	72.8	-	0.36	15.8	0.7	0.171	60.8	68.3	-	
208	06/28/02	4	0.557	19.5	ND	-	0.9	7.1	1.5	0.085	50.8	-	-	
209	06/28/02	4	ND	ND	ND	-	-	-	-	-	-	-	-	
213	06/27/02	3	1.18	198	764	-	-	-	-	-	-	-	-	
213	06/27/02	5.5	ND	18.0	32.9	-	-	-	-	-	-	-	-	
214A	06/27/02	1	ND	19.0	124	ND	-	-	-	-	-	-	-	
215A	06/27/02	1	ND	12.1	90.6	-	-	-	-	-	-	-	-	
215A	06/27/02	3.5	ND	16.5	153	-	-	9.6	0.9	0.167	44.7	64.0	-	
MTCA ⁸ Method A cleanup levels			100/30 ⁹	2,000	2,000	1	0.1	20	2	2	250	NE		

Notes:

¹GRPH = Gasoline-range petroleum hydrocarbons by Modified Method 8015-G or equivalent.

²DRPH = Diesel-range petroleum hydrocarbons by Modified Method 8015-D or equivalent.

³ORPH = Oil-range petroleum hydrocarbons by Modified Method 8015-D extended or equivalent.

⁴PCBs = Polychlorinated Biphenyls by EPA Method 8082A.

⁵PAH = Polycyclic Aromatic Hydrocarbons by EPA Method 8270D; only results for benzo(a)pyrene (BaP) are shown although other PAHs may have been detected.

⁶Metals by EPA 6000/7000 Series Methods or equivalent. Other metals tested in some samples. As = Arsenic; Cd = Cadmium; Hg = Mercury; Pb = Lead; Zn = Zinc.

⁷These samples were also analyzed for volatile organic compounds (VOC). VOCs were either not detected or were detected below cleanup levels. Refer to GeoEngineers' 2002 Phase I Limited Phase II ESA for full laboratory reports.

⁸Washington State, Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use.

⁹100 mg/kg if benzene is not detected; 30 mg/kg if benzene is detected. Benzene has not been detected at the site.

mg/kg = milligrams per kilogram; "-" = not analyzed; ND = not detected above method detection limit. Refer to 2002 Phase I Limited Phase II ESA for laboratory detection limits.

Bold indicates sample concentration exceeds MTCA Method A cleanup level; NE = Not Established.

Table 2
Summary of Historic Chemical Analytical Results - Groundwater
Proposed Convention Center Completion Project
Spokane, Washington

Monitoring Well Number	Date Sampled	Depth to Water (feet)	GRPH ¹ (µg/l)	DRPH ² (mg/l)	ORPH ³ (mg/l)	PCBs ⁴ (µg/l)	PAH ⁵ (µg/l)	Metals ^{6,7} (mg/L)				Consultant
							BaP	As	Cd	Hg	Pb	
MW-SH01	05/03/93	10.41	<1.0	<1.0	<1.0	-	ND	-	-	-	-	Lambert
	12/19/94	10.50	<10	<25	<100	-	ND	-	-	-	-	Lambert
	04/14/95	10.74	<10	<25	<100	-	ND	0.014	<0.005	<0.0002	0.017	AGRA
	07/19/95	NA	-	-	-	-	0.63	-	-	-	-	AGRA
	10/03/95	10.60	<10	<25	<100	-	ND	-	-	-	-	Lambert
	05/20/04	10.87	-	<0.250	<0.500	-	ND	0.0013	<0.00200	<0.000200	<0.001	
MW-SH02	05/03/93	7.04	<1.0	<1.0	<1.0	-	2.9	-	-	-	-	Lambert
	12/19/94	7.26	<10	<25	<100	-	ND	-	-	-	-	Lambert
	04/14/95	7.43	<10	<25	<100	-	ND	0.017	<0.005	<0.0002	0.012	AGRA
	07/19/95	NA	-	-	-	-	0.14	-	-	-	-	AGRA
	10/03/95	7.54	<10	<25	<100	-	ND	-	-	-	-	Lambert
	07/03/02	7.52	<10.0	<0.200	<0.500	ND	ND	<0.01	<0.002	<0.0002	<0.012	GeoEngineers
	05/20/04	7.69	-	<0.250	<0.500	-	ND	<0.0010	<0.00200	<0.000200	<0.001	
MW-SH19	08/13/04		-	<0.250	<0.500	-	ND	<0.0680	<0.00200	<0.000200	<0.0300	
	05/03/93	9.40	<1.0	<1.0	<1.0	-	ND	-	-	-	-	Lambert
	12/19/94	9.14	<10	<25	<100	-	ND	-	-	-	-	Lambert
	04/14/95	9.35	<10	<25	<100	-	ND	0.014	<0.005	<0.0002	0.018	AGRA
	07/19/95	NA	-	-	-	-	0.05	-	-	-	-	AGRA
	10/03/95	9.40	<10	<25	<100	-	ND	-	-	-	-	Lambert
	07/03/02	9.44	<10.0	<0.200	<0.500	ND	ND	<0.01	<0.002	<0.0002	<0.005	GeoEngineers
	05/20/04	9.56	-	<0.250	<0.500	-	ND	0.0016	<0.00200	<0.000200	<0.001	
MW-SH20	08/13/04		-	<0.250	<0.500	-	ND	<0.0680	<0.00200	<0.000200	<0.0300	
	05/03/93	9.33	<1.0	<1.0	<1.0	-	ND	-	-	-	-	Lambert
	12/19/94	9.60	<10	<25	<100	-	ND	-	-	-	-	Lambert
	04/14/95	9.52	<10	<25	<100	-	ND	-	-	-	-	AGRA
	10/03/95	9.82	<10	<25	<100	-	ND	-	-	-	-	Lambert
	07/03/02	9.85	<10.0	<0.200	<0.500	ND	ND	0.01	<0.002	<0.0002	<0.005	GeoEngineers
	05/20/04	10.03	-	<0.250	<0.500	-	ND	0.0010	<0.00200	<0.000200	<0.001	
08/13/04		-	<0.250	<0.500	-	ND	<0.0680	<0.00200	<0.000200	<0.0300		

Monitoring Well Number	Date Sampled	Depth to Water (feet)	GRPH ¹ (µg/l)	DRPH ² (mg/l)	ORPH ³ (mg/l)	PCBs ⁴ (µg/l)	PAH ⁵ (µg/l)	Metals ^{6,7} (mg/L)				Consultant
							BaP	As	Cd	Hg	Pb	
MW-213	07/03/02	6.63	<10.0	<0.200	<0.500	ND	0.20	<0.01	<0.002	<0.0002	<0.005	GeoEngineers
	05/20/04	6.71	-	<0.250	<0.500	-	ND	<0.0010	<0.00200	<0.000200	<0.001	
	08/13/04		-	<0.250	<0.500	-	ND	<0.0680	<0.00200	<0.000200	<0.0300	
BH-G ⁷	04/13/95	Borehole	-	-	-	-	-					AGRA
BH-B	04/13/95	Borehole	<0.05	<0.10	<0.20	-	-					AGRA
MTCA ⁸ Method A cleanup levels			1000/800 ⁹	0.50	0.50	0.10	BaP =	0.005	0.005	0.002	0.015	

Notes:

¹GRPH = Gasoline-range petroleum hydrocarbons by Modified Method 8015-G or equivalent.

²DRPH = Diesel-range petroleum hydrocarbons by Modified Method 8015-D or equivalent.

³ORPH = Oil-range petroleum hydrocarbons by Modified Method 8015-D extended or equivalent.

⁴PCBs = Polychlorinated Biphenyls by EPA Method 8082A.

⁵PAH = Polycyclic Aromatic Hydrocarbons by EPA Method 8270D; only results for benzo(a)pyrene (BaP) are shown although other PAHs may have been detected.

⁶Metals by EPA 6000/7000 Series Methods or equivalent. Other metals tested in some samples. As = Arsenic; Cd = Cadmium; Hg = Mercury; Pb = Lead.

⁷This sample was analyzed for volatile organic compounds (VOC). VOCs were either not detected or were detected below cleanup levels. Refer to 2002 Phase I Limited Phase II ESA for full laboratory reports.

⁸Washington State, Model Toxics Control Act (MTCA).

⁹1,000 ug/L if benzene is not detected; 800 ug/L if benzene is detected. Benzene has not been detected at the site.

mg/L = milligrams per liter, ug/L = micrograms per liter, "-" = not analyzed; ND = not detected above method detection limit. Refer to 2002 Phase I Limited Phase II ESA for laboratory detection limits.

Bold indicates sample concentration exceeds MTCA Method A cleanup level.

Table 3
Summary of Petroleum and Metals Analytical Results, 2004 Site Assessment - Soil¹
Proposed Convention Center Completion Project
Spokane, Washington

Sample Name	Date Sampled	Sample Depth (ft)	Field Screen ppm/sheen ²	Arsenic ³ (mg/kg)	Cadmium ³ (mg/kg)	Lead ³ (mg/kg)	Mercury ³ (mg/kg)	DRPH ⁴ (mg/kg)	ORPH ⁴ (mg/kg)	TCLP - Lead ⁵ (mg/L)
TP-B7/S-1 @3'	03/17/04	3	0.6/NS	7.0	<0.20	233	0.107	47.4	75.9	---
TP-B7/S-2 @6'	03/17/04	6	0.9/NS	8.1	<0.20	23	0.0520	<30.3	<60.5	---
TP-B8/S-1 @3'	03/17/04	3	0.6/NS	22.9	2.32	383	0.173	259	1418	---
TP-B8/S-2 @6.5'	03/17/04	6.5	0.6/NS	---	---	---	---	---	---	---
TP-C7/S-1 @3'	03/17/04	3	1.1/NS	34.9	0.98	389	0.297	76.5	200	0.0786
TP-C7/S-2 @7'	03/17/04	7	0.5/NS	---	---	---	---	---	---	---
TP-C7/S-3 @9'	03/17/04	9	0.5/NS	---	---	---	---	---	---	---
TP-C1/S-1 @3'	03/17/04	3	0.7/NS	9.3	<0.20	51.3	0.177	111	111	---
TP-C1/S-2 @6.5'	03/17/04	6.5	0.5/NS	5.5	<0.20	5.67	<0.0330	<30.1	<60.3	---
TP-C3/S-1 @3'	03/17/04	3	0.7/NS	11.1	<0.20	12.2	<0.0333	<26.4	<52.8	---
TP-C3/S-2 @8'	03/17/04	8	0.7/NS	---	---	---	---	---	---	---
TP-E7/S-1 @3'	03/17/04	3	0.6/NS	10.9	<0.20	7.17	<0.0333	<26.2	<52.4	---
TP-F7/S-1 @3'	03/17/04	3	0.6/NS	34.5	6.00	2810	1.21	51.9	941	---
TP-G6/S-1 @3'	03/17/04	3	0.5/NS	11.2	1.37	1570	0.307	77.3	110	0.183
TP-D8/S-1 @2'	03/17/04	2	0.8/NS	8.5	<0.20	589	0.168	<27.0	57.9	---
TP-D5/S-1 @3'	03/17/04	3	0.7/NS	7.0	<0.20	44.8	0.0850	43.6	195	---
TP-D5/S-2 @6'	03/17/04	6	0.6/NS	---	---	---	---	---	---	---
TP-D5/S-3 @9'	03/17/04	9	0.8/NS	11.6	<0.20	41.1	<0.0330	<30.1	<60.3	---
TP-F6/S-1 @3'	03/17/04	3	0.7/NS	6.3	<0.20	73.6	0.148	39.5	259	---
TP-B7/S-3 @4-4.5'	03/17/04	4-4.5	0.6/NS	---	---	---	---	---	---	---
TP-F5/S-1 @3'	03/18/04	3	0.5/NS	9.0	<0.20	85.2	0.198	28.3	80.6	---
TP-F4/S-1 @3'	03/18/04	3	0.3/NS	11.2	0.34	289	0.0780	45.2	109	---
TP-F4/S-2 @6'	03/18/04	6	0.4/NS	---	---	---	---	---	---	---
TP-F1/S-1 @3'	03/18/04	3	0.6/NS	14.4	<0.20	127	0.130	24.4	142	---
TP-F1/S-2 @5'	03/18/04	5	0.3/NS	13.4	0.50	344	0.445	26.0	164	---
TP-F2/S-1 @3'	03/18/04	3	0.5/NS	10.1	0.40	236	0.142	37.2	176	---
TP-G3/S-1 @2'	03/18/04	2	0.4/NS	18.8	3.28	1390	0.552	131	491	---
TP-G4/S-1 @2.5'	03/18/04	2.5	0.3/NS	31.9	9.86	2860	0.552	34.7	111	1.50
TP-C6/S-1 @3'	03/18/04	3	0.6/NS	7.2	0.28	213	0.153	68.5	101	---
TP-C6/S-2 @6'	03/18/04	6	0.8/NS	---	---	---	---	---	---	---
TP-C6/S-3 @9'	03/18/04	9	0.6/NS	---	---	---	---	---	---	---

Sample Name	Date Sampled	Sample Depth (ft)	Field Screen ppm/sheen ²	Arsenic ³ (mg/kg)	Cadmium ³ (mg/kg)	Lead ³ (mg/kg)	Mercury ³ (mg/kg)	DRPH ⁴ (mg/kg)	ORPH ⁴ (mg/kg)	TCLP - Lead ⁵ (mg/L)
TP-C5/S-1 @3.5'	03/18/04	3.5	0.3/NS	10.1	<0.20	23.2	<0.0330	34.2	183	---
TP-E4/S-1 @2.5'	03/18/04	2.5	0.3/NS	25.9	<0.20	171	0.0870	125	408	---
TP-D6/S-1 @3'	03/18/04	3	0.4/NS	9.1	<0.20	113	0.327	<31.3	<62.6	---
TP-D6/S-2 @6'	03/18/04	6	0.6/NS	---	---	---	---	---	---	---
MTCA Method A Cleanup Levels				20	2	250	2	2000	2000	---
Dangerous Waste Toxicity Characteristic Criteria ⁶										5

Notes:

¹Soil analyzed by SVL Analytical, Kellogg, Idaho.

²Field-Screening Observations. PID readings are shown in parts per million (ppm); water sheen observations are either No Sheen (NS); Slight Sheen (SS); Moderate Sheen (MS); or Heavy Sheen (HS).

³Metals analyzed by Environmental Protection Agency (EPA) 6000/7000 series Methods.

⁴DRPH = diesel-range petroleum hydrocarbons; ORPH = oil-range petroleum hydrocarbons. DRPH and ORPH analyzed by Northwest Method NWTPH-Dx.

⁵TCLP = Sample was extracted using the Toxicity Characteristic Leaching Procedure by EPA Method 1311. Leachate analyzed for lead by EPA Method 6010B.

⁶Concentrations of leachable lead greater than 5 mg/L would characterize the soil as a Washington State Dangerous Waste and a US Federal Hazardous Waste. mg/kg = milligrams per kilogram; mg/L = milligrams per liter; PID = photoionization detector; "----" = not analyzed.

BOLD indicates sample concentration exceeds MTCA Method A cleanup level.

Table 4
Summary of PAH Results, 2004 Site Assessment - Soil¹

Proposed Convention Center Completion Project
Spokane, Washington

			PAH (mg/kg)									cPAH (mg/kg)							
			Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(g,h,i)perylene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(e)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenz(a,h)anthracene	Toxic Equivalency ³
Toxic Equivalency Factors² :			-	-	-	-	-	-	-	-	0.1	0.001	0.1	0.1	1	0.1	0.1		
Sample Name	Date Sampled	Sample Depth (feet)																	
TP-B7/S-1	03/17/04	3	<3.70	<3.70	<3.70	<3.70	11.3	<3.70	20.7	26.1	4.66	11.0	10.8	<3.70	18.5	11.9	4.01	<3.70	15.3
TP-B7/S-2	03/17/04	6	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
TP-B8/S-1	03/17/04	3	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	<3.98	
TP-C7/S-1	03/17/04	3	<0.948	<0.948	<0.948	<0.948	1.27	<0.948	<0.948	<0.948	<0.948	<0.948	<0.948	<0.948	1.17	<0.948	<0.948	<0.948	0.1
TP-C1/S-1	03/17/04	3	<0.186	<0.186	<0.186	<0.186	0.603	<0.186	0.644	0.552	<0.186	0.253	0.248	<0.186	0.422	0.207	<0.186	<0.186	0.3
TP-C1/S-2	03/17/04	6.5	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	<1.13	
TP-C3/S-1	03/17/04	3	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	
TP-E7/S-1	03/17/04	3	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	<0.174	
TP-F7/S-1	03/17/04	3	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	<0.901	
TP-G6/S-1	03/17/04	3	<0.932	<0.932	<0.932	<0.932	2.92	<0.932	5.02	8.01	1.21	2.45	2.41	<0.932	3.60	2.12	0.978	<0.932	2.8
TP-D8/S-1	03/17/04	2	<0.180	<0.180	<0.180	<0.180	0.225	<0.180	0.657	1.150	0.261	0.400	0.377	<0.180	0.663	0.393	0.218	<0.180	0.5
TP-D5/S-1	03/17/04	3	<0.938	<0.938	<0.938	<0.938	1.19	<0.938	1.62	3.06	<0.938	<0.938	<0.938	<0.938	1.43	<0.938	<0.938	<0.938	
TP-D5/S-3	03/17/04	9	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	<0.877	
TP-F6/S-1	03/17/04	3	<0.999	<0.999	<0.999	<0.999	4.08	<0.999	5.84	10.40	2.66	2.66	2.57	<0.999	4.53	2.70	1.98	<0.999	3.6
TP-F5/S-1	03/18/04	3	<0.886	<0.886	<0.886	<0.886	<0.886	<0.886	1.05	1.15	<0.886	<0.886	<0.886	<0.886	<0.886	<0.886	<0.886	<0.886	
TP-F4/S-1	03/18/04	3	<0.892	<0.892	<0.892	<0.892	1.03	<0.892	1.32	1.42	<0.892	<0.892	<0.892	<0.892	<0.892	<0.892	<0.892	<0.892	
TP-F1/S-1	03/18/04	3	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	
TP-F1/S-2	03/18/04	5	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	<0.902	
TP-F2/S-1	03/18/04	3	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	<0.920	
TP-G3/S-1	03/18/04	2	8.40	<0.903	33.10	22.40	215.00	52.10	174.00	208.00	33.10	64.20	66.00	<0.903	104.00	65.90	28.10	<0.903	85.6
TP-G4/S-1	03/18/04	2.5	<0.913	<0.913	<0.913	<0.913	<0.913	<0.913	1.03	1.350	<0.913	<0.913	<0.913	<0.913	<0.913	<0.913	<0.913	<0.913	
TP-C6/S-1	03/18/04	3	<0.968	<0.968	<0.968	<0.968	<0.968	<0.968	0.970	1.10	<0.968	<0.968	<0.968	<0.968	1.410	<0.968	<0.968	<0.968	0.1
TP-C5/S-1	03/18/04	3.5	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	<1.78	
TP-E4/S-1	03/18/04	2.5	2.20	<1.82	<1.82	<1.82	<1.82	<1.82	2.11	3.29	2.55	<1.82	<1.82	<1.82	2.95	<1.82	<1.82	<1.82	0.3
TP-D6/S-1	03/18/04	3	<1.04	<1.04	<1.04	<1.04	6.74	1.15	9.05	4.22	2.35	4.52	4.96	<1.04	9.47	5.36	1.78	<1.04	6.9
MTCA Method A Cleanup Level ⁴			5	NE	NE	NE	NE	NE	NE	NE	NE	NE ⁵	NE ⁵	NE ⁵	NE ⁵	0.1	NE ⁵	NE ⁵	0.1

Notes:

¹Soil analyzed by SVL Analytical, Kellogg, Idaho.

²Toxic equivalency factors taken from WAC 173-340-900, Table 708-2

³Toxic equivalency calculated using methodology outlined in WAC 173-340-708(6)

⁴Cleanup level for unrestricted land use.

⁵Cleanup levels have not been established for these individual cPAH; rather, total cPAH concentrations evaluated using the toxic equivalency method (see note 2)

BOLD indicates sample concentration exceeds MTCA Method A cleanup level.

"-" indicates toxic equivalency factors have not been established for these PAHs.

PAH = Polycyclic Aromatic Hydrocarbon

cPAH = carcinogenic PAH

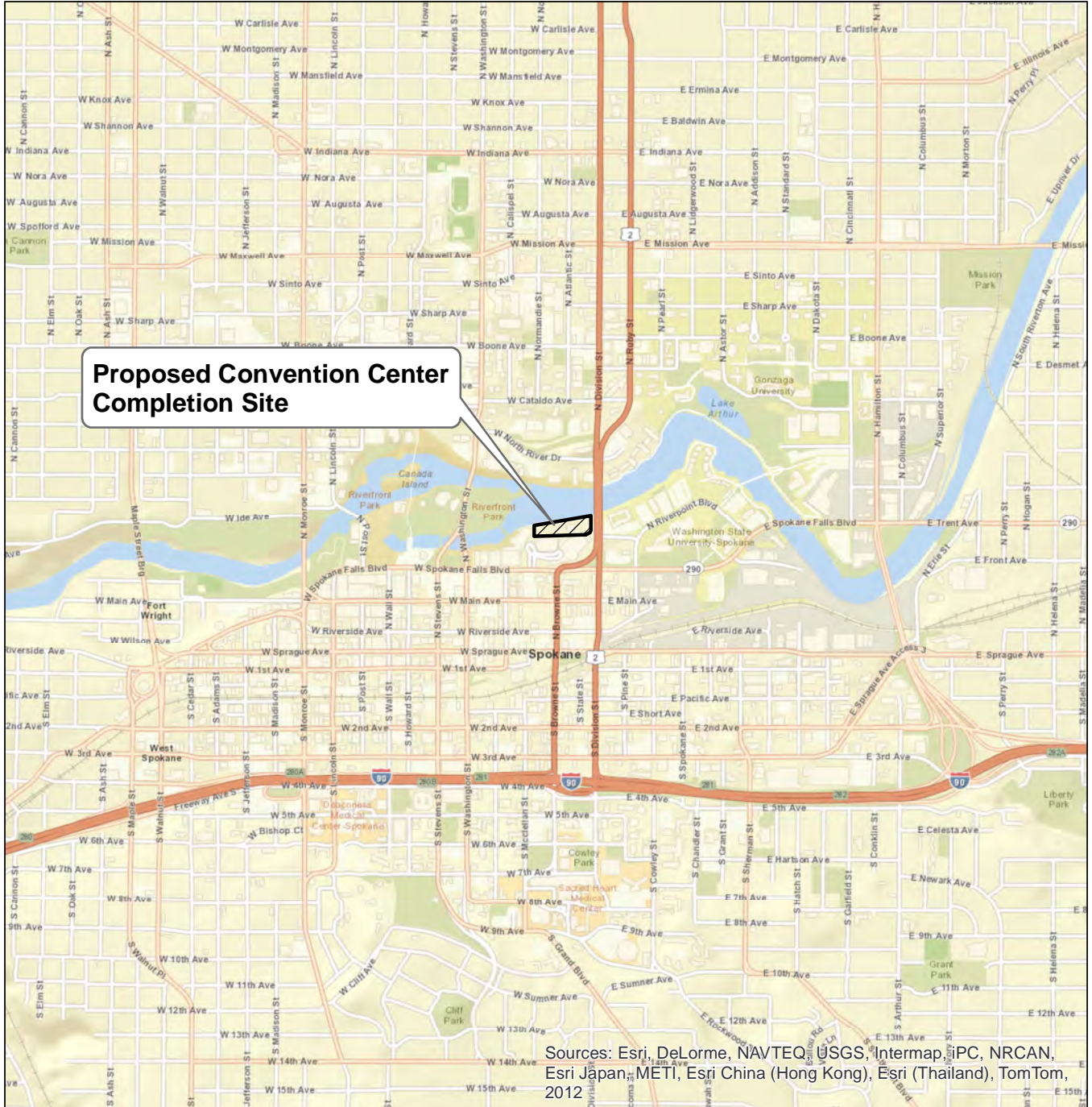
mg/kg = milligrams per kilogram

NE = not established

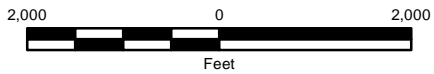
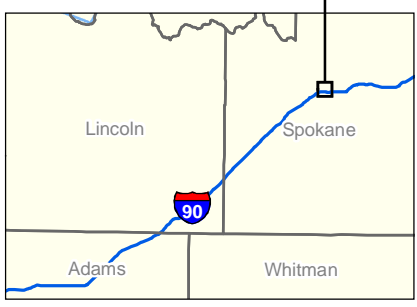
Note that the detection limit for some analyses exceeds soil cleanup levels. The laboratory indicated this is the result of matrix interferences.

Map Revised: 12/05/2012 CRC

Path: W:\Spokane\Projects\1212088001\06\GIS\1208800106_VML_F1.mxd
Office: SPO



Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012



Vicinity Map

Proposed Convention Center Completion Project Spokane, Washington

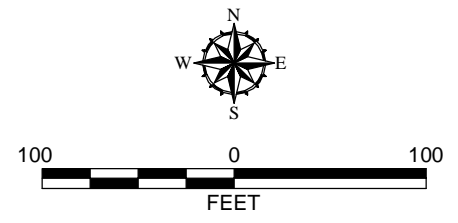
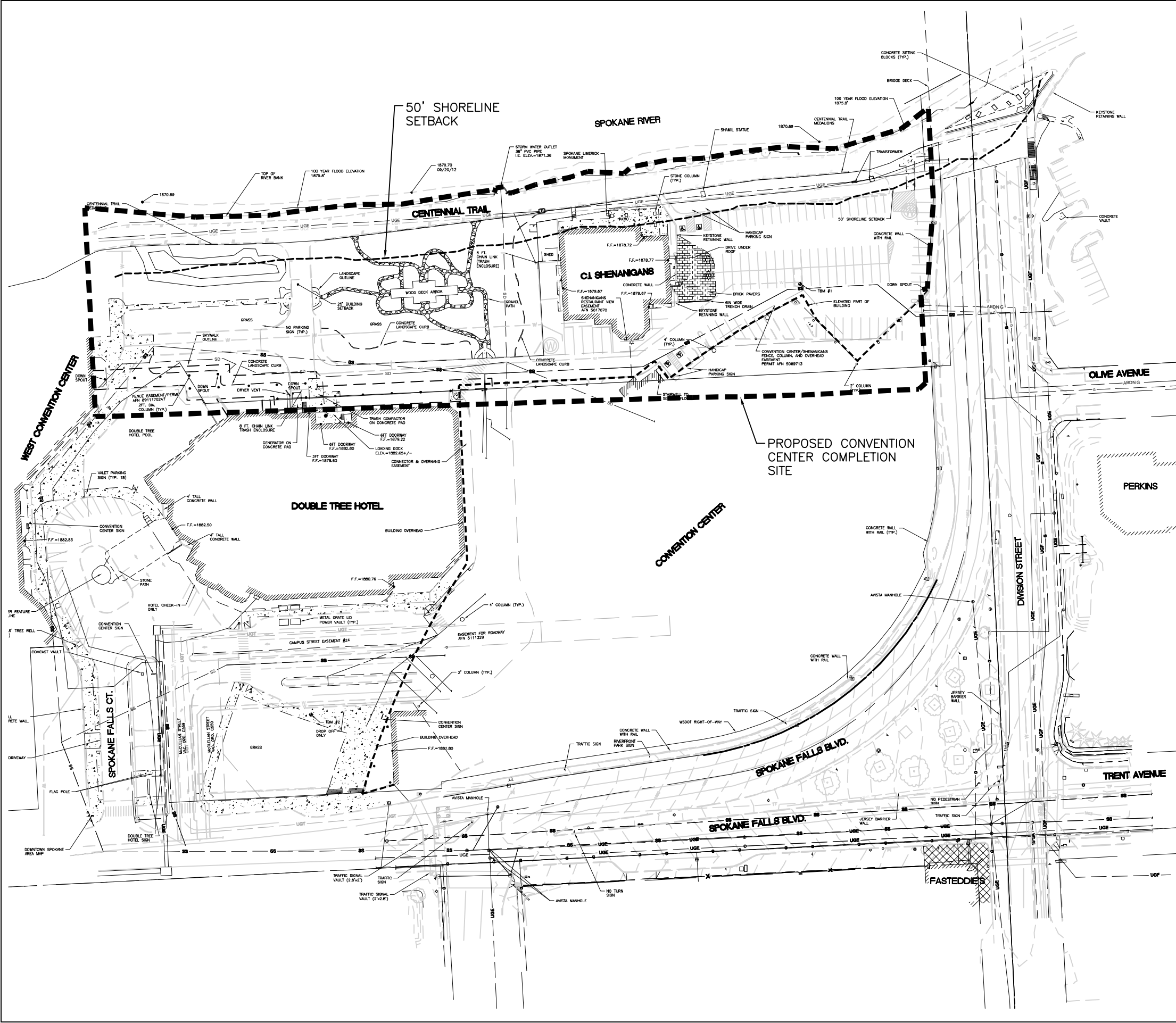


Figure 1

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. Data Sources: ESRI Data & Maps, Street Maps 2008. Projection: NAD 1983, UTM Zone 11 North.

\\SPO\PROJECTS\12\2088001\06\CAD\04_SHEET FILES\208800106-F2.DWG\TAB.FIGURE 2 MODIFIED BY MFORMOLO ON JAN 08, 2013 - 13:22



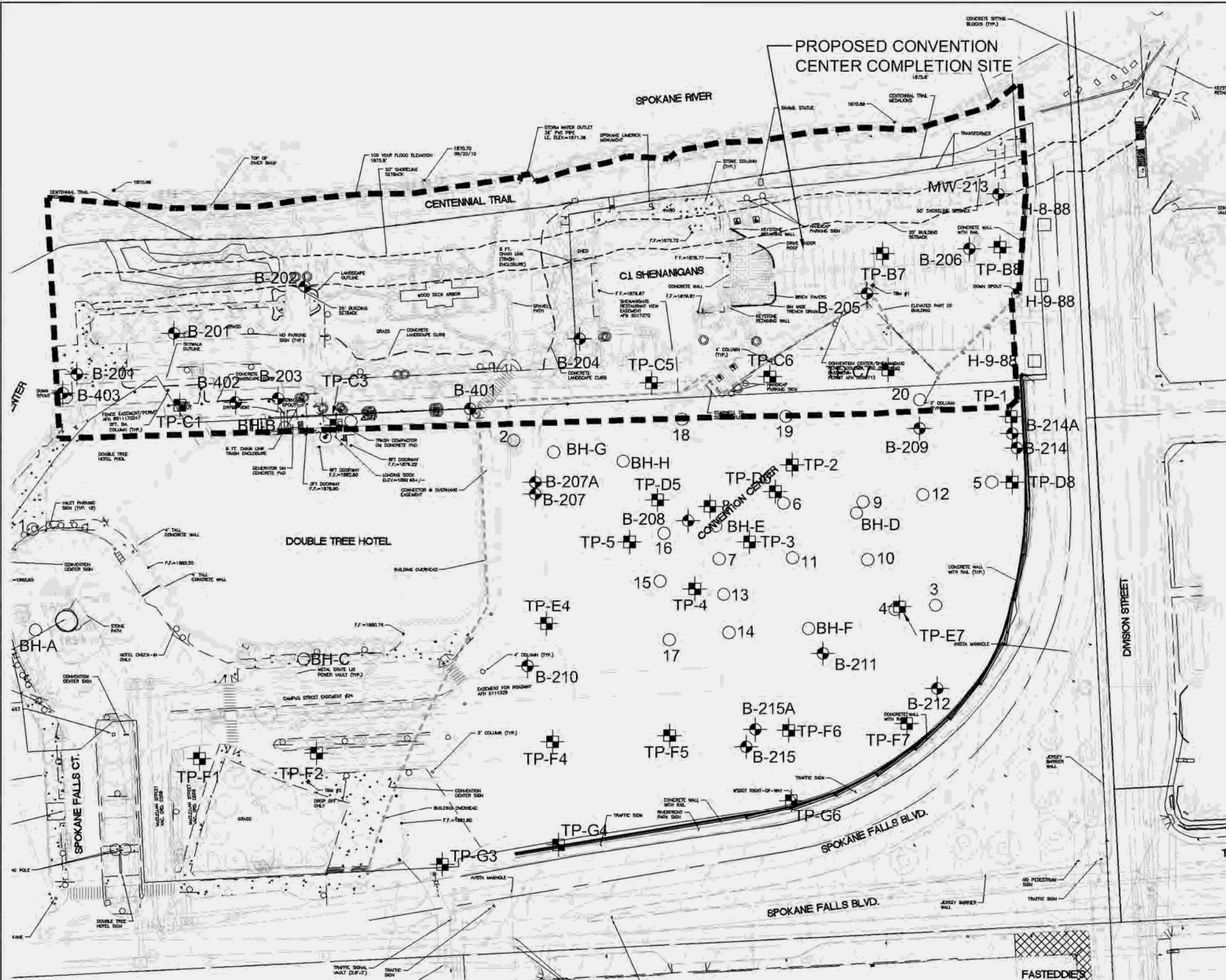
Notes








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Reference: Base topographic survey by Coffman Engineers dated 11/1/12.

Site Plan	
Proposed Convention Center Completion Project Spokane, Washington	
GEOENGINEERS	Figure 2

OFFICE: SPO Dwg name: \\SPO\projects\12\12086001\06\CAD\04_Sheet Files\1208600106-F3.dwg User: mformelo Plot time: Jan-08-13 @ 1:21pm

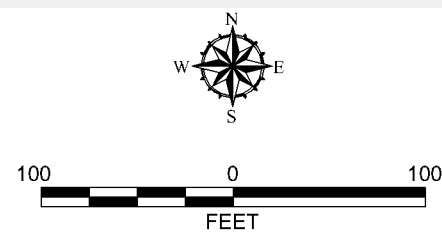



-  B-401
 GEOTECHNICAL SOIL BORING NUMBER AND APPROXIMATE LOCATION (GEOENGINEERS, 2005)
-  TP-B7
 ENVIRONMENTAL TEST PIT NUMBER AND APPROXIMATE LOCATION (GEOENGINEERS, 2004)
-  B-201
 ENVIRONMENTAL SOIL BORING NUMBER AND APPROXIMATE LOCATION (GEOENGINEERS, 2002)
-  MW 213
 ENVIRONMENTAL MONITORING WELL NUMBER AND APPROXIMATE LOCATION (GEOENGINEERS, 2002)
-  BH-A
 PREVIOUS BORE HOLE NUMBER AND APPROXIMATE LOCATION (AGRA, 1995)
-  3
 PREVIOUS SOIL BORING NUMBER AND APPROXIMATE LOCATION (LAMBERT, 1993)
-  TP-1
 PREVIOUS TEST PIT NUMBER AND APPROXIMATE LOCATION (AGI, 1992)

Notes

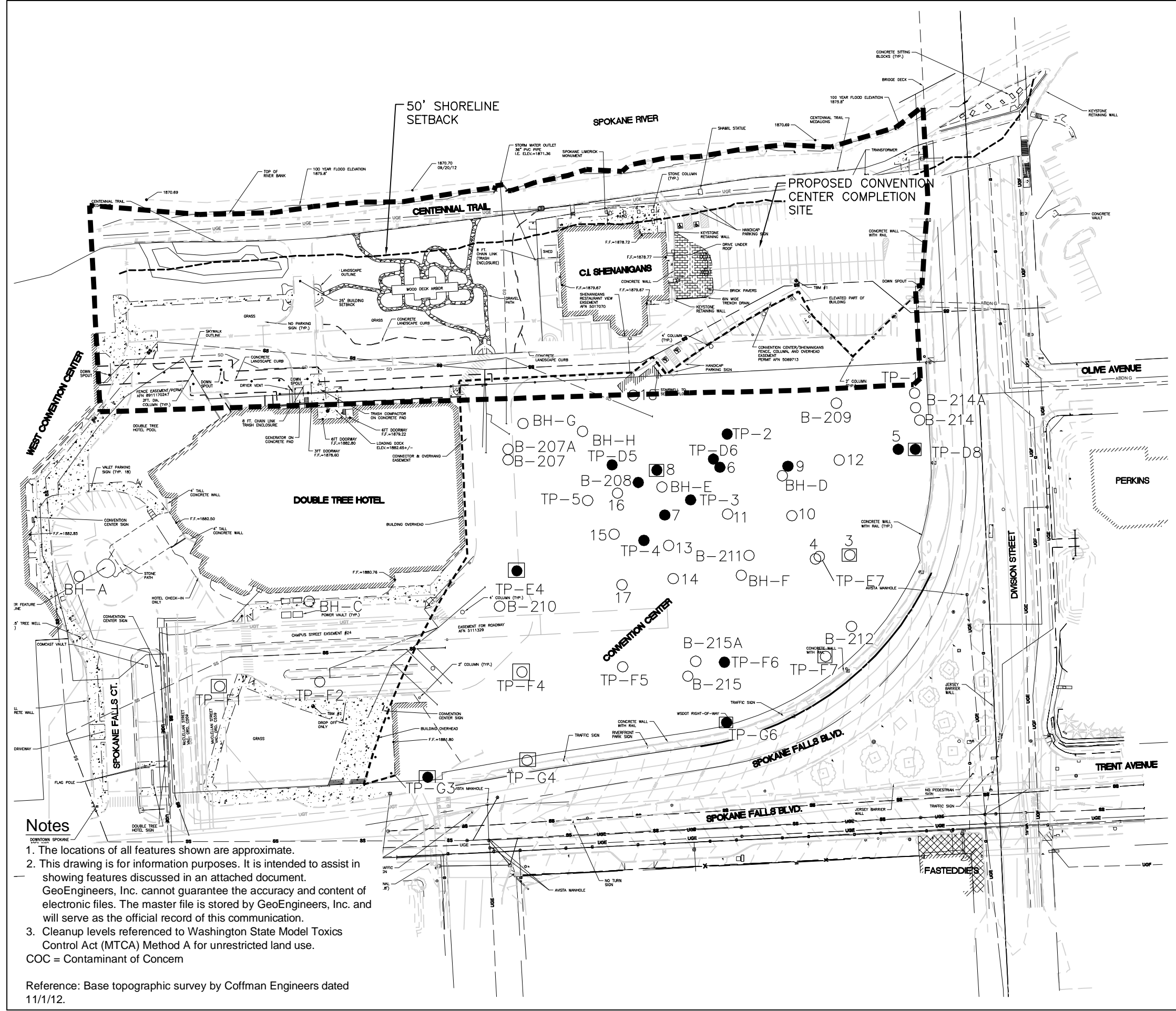
- The locations of all features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers,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

Reference: Base drawing provided by LMN Architects titled "Spokane Convention Center Expansion" dated 2/2/04.



Historical Subsurface Exploration Map	
Proposed Convention Center Completion Project Spokane, Washington	
GEOENGINEERS 	Figure 3

\\SPO\PROJECTS\12\2088001\06\CAD\04_SHEET FILES\208800106-F4.DWG\TAB.FIGURE 4 MODIFIED BY MFORMOLO ON JAN 08, 2013 - 13:20



EXPLANATION:

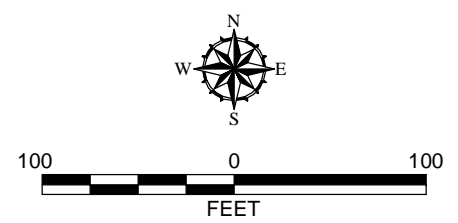
- B-201 ENVIRONMENTAL SOIL BORING NUMBER AND APPROXIMATE LOCATION (GEOENGINEERS, 2002)
- BH-A PREVIOUS BORE HOLE NUMBER AND APPROXIMATE LOCATION (AGRA, 1995)
- 3 PREVIOUS SOIL BORING NUMBER AND APPROXIMATE LOCATION (LAMBERT, 1993)
- TP-1 PREVIOUS TEXT PIT AND APPROXIMATE LOCATION (AGI, 1992)

- LOCATIONS OF SOIL BORING OR TEST PIT WITH CONCENTRATIONS OF ORPH/PAHS BELOW CLEANUP LEVELS
- LOCATION OF SOIL BORING OR TEST PIT WITH CONCENTRATIONS OF ORPH/PAHS ABOVE CLEANUP LEVELS
- ◻ LOCATION OF SOIL BORING OR TEST PIT WITH CONCENTRATIONS OF METALS ABOVE CLEANUP LEVELS
- ◼ LOCATION OF SOIL BORING OR TEST PIT WITH CONCENTRATIONS OF METALS AND ORPH/PAHS ABOVE CLEANUP LEVELS

Notes

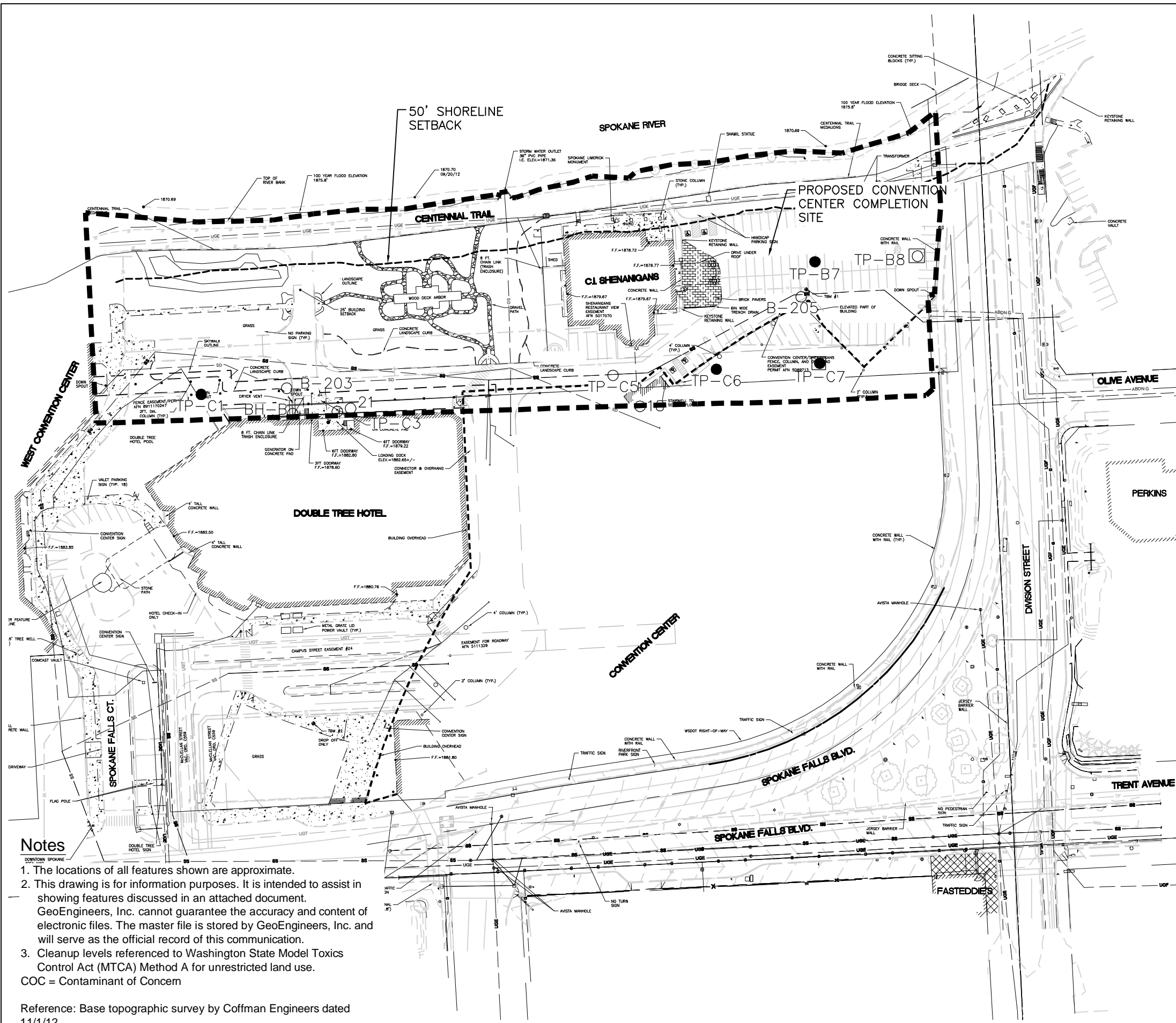
- The locations of all features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- Cleanup levels referenced to Washington State Model Toxics Control Act (MTCA) Method A for unrestricted land use.
COC = Contaminant of Concern

Reference: Base topographic survey by Coffman Engineers dated 11/1/12.



Summary of Exhibit Hall Property Explorations and COC Concentrations Relative to Cleanup Levels	
Proposed Convention Center Completion Project Spokane, Washington	
GEOENGINEERS	Figure 4

\\SPO\PROJECTS\12\2088001\06\CAD\04_SHEET FILES\208800106-F5.DWG\TAB.FIGURE 5 MODIFIED BY MFORMOLO ON JAN 08, 2013 - 13:16



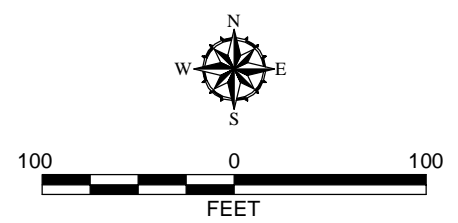
EXPLANATION:

- B-201 ENVIRONMENTAL SOIL BORING NUMBER AND APPROXIMATE LOCATION (GEOENGINEERS, 2002)
- TP-B7 ENVIRONMENTAL TEST PIT NUMBER AND APPROXIMATE LOCATION (GEOENGINEERS, 2004)
- BH-A PREVIOUS BORE HOLE NUMBER AND APPROXIMATE LOCATION (AGRA, 1995)
- 3 PREVIOUS SOIL BORING NUMBER AND APPROXIMATE LOCATION (LAMBERT, 1993)
- LOCATIONS OF SOIL BORING OR TEST PIT WITH CONCENTRATIONS OF ORPH/PAHS BELOW CLEANUP LEVELS
- LOCATION OF SOIL BORING OR TEST PIT WITH CONCENTRATIONS OF ORPH/PAHS ABOVE CLEANUP LEVELS
- LOCATION OF SOIL BORING OR TEST PIT WITH CONCENTRATIONS OF METALS ABOVE CLEANUP LEVELS
- LOCATION OF SOIL BORING OR TEST PIT WITH CONCENTRATIONS OF METALS AND ORPH/PAHS ABOVE CLEANUP LEVELS

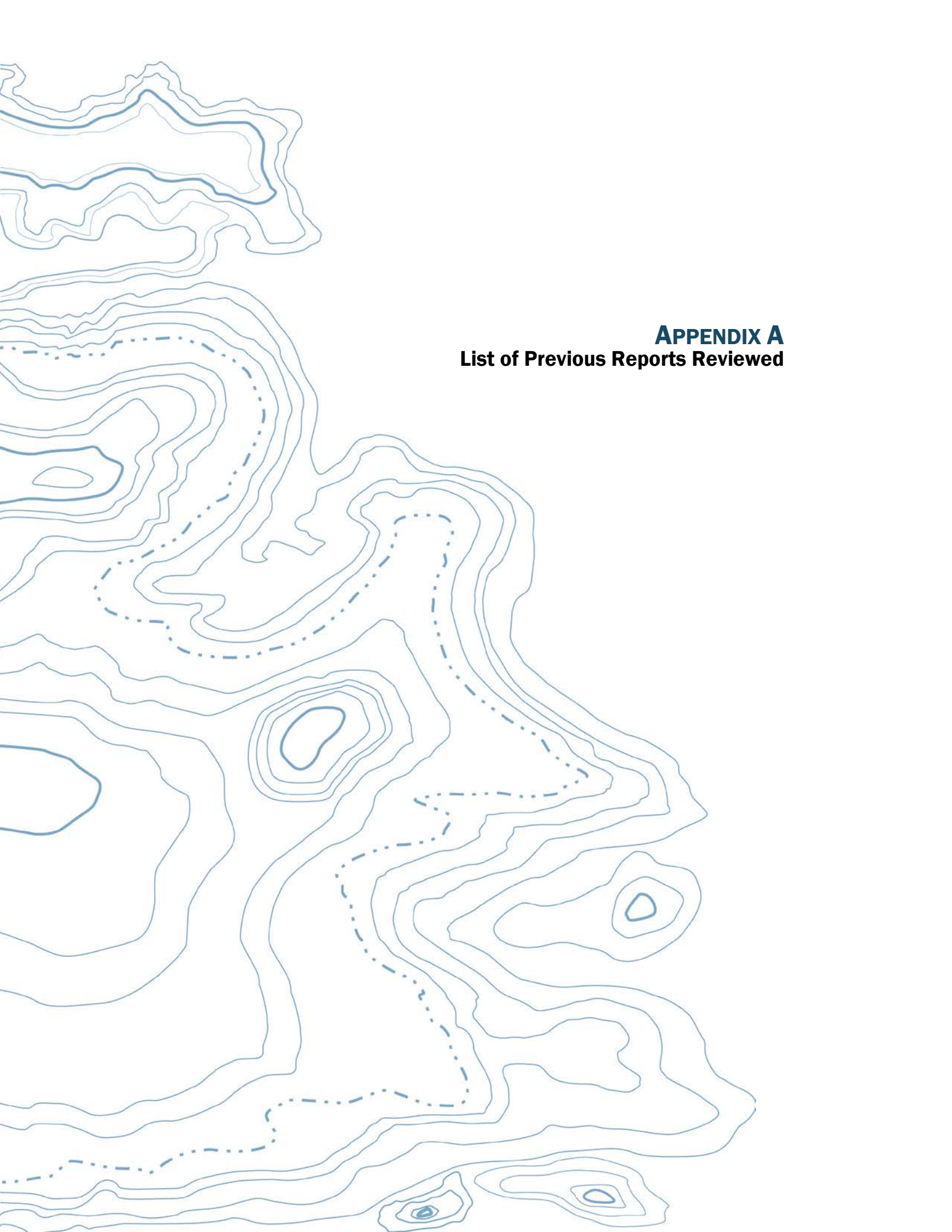
Notes

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Cleanup levels referenced to Washington State Model Toxics Control Act (MTCA) Method A for unrestricted land use.
COC = Contaminant of Concern

Reference: Base topographic survey by Coffman Engineers dated 11/1/12.



Summary of Site Explorations and COC Concentrations Relative to Cleanup Levels	
Proposed Convention Center Completion Project Spokane, Washington	
GEOENGINEERS	Figure 5



APPENDIX A
List of Previous Reports Reviewed

APPENDIX A

LIST OF PREVIOUS REPORTS REVIEWED

Multiple reports have been created for the subject Site. Below is a list of reports reviewed and a brief summary.

3. "Phase I Environmental Assessment, North 322 Spokane Falls Court, Spokane, Washington" Applied Geotechnology Inc. (AGI), August 2, 1991. This report presented findings of a Phase I ESA for the Site. Conclusions of the report indicate a low to moderate potential for contamination. Recommendations for Phase II testing were presented.
4. "Phase I Environmental Assessment Update and Limited Phase II Environmental Assessment, Sheraton-Spokane Hotel Property, North 322 Spokane Falls Court, Spokane, Washington" AGI, February 5, 1993. The report was an update to AGI's 1991 Phase I ESA report of the Sheraton Hotel (DoubleTree Hotel) Site. The update report included data from Phase II sampling of four test pits at the Site. Results indicated that soil at the Site was impacted with diesel- and oil-range petroleum hydrocarbons and carcinogenic PAHs (cPAHs) at concentrations that exceeded current MTCA cleanup levels.
5. "Phase II Environmental Site Assessment, for North 322 Spokane Falls Court, Spokane Washington," The Lambert Group, May 1993. This study was completed to further address concerns identified in the February 1993 AGI report. As part of the Lambert study, 21 soil borings were drilled and four groundwater monitoring wells were installed and sampled at the DoubleTree Site. Samples from six of the soil borings contained concentrations of cPAHs, petroleum hydrocarbons, and/or metals in soil at concentrations exceeding current MTCA cleanup levels. Soil samples from four of seven soil borings that were analyzed for cPAHs had concentrations of cPAHs exceeding the current MTCA cleanup level. Groundwater sample from a Site monitoring well contained cPAH concentrations exceeding current MTCA cleanup levels. Approximately 9,000 tons of contaminated soil was estimated to be present at the Site, based on 1993 soil cleanup levels.
6. "First Quarter Report, Groundwater Monitoring Results for Sheraton Spokane Hotel Property, 322 North Spokane Falls Blvd, Spokane, WA," The Lambert Group, January 1995. This report documented a January 1995 groundwater sampling and analysis event at the Site. Results did not indicate exceedances of current MTCA cleanup levels.
7. "Environmental Site Assessment, 322 N. Spokane Falls Court," AGRA Earth & Environmental, Inc., April 1995 (including follow up letter dated April 26, 1995). This report presented the results of the second Phase I and Phase II ESA of the DoubleTree Site. As part of this study, additional soil borings were drilled and sampled including a boring located at the former UST Site near the north-central wall of the Sheraton hotel. Phase II ESA results supported earlier evidence that contaminated soil is present on portions of the Site. Contaminated soil associated with the former UST Site near the Sheraton Hotel was not identified.
8. "Third Phase of Testing and Volumetric Estimate for Petroleum-Impacted Soils" letter, AGRA Earth and Environmental, August 14, 1995. This report presented results of a third groundwater sampling event performed at the Site in July 1995. In addition, two soil samples

were collected and analyzed. Results indicated the presence of cPAHs at concentrations exceeding current MTCA cleanup levels in one Site monitoring well.

9. "Sheraton Hotel Spokane, Washington, Fourth Quarterly Groundwater Sample Results," Lambert Group, Inc., November 1, 1995. This report documented results of a fourth groundwater sampling event performed at the Site. This was the most recent sampling data that we identified. Results of the sampling event did not indicate the presence of contaminants at concentrations that exceeded groundwater cleanup levels.



APPENDIX B
Test Pit Logs

SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOL	GROUP NAME
COARSE GRAINED SOILS More Than 50% Retained on No. 200 Sieve	GRAVEL More Than 50% of Coarse Fraction Retained on No. 4 Sieve	CLEAN GRAVEL	GW	WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL
			GP	POORLY-GRADED GRAVEL
		GRAVEL WITH FINES	GM	SILTY GRAVEL
			GC	CLAYEY GRAVEL
	SAND More Than 50% of Coarse Fraction Passes on No. 4 Sieve	CLEAN SAND	SW	WELL-GRADED SAND, FINE TO COARSE SAND
			SP	POORLY-GRADED SAND
		SAND WITH FINES	SM	SILTY SAND
			SC	CLAYEY SAND
FINE GRAINED SOILS More Than 50% Passes No. 200 Sieve	SILT AND CLAY Liquid Limit Less Than 50	INORGANIC	ML	SILT
			CL	CLAY
		ORGANIC	OL	ORGANIC SILT, ORGANIC CLAY
	SILT AND CLAY Liquid Limit 50 or More	INORGANIC	MH	SILT OF HIGH PLASTICITY, ELASTIC SILT
			CH	CLAY OF HIGH PLASTICITY, FAT CLAY
		ORGANIC	OH	ORGANIC CLAY, ORGANIC SILT
HIGHLY ORGANIC SOILS			PT	PEAT

NOTES:

1. Field classification is based on visual examination of soil in general accordance with ASTM D2488-90.
2. Soil Classification using laboratory tests is based on ASTM D2487-90.
3. Descriptions of soil density or consistency are based on interpretation of blow count data, visual appearance of soils, and/or test data.

SOIL MOISTURE MODIFIERS:

- Dry - Absence of moisture, dusty, dry to the touch
- Moist - Damp, but no visible water
- Wet - Visible free water or saturated, usually soil is obtained from below water table



SOIL CLASSIFICATION SYSTEM

FIGURE B-1

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Dark brown fine to coarse gravel with sand, trace silt and construction debris (medium dense, moist) (fill)			
							6 inch layer of black cinder	NS	0.6	
						GP	Tan fine to coarse gravel with sand and trace silt (medium dense, moist)			
							4 inch layer of white caliche	NS	0.9	
							Test pit completed at approximately 8 foot depth Rapid groundwater seepage observed at approximately 8 foot depth No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-B7



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-2
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Gray fine gravel with sand (medium dense, dry)			
						GP	Brown gravel with sand, trace silt and construction debris (medium dense, moist) (fill)			
						GP	Brown fine to coarse gravel with sand and trace silt (medium dense, moist)	NS	0.6	
						GP	Brown fine to coarse gravel with sand and trace silt (medium dense, moist)	NS	0.6	
							Test pit completed at approximately 8 1/2 foot depth Rapid groundwater seepage observed at approximately 8 foot depth No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-B8



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-3
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Black gravel with sand, trace silt and construction debris (medium dense, moist) (fill)			
						SP	Brown fine sand with trace silt (loose, moist)	NS	0.7	
								NS	0.5	
							Test pit terminated at approximately 9 foot depth due to refusal on basalt rock Rapid groundwater seepage observed below approximately 7 foot depth No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-C1



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-4
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Brown fine to coarse gravel with sand, trace silt and construction debris (medium dense, moist) (fill)			
						SP	Brown fine sand with trace silt (loose, moist)	NS	0.7	
								NS	0.7	
							Test pit completed at approximately 9 foot depth Rapid groundwater seepage observed below approximately 8 1/2 foot depth No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-C3



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-5
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extindahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC GP	2 inches asphalt concrete pavement Brown fine to coarse gravel with sand, trace silt and large chunks of concrete with rebar (medium dense, moist) (fill)			
								NS		
	5						Test pit terminated at approximately 3 1/2 foot depth due to backhoe refusal on concrete slab No groundwater seepage observed No caving observed			
	10									
	15									
	20									

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-C5



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-6
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP-GM	Dark brown fine to coarse gravel with sand, silt and construction debris (medium dense, moist) (fill)	NS		
5						GM	Tan fine to coarse gravel with sand and trace silt (medium dense, moist)	NS		
							Grades to loose	NS		
9.5							Test pit completed at approximately 9 1/2 foot depth Rapid groundwater seepage observed below approximately 9 foot depth Moderate caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-C6



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-7
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Gray fine gravel with sand (medium dense, dry)			
						GP	Brown fine to coarse gravel with sand and cobbles (medium dense, moist) (fill)			
						GP		NS	1.1	
						GP	Black fine to coarse gravel with sand and trace silt (medium dense, moist) (fill)			
						GP	Light brown fine to coarse gravel with sand and trace silt (medium dense, moist) (fill)			
						GP	Black fine to coarse gravel with sand, trace silt and ash (medium dense, moist) (fill)	NS	0.5	
						GM	Tan fine to coarse gravel with sand (medium dense, moist)	NS	0.5	
							Test pit completed at approximately 9 1/2 foot depth Rapid groundwater seepage observed at approximately 9 1/2 foot depth Minor caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-C7



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-8
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Gray fine gravel with sand (medium dense, dry)			
						GP	Dark brown fine to coarse gravel with sand, trace silt and construction debris (very dense, moist) (fill)			
								NS	0.7	
						GP	Light brown fine to coarse gravel with sand and trace silt (medium dense, moist)			
								NS	0.6	
							Grades to loose			
								NS	0.8	
							Test pit completed at approximately 9 foot depth No groundwater seepage observed No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-D5



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-9
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ_GENV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV(ppm)	NOTES
0						CC GP GP	2 inches asphalt concrete pavement Gray fine gravel with sand (medium dense, dry) Dark brown fine to coarse gravel with sand, trace silt and construction debris (very dense, moist) (fill)			
	5						Test pit terminated at approximately 3.7 foot depth due to backhoe refusal on concrete slab No groundwater seepage observed No caving observed			
	10									
	15									
	20									

Note: See Figure B-2 for explanation of symbols

0110-047-02_GEL_ENVTSTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

LOG OF TEST PIT TP-D5A



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-10
 Sheet 1 of 1

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Black fine to coarse gravel with sand, trace silt and coal dust (medium dense, moist) (fill)	NS		
						GP	Brown fine to coarse gravel with sand and trace silt (medium dense, moist)	NS		
							Test pit completed at approximately 7 foot depth No groundwater seepage observed Severe caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-D6



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-11
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV(ppm)	NOTES
0						AC GP GP	2 inches asphalt concrete pavement Gray fine gravel with sand (medium dense, dry) Brown fine to coarse gravel with sand and trace silt (medium dense, moist)	NS	0.8	
							Test pit terminated at approximately 2 foot depth due to backhoe refusal on basalt rock No groundwater seepage observed No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-D8



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-12
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ_GEIV2_2.GDT 4/7/04

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC GP	2 inches asphalt concrete pavement Brown fine to coarse gravel with sand and trace silt (medium dense, moist) (fill)			
							Test pit terminated at approximately 2 1/2 foot depth due to backhoe refusal on basalt rock No groundwater seepage observed No caving observed	NS		

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-E4



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-13
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extindahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Shoen	Headspace Vapor TLV(ppm)	NOTES
0						AC GP	4 inches asphalt concrete pavement Light brown fine to coarse gravel with sand and trace silt (medium dense, moist)	NS	0.6	
5							Test pit terminated at approximately 3 foot depth due to backhoe refusal on basalt rock No groundwater seepage observed No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-E7



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-14
 Sheet 1 of 1


0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV(ppm)	NOTES
0						AC GP	2 inches asphalt concrete pavement Brown fine to coarse gravel with sand, trace silt and construction debris (medium dense, moist) (fill)			
								NS		
								NS		
5							Test pit terminated at approximately 5 foot depth due to backhoe refusal on basalt rock No groundwater seepage observed No caving observed			
10										
15										
20										

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-F1



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-15
 Sheet 1 of 1

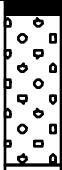
0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ_GENV2_2.GDT 4/7/04

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC GP	2 inches asphalt concrete pavement Dark brown fine to coarse gravel with sand, cobbles, trace silt and construction debris (medium dense, moist)			
							Test pit terminated at approximately 3 foot depth due to backhoe refusal on bedrock No groundwater seepage observed No caving observed	NS		

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-F2



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-16
 Sheet 1 of 1


0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Shoen	Headspace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Dark brownish black fine to coarse gravel with sand, trace silt and construction debris (medium dense, moist) (fill)			
						GP	Tan fine to coarse gravel with sand and trace silt (medium dense, moist)	NS		
								NS		
							Test pit terminated at approximately 7 1/2 foot depth due to backhoe refusal on bedrock No groundwater seepage observed No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-F4



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-17
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Shoen	Headspace Vapor TLV(ppm)	NOTES
0						AC GP	2 inches asphalt concrete pavement Dark brown fine to coarse gravel with sand, trace silt and construction debris (medium dense, moist) (fill)			
						BASALT	Dark gray fractured basalt (very dense, moist)	NS		
							Test pit terminated at approximately 5 foot depth due to backhoe refusal in basalt rock No groundwater seepage observed No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-F5



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-18
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ_GENV2_2.GDT 4/7/04

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Gray fine to coarse gravel with sand (medium dense, dry)			
							Test pit terminated at approximately 1/2 foot depth due to backhoe refusal on brick paving No groundwater seepage observed No caving observed			
5										
10										
15										
20										

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-F5A



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-19
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC GP	2 inches asphalt concrete pavement Dark brown fine to coarse gravel with sand, trace silt and construction debris (medium dense, moist) (fill)			
						BASALT	Dark gray fractured basalt (very dense, moist)	NS		
							Test pit terminated at approximately 5 foot depth due to backhoe refusal in basalt rock No groundwater seepage observed No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-F6



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-20
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ_GENV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extindahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Shoen	Headspace Vapor TLV(ppm)	NOTES
0						AC	2 inches asphalt concrete pavement			
						GP	Black fine to coarse gravel with sand and trace silt (medium dense, moist) (fill)			
						GP	Tan fine to coarse gravel with sand, trace silt and construction debris (medium dense, moist) (fill)	NS	0.6	
						BASALT	Dark gray fractured basalt (very dense, moist)			
							Test pit terminated at approximately 7 foot depth due to backhoe refusal in basalt rock No groundwater seepage observed No caving observed			

Note: See Figure B-2 for explanation of symbols

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

LOG OF TEST PIT TP-F7



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-21
 Sheet 1 of 1

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extendahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV(ppm)	NOTES
0						AC GP	2 inches asphalt concrete pavement Brown fine to coarse gravel with sand, trace silt and construction debris (medium dense, moist) (fill)	NS		
							Test pit terminated at approximately 2 foot depth due to backhoe refusal on basalt rock No groundwater seepage observed No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-G3



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-22
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/18/04

Logged by: MBE

Equipment: CAT 420 Extindahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV(ppm)	NOTES
0						AC GP	2 inches asphalt concrete pavement Brown fine to coarse gravel with sand, cobbles, and trace silt (medium dense, moist)			
							Test pit terminated at approximately 2 1/2 foot depth due to backhoe refusal on basalt rock No groundwater seepage observed No caving observed	NS		

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-G4



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-23
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extindahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV(ppm)	NOTES
0						AC GP	2 inches asphalt concrete pavement Black fine to coarse gravel with sand, cobbles and trace silt (medium dense, moist)			
						BASALT	Dark gray fractured basalt (very dense, moist)	NS	0.5	
							Test pit terminated at approximately 7 foot depth due to backhoe refusal in basalt rock No groundwater seepage observed No caving observed			

Note: See Figure B-2 for explanation of symbols

LOG OF TEST PIT TP-G6



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-24
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04

Date Excavated: 03/17/04

Logged by: MBE

Equipment: CAT 420 Extindahoe

Surface Elevation (ft): NM

Elevation feet	Depth feet	Sample	Testing	Water	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	HeadSpace Vapor TLV(ppm)	NOTES
0						AC GP	<p>2 inches asphalt concrete pavement</p> <p>Gray fine gravel with sand (medium dense, dry to moist)</p> <p>Test pit terminated at approximately 1/2 foot depth due to backhoe refusal on brick paving No groundwater seepage observed No caving observed</p>			
5										
10										
15										
20										

Note: See Figure B-2 for explanation of symbols

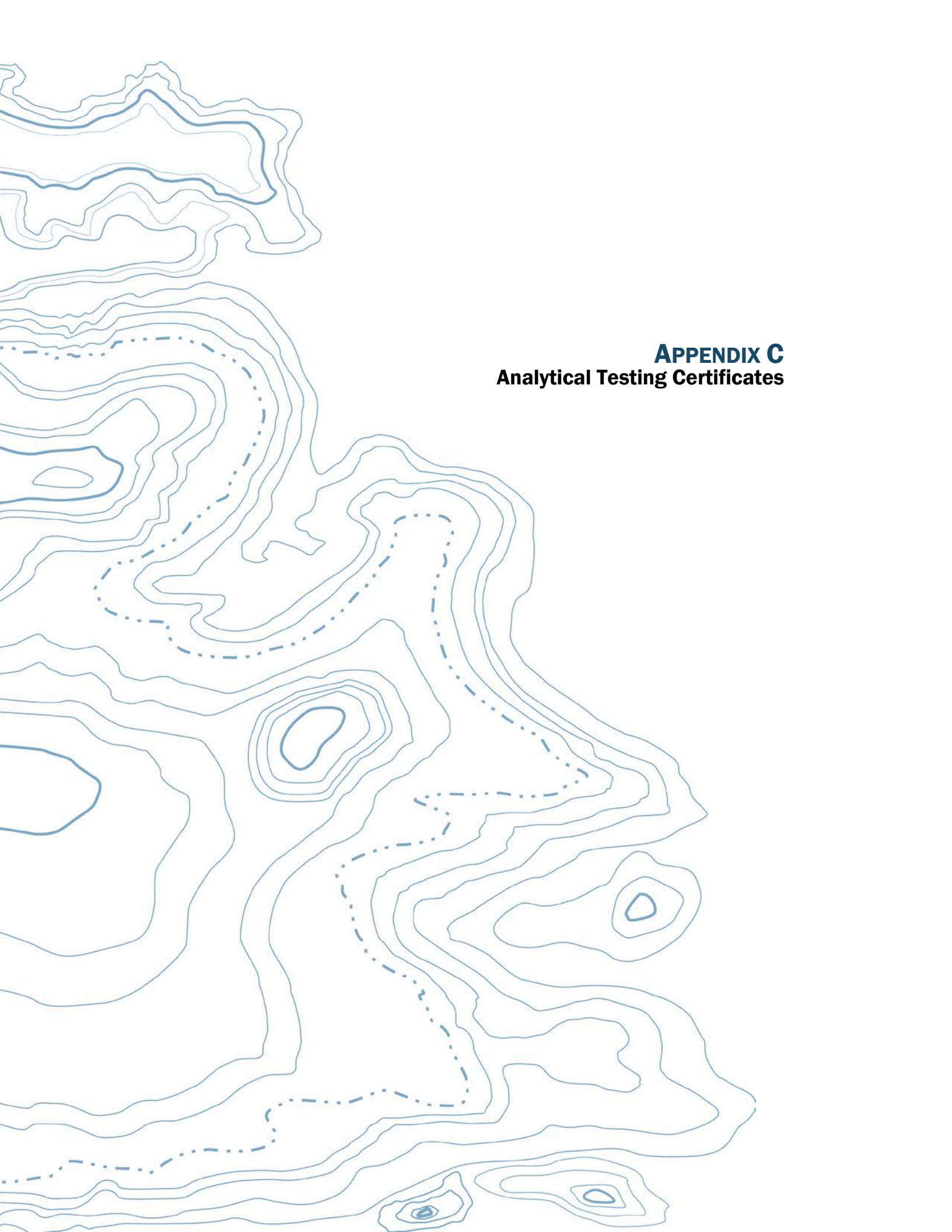
LOG OF TEST PIT TP-G6A



Project: Convention Center Expansion
 Project Location: Spokane, Washington
 Project Number: 0110-047-02

Figure: B-25
 Sheet 1 of 1

0110-047-02_GEL_ENVTESTPIT_2.1.0_P:\00\0110047\02\FINAL\S0110047.GPJ GEIV2_2.GDT 4/7/04



APPENDIX C
Analytical Testing Certificates

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110115

Matrix: Soil

Quality Control Results

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: Lab Control Sample

Lab #: S031904C

Analysis Date: 04/01/04

Units: mg/kg

% Solids: 100%

Analyte	Blank*	Conc. Added*	LCS*	%R	%R Limits	Data Qualifier
Diesel (C12-C22)	ND	100	109	109%	70 - 130	
Motor Oil (C24-C44)	ND	500	455	90.9%	70 - 130	

Sample Name: TP-F5/S-1@3' MS/MSD

Lab #: S377010 MS/MSD

Analysis Date: 04/02/04

Units: mg/kg

% Solids: 93.0%

Analyte	Sample*	Conc. Added*	MS*	MSD*	MS %R	MSD %R	RPD	%R Limits	RPD Limits	Data Qualifier
Diesel	28.3	108	144	177	108%	139%	25.1%	70 - 130	20	M1, R1
Motor Oil	80.6	538	521	637	81.9%	104%	23.3%	70 - 130	20	R1

COMMENTS:

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.

R1 = RPD exceeded the method control limit.

Reviewed by: Wendy Dymnikowski

Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results calculated on a dry weight basis

LCS - Lab Control Sample

MS/MSD - Matrix Spike/Matrix Spike Duplicate

RPD - Relative Percent Difference

CLIENT : Geo Engineers

Sample Receipt: 3/19/04

Page 1 of 1

PROJECT: 0110-047-02

Report Date: 3/26/04

SVL JOB: 110115

SVL ID	CLIENT SAMPLE ID		As	Cd	Pb	Hg	% Sol.
			6010B	6010B	6010B	7471A	999
S377010	TP-F5/S-1@3'	3/18/04	9.0mg/kg	<0.20mg/kg	85.2mg/kg	0.198mg/kg	92.3%
S377011	TP-F4/S-1@3'	3/18/04	11.2mg/kg	0.34mg/kg	289mg/kg	0.0780mg/kg	93.4%
S377012	TP-F1/S-1@3'	3/18/04	14.4mg/kg	<0.20mg/kg	127mg/kg	0.130mg/kg	93.8%
S377013	TP-F1/S-2@5'	3/18/04	13.4mg/kg	0.50mg/kg	344mg/kg	0.445mg/kg	93.7%
S377014	TP-F2/S-1@3'	3/18/04	10.1mg/kg	0.40mg/kg	236mg/kg	0.142mg/kg	90.8%
S377015	TP-G3/S-1@2'	3/18/04	18.8mg/kg	3.28mg/kg	1390mg/kg	0.552mg/kg	93.1%
S377016	TP-G4/S-1@2.5'	3/18/04	31.9mg/kg	9.86mg/kg	2860mg/kg	0.552mg/kg	92.9%
S377017	TP-C6/S-1@3'	3/18/04	7.2mg/kg	0.28mg/kg	213mg/kg	0.153mg/kg	86.2%
S377018	TP-C5/S-1@3.5'	3/18/04	10.1mg/kg	<0.20mg/kg	23.2mg/kg	<0.0333mg/kg	93.9%
S377019	TP-E4/S-1@2.5'	3/18/04	25.9mg/kg	<0.20mg/kg	171mg/kg	0.0870mg/kg	91.9%
S377020	TP-D6/S-1@3'	3/18/04	9.1mg/kg	<0.20mg/kg	113mg/kg	0.327mg/kg	81.2%
S377021	TP-B7/S-2@6'	3/17/04	8.1mg/kg	<0.20mg/kg	23.0mg/kg	0.0520mg/kg	86.0%
S377022	TP-C1/S-2@6.5'	3/17/04	5.5mg/kg	<0.20mg/kg	5.67mg/kg	<0.0330mg/kg	73.3%
S377023	TP-D5/S-3@9'	3/17/04	11.6mg/kg	<0.20mg/kg	41.1mg/kg	<0.0330mg/kg	94.1%

Soil Samples: As Received Basis

Certificate: WA DOE NO. C074; DOH NO. 050

Reviewed By: _____

[Signature]

Date: 3/26/04

SVL ANALYTICAL, INC.

One Government Gulch

P.O. Box 929

Kellogg, Idaho 83837-0929

Certificate: WA DOE NO. C074; DOH NO. 050

Phone: (208)784-1258 Fax: (208)783-0891

CLIENT : Geo Engineers

SVL JOB: 110115

PROJECT: 0110-047-02

SAMPLE: 377010

CLIENT SAMPLE ID: TP-F5/S-1@3'

Sample Collected: 3/18/04 7:15

% Solids: 92.3%

Sample Receipt : 3/19/04

Matrix: SOIL

Date of Report : 3/26/04

As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	9.0	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.198	mg/kg		7471A	3/25/04
Lead	85.2	mg/kg		6010B	3/23/04

Reviewed By: _____



Date

3/26/04

3/26/04 10:37

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377011
CLIENT SAMPLE ID: TP-F4/S-1@3'	
Sample Collected: 3/18/04 8:00	% Solids: 93.4%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	11.2	mg/kg		6010B	3/23/04
Cadmium	0.34	mg/kg		6010B	3/23/04
Mercury	0.0780	mg/kg		7471A	3/25/04
Lead	289	mg/kg		6010B	3/23/04

Reviewed By: _____

[Signature]

Date 3/26/04
3/26/04 10:37

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377012
CLIENT SAMPLE ID: TP-F1/S-1@3'	
Sample Collected: 3/18/04 8:30	% Solids: 93.8%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	14.4	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.130	mg/kg		7471A	3/25/04
Lead	127	mg/kg		6010B	3/23/04

Reviewed By: *AKC* Date 3/26/04
3/26/04 10:37

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Certificate: WA DOE NO. C074; DOH NO. 050
 Phone: (208)784-1258 ■ Fax: (208)783-0891

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377013
CLIENT SAMPLE ID: TP-F1/S-2@5'	
Sample Collected: 3/18/04 8:40	% Solids: 93.7%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	13.4	mg/kg		6010B	3/23/04
Cadmium	0.50	mg/kg		6010B	3/23/04
Mercury	0.445	mg/kg		7471A	3/25/04
Lead	344	mg/kg		6010B	3/23/04

Reviewed By: *[Signature]* Date 3/26/04
 3/26/04 10:37

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377014
CLIENT SAMPLE ID: TP-F2/S-1@3'	
Sample Collected: 3/18/04 8:50	% Solids: 90.8%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	10.1	mg/kg		6010B	3/23/04
Cadmium	0.40	mg/kg		6010B	3/23/04
Mercury	0.142	mg/kg		7471A	3/25/04
Lead	236	mg/kg		6010B	3/23/04

Reviewed By:  Date 3/26/04
3/26/04 10:37

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Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377015
CLIENT SAMPLE ID: TP-G3/S-1@2'	
Sample Collected: 3/18/04 9:20	% Solids: 93.1%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
---------------	--------	-------	----------	--------	----------

Arsenic	18.8	mg/kg		6010B	3/23/04
Cadmium	3.28	mg/kg		6010B	3/23/04
Mercury	0.552	mg/kg		7471A	3/25/04
Lead	1390	mg/kg		6010B	3/23/04

Reviewed By: _____

Handwritten Signature

Date 3/26/04

3/26/04 10:37

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377016
CLIENT SAMPLE ID: TP-G4/S-1@2.5'	
Sample Collected: 3/18/04 9:40	% Solids: 92.9%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	31.9	mg/kg		6010B	3/23/04
Cadmium	9.86	mg/kg		6010B	3/23/04
Mercury	0.552	mg/kg		7471A	3/25/04
Lead	2860	mg/kg		6010B	3/23/04

Reviewed By: _____

Handwritten Signature

Date

3/26/04

3/26/04 10:37

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Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377017
CLIENT SAMPLE ID: TP-C6/S-1@3'	
Sample Collected: 3/18/04 10:00	% Solids: 86.2%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	7.2	mg/kg		6010B	3/23/04
Cadmium	0.28	mg/kg		6010B	3/23/04
Mercury	0.153	mg/kg		7471A	3/25/04
Lead	213	mg/kg		6010B	3/23/04

Reviewed By: _____

Handwritten Signature

Date 3/26/04
3/26/04 10:37

SVL ANALYTICAL, INC.

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Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377018
CLIENT SAMPLE ID: TP-C5/S-1@3.5'	
Sample Collected: 3/18/04 10:45	% Solids: 93.9%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	10.1	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	<0.0333	mg/kg		7471A	3/25/04
Lead	23.2	mg/kg		6010B	3/23/04

Reviewed By: _____



Date 3/26/04
3/26/04 10:37

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377019
CLIENT SAMPLE ID: TP-E4/S-1@2.5'	
Sample Collected: 3/18/04 11:30	% Solids: 91.9%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	25.9	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.0870	mg/kg		7471A	3/25/04
Lead	171	mg/kg		6010B	3/23/04

Reviewed By:  Date 3/26/04
3/26/04 10:37

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Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377020
CLIENT SAMPLE ID: TP-D6/S-1@3'	
Sample Collected: 3/18/04 12:15	% Solids: 81.2%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	9.1	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.327	mg/kg		7471A	3/25/04
Lead	113	mg/kg		6010B	3/23/04

Reviewed By: _____

Handwritten Signature

Date 3/26/04

3/26/04 10:37

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377021
CLIENT SAMPLE ID: TP-B7/S-2@6'	
Sample Collected: 3/17/04 8:20	% Solids: 86.0%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	8.1	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.0520	mg/kg		7471A	3/25/04
Lead	23.0	mg/kg		6010B	3/23/04

Reviewed By:  Date 3/26/04
3/26/04 10:37

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377022
CLIENT SAMPLE ID: TP-C1/S-2@6.5'	
Sample Collected: 3/17/04 11:10	% Solids: 73.3%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	5.5	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	<0.0330	mg/kg		7471A	3/25/04
Lead	5.67	mg/kg		6010B	3/23/04

Reviewed By: _____

Date 3/26/04
3/26/04 10:37

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110115
PROJECT: 0110-047-02	SAMPLE: 377023
CLIENT SAMPLE ID: TP-D5/S-3@9'	
Sample Collected: 3/17/04 15:20	% Solids: 94.1%
Sample Receipt : 3/19/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	11.6	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	<0.0330	mg/kg		7471A	3/25/04
Lead	41.1	mg/kg		6010B	3/23/04

Reviewed By: _____



Date

3/26/04

3/26/04 10:37

Client :Geo Engineers

SVL JOB No: 110115

Analysis
Date

Analyte	Method	Matrix	Units	Prep Blank	True—LCS—Found	LCS %R	Analysis Date
Arsenic	6010B	SOIL	mg/kg	<1.0	111 112	100.9	3/23/04
Cadmium	6010B	SOIL	mg/kg	<0.20	110 111	100.9	3/23/04
Lead	6010B	SOIL	mg/kg	<0.50	158 174	110.1	3/23/04
Mercury	7471A	SOIL	mg/kg	<0.0333	8.38 7.65	91.3	3/25/04

LEGEND:

LCS = Laboratory Control Sample

LCS %R = LCS Percent Recovery

N/A = Not Applicable

Client :Geo Engineers		SVL JOB No: 110115									
Test Method Mtx	QC SAMPLE ID		Duplicate or Found	or	MSD RPD%	Matrix Spike			Analysis Date		
	Units	Result				Result	SPK ADD	%R			
As	6010B S	1 mg/kg	9.0	110	M	4.7	105	100	96.0	3/23/04	
As	6010B S	2 mg/kg	9.1	N/A		N/A	110	100	100.9	3/23/04	
Cd	6010B S	1 mg/kg	<0.20	94.1	M	2.1	92.1	100	92.1	3/23/04	
Cd	6010B S	2 mg/kg	<0.20	N/A		N/A	94.1	100	94.1	3/23/04	
Pb	6010B S	1 mg/kg	85.2	164	M	0.0	164	100	78.8	3/23/04	
Pb	6010B S	2 mg/kg	113	N/A		N/A	230	100	117.0	3/23/04	
Hg	7471A S	1 mg/kg	0.198	0.393	M	12.4	0.445	0.167	147.9	3/25/04	
Hg	7471A S	2 mg/kg	0.327	N/A		N/A	0.505	0.167	106.6	3/25/04	
% Sol.	999 S	1 %	92.3	92.1		0.2	N/A	N/A	N/A	3/25/04	

LEGEND:
 RPD% = (|SAM - DUP| / ((SAM + DUP) / 2)) * 100 UDL = Both SAM & DUP not detected. *Result or *Found: Interference required dilution.
 RPD% = (|SPK - MSD| / ((SPK + MSD) / 2)) * 100 M in Duplicate/MSD column indicates MSD.
 SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added
 QC limits for MS recoveries apply only if the spike is at least 1/4 the concentration of the analyte in the sample.
 Control limits for the RPD apply only if the concentration of the analyte in the sample is at least five times the reporting limit.
 QC Sample 1: SVL SAM No.: 377010 Client Sample ID: TP-F5/S-1@3'
 QC Sample 2: SVL SAM No.: 377020 Client Sample ID: TP-D6/S-1@3'

CHAIN OF CUSTODY RECORD

GEOENGINEERS - GIFFORD
523 EAST SECOND AVE.
SPOKANE, WASHINGTON 99202
(509) 363-3125



DATE 3/17/04
 PAGE 1 OF 1
 LAB SUL
 LAB NO. _____

PROJECT NAME/LOCATION <u>Spokane Convention Center</u>						ANALYSIS REQUIRED						NOTES/COMMENTS (Preserved, filtered, etc.)				
PROJECT NUMBER <u>0110-047-02</u>						NUTRITION	PAHs (Σ20 SEM)	METALS As, Cd, Pb, Hg								
PROJECT MANAGER <u>Dave Enos</u>																
SAMPLED BY <u>Mark Engdahl</u>																
SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF JARS											
LAB	GEOENGINEERS	DATE	TIME	MATRIX												
	TP-B7/5-1@3'	3/17/04	0810	Soil	1	X	X	X								
*	TP-B7/5-2@6'		0820			X	X	X								HOLD Run
	TP-B8/5-1@3'		0920			X	X	X								
	TP-B8/5-2@6.5'		0930													HOLD
	TP-C7/5-1@3'		1000			X	X	X								
	TP-C7/5-2@7'		1010													HOLD
	TP-C7/5-3@9'		1020													1
	TP-C1/5-1@3'		1100			X	X	X								
*	TP-C1/5-2@6.5'		1110			X	X	X								HOLD Run
	TP-C3/5-1@3'		1130			X	X	X								
	TP-C3/5-2@8'	3/17/04	1140	Soil	1											HOLD

RELINQUISHED BY Mark Engdahl FIRM GEE
 SIGNATURE _____
 PRINTED NAME Mark Engdahl
 DATE 3/18/04 TIME 0630

RECEIVED BY Dave Enos FIRM GEE
 SIGNATURE _____
 PRINTED NAME Dave Enos
 DATE 3/18/04 TIME 0630

RELINQUISHED BY Dave Enos FIRM GEE
 SIGNATURE _____
 PRINTED NAME Dave Enos
 DATE 3/18/04 TIME 0800

RECEIVED BY Dave Warsman FIRM _____
 SIGNATURE _____
 PRINTED NAME Dave Warsman
 DATE 3-18-04 TIME 8:00a

RELINQUISHED BY _____ FIRM _____
 SIGNATURE _____
 PRINTED NAME _____
 DATE _____ TIME _____

RECEIVED BY _____ FIRM _____
 SIGNATURE _____
 PRINTED NAME _____
 DATE _____ TIME _____

ADDITIONAL COMMENTS:
3-5 DAY TAT - DO NOT DESTROY/DISPOSE MATRIX/EXTRACT UNTIL AUTHORIZED DAY WEIGHT-BASIS

CHAIN OF CUSTODY RECORD

GEOENGINEERS - GIFFORD
523 EAST SECOND AVE.
SPOKANE, WASHINGTON 99202
(509) 363-3125



DATE 3/17/04
 PAGE 1 OF 1
 LAB SUL
 LAB NO. _____

PROJECT NAME/LOCATION						ANALYSIS REQUIRED						NOTES/COMMENTS (Preserved, filtered, etc.)		
PROJECT NUMBER						NINTEH-DX	PHYS (SIL, SIM)	METALS	As, Cd, Pb, Hg					
PROJECT MANAGER												# OF JARS		
SAMPLED BY						LAB	GEOENGINEERS	DATE	TIME	MATRIX				
Spokane Convention Center														
0110-047-02														
Dave Enos														
Mark Engdahl														
TP-E7/5-1@3'						3/17/04	1730	Soil	1	X	X	X		
TP-E7/5-1@3'							1245			X	X	X		
TP-G6/5-1@3'							1330			X	X	X		
TP-D8/5-1@2'							1410			X	X	X		
TP-D5/5-1@3'							1500			X	X	X		
TP-D5/5-2@6'							1510							Hold
* TP-D5/5-3@9'							1520			X	X	X		Hold Run
* TP-F6/5-1@3'						3/17/04	1610	Soil	1	X	X	X		Run
TP-B7/5-3@4-4.5'						3/17/04	0830	Soil	1					Hold

RELINQUISHED BY
 SIGNATURE Mark Engdahl
 PRINTED NAME Mark Engdahl
 DATE _____ TIME _____

RELINQUISHED BY
 SIGNATURE Dave Enos
 PRINTED NAME Dave Enos
 DATE 3/18/04 TIME 8:00

RELINQUISHED BY
 SIGNATURE _____
 PRINTED NAME _____
 DATE _____ TIME _____

RECEIVED BY
 SIGNATURE Dave Enos
 PRINTED NAME Dave Enos
 DATE _____ TIME _____

RECEIVED BY
 SIGNATURE Dave Enos
 PRINTED NAME Dave Enos
 DATE 3-18-04 TIME 8:00a

RECEIVED BY
 SIGNATURE _____
 PRINTED NAME _____
 DATE _____ TIME _____

ADDITIONAL COMMENTS:
3-5 DAY TAT DO NOT DESTROY/DISPOSE MATRIX/EXTRACT
UNTIL AUTHORIZED
DRY WEIGHT-BASIS

CASE NARRATIVE

April 6, 2004

Lab Name: SVL Analytical, Inc.**Project Tracking No.:** 0110-047-02**SVL Job No.:** 110115**Project Summary:** Fourteen soil samples were analyzed for polyaromatic hydrocarbons (8270C) and NWTPH-Dx.

<u>Client Sample ID</u>	<u>SVL Sample ID</u>	<u>Organic</u>	<u>Inorganic</u>
TP-F5/S-1@3'	W377010	X	X
TP-F4/S-1@3'	W377011	X	X
TP-F1/S-1@3'	W377012	X	X
TP-F1/S-2@5'	W377013	X	X
TP-F2/S-1@3'	W377014	X	X
TP-G3/S-1@2'	W377015	X	X
TP-G4/S-1@2.5'	W377016	X	X
TP-C6/S-1@3'	W377017	X	X
TP-C5/S-1@3.5'	W377018	X	X
TP-E4/S-1@2.5'	W377019	X	X
TP-D6/S-1@3'	W377020	X	X
TP-B7/S-2@6'	W377021	X	X
TP-C1/S-2@6.5'	W377022	X	X
TP-D5/S-3@9'	W377023	X	X

QA/QC Checks

<u>Parameters</u>	<u>Yes / No</u>	<u>Exceptions / Deviations</u>
Sample Holding Time Valid?	Y	NA
Surrogate Recoveries Valid?	Y	See note #4
QC Sample(s) Recoveries Valid?	Y	See note #5
Method Blank(s) Valid?	Y	NA
Tune(s) Valid?	Y	NA
Internal Standard Responses Valid?	Y	See note #7
Initial Calibration Curve(s) Valid?	Y	NA
Continuing Calibration(s) Valid?	Y	See note #3

1. Holding Time Requirements

Initial analysis of all samples performed within holding time requirements. No problems encountered

2. GC/MS Tune Requirements

No problems encountered.

3. Calibration Requirements

NWTPH-Dx:

The %RSD for the ending continuing calibration verification for motor oil was below the method acceptance limit; however, since the average %RSD for all target compounds was less than the method acceptance limit, no further action was taken. The samples that were affected were S377016 through S377023.

4. Surrogate Recovery Requirements

8270C:

Due to sample matrix interference there was a high surrogate recovery for terphenyl-d14 in sample S377015. Because of the destructive nature of the sample matrices, no further action was taken.

5. QC Sample (LSC/MS/MSD) Recovery Requirements

8270C:

The % recoveries for naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene and anthracene were below the 70 to 130% acceptance limits in the LCS. Due to sample matrix interference, the MS/MSD was not reported.

NWTPH-Dx:

The % recovery for diesel and the RPD for diesel and motor oil in the MS/MSD were outside of acceptable limits. Due to the destructive nature of the sample, no further action was taken.

6. Method Blank Requirements

No problems encountered.

7. Internal Standard(s) Response Requirements

8270C:

Internal standard recoveries did not meet method acceptance criteria due to sample matrix interference for the following samples: S377012, S377013, S377014, S377015, S377016, S377018, S377019, S377020 and S377023. The target compounds affected by the low internal standard recoveries were flagged on the reports. No further problems encountered

8. Comments

I certify that this data package is in compliance with the terms and conditions of the contract. Release of the data contained in this data package has been authorized by the Laboratory Manager or his designee.

Signature: Wendy Ozminkowski Date: 4/10/04

Wendy Ozminkowski
Organic Laboratory Supervisor

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110115

Matrix: Soil

Certificate of Analysis

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: TP-G4/S-1@2.5'

Lab #: S377016
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/05/04
Analyst: JAA/CDC
% Solids: 91.2%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	34.7	mg/kg	27.4	
Motor Oil (C24-C44)	111	mg/kg	54.9	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	59.4	50 - 150	

Sample Name: TP-C6/S-1@3'

Lab #: S377017
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/05/04
Analyst: JAA/CDC
% Solids: 85.8%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	68.5	mg/kg	29.2	
Motor Oil (C24-C44)	101	mg/kg	58.4	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	94.7	50 - 150	

Sample Name: TP-C5/S-1@3.5'

Lab #: S377018
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/05/04
Analyst: JAA/CDC
% Solids: 93.7%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	34.2	mg/kg	26.2	
Motor Oil (C24-C44)	183	mg/kg	52.5	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	100	50 - 150	

Sample Name: TP-E4/S-1@2.5'

Lab #: S377019
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/05/04
Analyst: JAA/CDC
% Solids: 91.1%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	125	mg/kg	27.3	
Motor Oil (C24-C44)	408	mg/kg	54.6	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	95.6	50 - 150	

Sample Name: TP-D6/S-1@3'

Lab #: S377020
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/05/04
Analyst: JAA/CDC
% Solids: 79.8%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	31.3	
Motor Oil (C24-C44)	ND	mg/kg	62.6	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	81.0	50 - 150	

COMMENTS:

V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average % difference or % drift for all the analytes met method criteria. (ending CCV)

Reviewed by: *Mandy Opimkowski*

Date: *4/16/04*

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538, California Cert. # 2080, Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
PQL - Practical Quantitation Limit
* Results calculated on a dry weight basis

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Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110093

Matrix: Soil

Certificate of Analysis

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: TP-B7/S-2@6'

Lab #: S377021

Sampling Date: 03/17/04

Extraction Date: 03/19/04

Analysis Date: 04/05/04

Analyst: JAA/CDC

% Solids: 82.5%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	30.3	
Motor Oil (C24-C44)	ND	mg/kg	60.5	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	53.1	50 - 150	

Sample Name: TP-C1/S-2@6.5'

Lab #: S377022

Sampling Date: 03/17/04

Extraction Date: 03/19/04

Analysis Date: 04/05/04

Analyst: JAA/CDC

% Solids: 73.7%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	30.1	
Motor Oil (C24-C44)	ND	mg/kg	60.3	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	99.9	50 - 150	

Sample Name: TP-D5/S-3@9'

Lab #: S377023

Sampling Date: 03/17/04

Extraction Date: 03/19/04

Analysis Date: 04/05/04

Analyst: JAA/CDC

% Solids: 95.0%

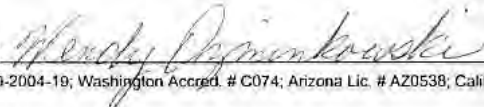
Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	30.1	
Motor Oil (C24-C44)	ND	mg/kg	60.3	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	95.7	50 - 150	

COMMENTS:

V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average % difference or % drift for all the analytes met method criteria. (ending CCV)

Reviewed by:



Date:

4/6/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results calculated on a dry weight basis

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110115

Matrix: Soil

Certificate of Analysis

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: Method Blank

Lab #: S031904P

Sampling Date:

Extraction Date: 03/19/04

Analysis Date: 04/01/04

Analyst: JAA/CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	10.0	
Motor Oil (C24-C44)	ND	mg/kg	20.0	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	102	50 - 150	

Sample Name: Lab Control Sample

Lab #: S031904C

Sampling Date:

Extraction Date: 03/19/04

Analysis Date: 04/01/04

Analyst: JAA/CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	109	mg/kg	10.0	
Motor Oil (C24-C44)	455	mg/kg	20.0	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	97.6	50 - 150	

COMMENTS:

Reviewed by: *Wendy Czerniakowski*

Date: *4/16/04*

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results calculated on a dry weight basis

MS/MSD - Matrix Spike/Matrix spike duplicate

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110115

Matrix: Soil

Quality Control Results

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: Lab Control Sample

Lab #: S031904C

Analysis Date: 04/01/04

Units: mg/kg

% Solids: 100%

Analyte	Blank*	Conc. Added*	LCS*	%R	%R Limits	Data Qualifier
Diesel (C12-C22)	ND	100	109	109%	70 - 130	
Motor Oil (C24-C44)	ND	500	455	90.9%	70 - 130	

COMMENTS:

Reviewed by: Wendy Dymkowski

Date: 2/16/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results calculated on a dry weight basis

LCS - Lab Control Sample

MS/MSD - Matrix Spike/Matrix Spike Duplicate

RPD - Relative Percent Difference

SVL Analytical, Inc.

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-F5/S-1@3'

Lab #: S377010
 Sampling Date: 03/18/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 93.0%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	886	91-20-3	D1
Acenaphthylene	ND	µg/kg	886	208-96-8	D1
Acenaphthene	ND	µg/kg	886	83-32-9	D1
Fluorene	ND	µg/kg	886	86-73-7	D1
Phenanthrene	ND	µg/kg	886	85-01-8	D1
Anthracene	ND	µg/kg	886	120-12-7	D1
Fluoranthene	1050	µg/kg	886	206-44-0	D1
Pyrene	1150	µg/kg	886	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	886	56-55-3	D1
Chrysene	ND	µg/kg	886	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	886	205-99-2	D1
Benzo(k)fluoroanthene	ND	µg/kg	886	207-08-9	D1
Benzo(a)pyrene	ND	µg/kg	886	50-32-8	D1
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	886	193-39-5	D1
Dibenz(a,h)anthracene	ND	µg/kg	886	53-70-3	D1
Benzo(g,h,i)perylene	ND	µg/kg	886	191-24-2	D1

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	32.9%	D - 106	
Phenol-d6 (AS-2)	39.2%	D - 122	
Nitrobenzene (BS-1)	36.8%	D - 122	
2-Fluorobiphenyl (BS-2)	43.2%	D - 115	
2,4,6-Tribromophenol (AS-3)	80.8%	D - 166	
Terphenyl-d14 (BS-3)	76.8%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.

Reviewed by: *Heath Dymnikowski* Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results reported on a dry weight basis

SVL Analytical, Inc.

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-F4/S-1@3'

Lab #: S377011
 Sampling Date: 03/18/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 93.3%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	892	91-20-3	D1
Acenaphthylene	ND	µg/kg	892	208-96-8	D1
Acenaphthene	ND	µg/kg	892	83-32-9	D1
Fluorene	ND	µg/kg	892	86-73-7	D1
Phenanthrene	1030	µg/kg	892	85-01-8	D1
Anthracene	ND	µg/kg	892	120-12-7	D1
Fluoranthene	1320	µg/kg	892	206-44-0	D1
Pyrene	1420	µg/kg	892	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	892	56-55-3	D1
Chrysene	ND	µg/kg	892	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	892	205-99-2	D1
Benzo(k)fluoroanthene	ND	µg/kg	892	207-08-9	D1
Benzo(a)pyrene	ND	µg/kg	892	50-32-8	D1
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	892	193-39-5	D1
Dibenz(a,h)anthracene	ND	µg/kg	892	53-70-3	D1
Benzo(g,h,i)perylene	ND	µg/kg	892	191-24-2	D1

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	34.2%	D - 106	
Phenol-d6 (AS-2)	48.7%	D - 122	
Nitrobenzene (BS-1)	35.0%	D - 122	
2-Fluorobiphenyl (BS-2)	49.4%	D - 115	
2,4,6-Tribromophenol (AS-3)	118%	D - 166	
Terphenyl-d14 (BS-3)	112%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.

Reviewed by: *Wesley Dominikowski* Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results reported on a dry weight basis

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-F1/S-1@3'

Lab #: S377012
Sampling Date: 03/18/04
Date Received: 03/19/04
Extraction Date: 03/23/04
Analysis Date: 03/31/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 92.1%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	902	91-20-3	D1
Acenaphthylene	ND	µg/kg	902	208-96-8	D1
Acenaphthene	ND	µg/kg	902	83-32-9	D1
Fluorene	ND	µg/kg	902	86-73-7	D1
Phenanthrene	ND	µg/kg	902	85-01-8	D1
Anthracene	ND	µg/kg	902	120-12-7	D1
Fluoranthene	ND	µg/kg	902	206-44-0	D1
Pyrene	ND	µg/kg	902	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	902	56-55-3	D1
Chrysene	ND	µg/kg	902	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	902	205-99-2	D1, E6
Benzo(k)fluoroanthene	ND	µg/kg	902	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	902	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	902	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	902	53-70-3	D1, E6
Benzo(g,h,i)perylene	ND	µg/kg	902	191-24-2	D1, E6

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	75.0%	D - 106	
Phenol-d6 (AS-2)	91.0%	D - 122	
Nitrobenzene (BS-1)	85.0%	D - 122	
2-Fluorobiphenyl (BS-2)	105%	D - 115	
2,4,6-Tribromophenol (AS-3)	132%	D - 166	
Terphenyl-d14 (BS-3)	129%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.

E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Reviewed by: Wendy Dymkowski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results reported on a dry weight basis

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-F1/S-2@5'

Lab #: S377013
 Sampling Date: 03/18/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 92.2%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	902	91-20-3	D1
Acenaphthylene	ND	µg/kg	902	208-96-8	D1
Acenaphthene	ND	µg/kg	902	83-32-9	D1
Fluorene	ND	µg/kg	902	86-73-7	D1
Phenanthrene	ND	µg/kg	902	85-01-8	D1
Anthracene	ND	µg/kg	902	120-12-7	D1
Fluoranthene	ND	µg/kg	902	206-44-0	D1
Pyrene	ND	µg/kg	902	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	902	56-55-3	D1
Chrysene	ND	µg/kg	902	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	902	205-99-2	D1, E6
Benzo(k)fluoroanthene	ND	µg/kg	902	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	902	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	902	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	902	53-70-3	D1, E6
Benzo(g,h,i)perylene	ND	µg/kg	902	191-24-2	D1, E6

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	69.8%	D - 106	
Phenol-d6 (AS-2)	79.7%	D - 122	
Nitrobenzene (BS-1)	78.2%	D - 122	
2-Fluorobiphenyl (BS-2)	97.8%	D - 115	
2,4,6-Tribromophenol (AS-3)	119%	D - 166	
Terphenyl-d14 (BS-3)	113%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.

E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Reviewed by: *Wendy Oymakowski* Date: *4/5/04*

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-F2/S-1@3'

Lab #: S377014
Sampling Date: 03/18/04
Date Received: 03/19/04
Extraction Date: 03/23/04
Analysis Date: 03/31/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 90.5%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	920	91-20-3	D1
Acenaphthylene	ND	µg/kg	920	208-96-8	D1
Acenaphthene	ND	µg/kg	920	83-32-9	D1
Fluorene	ND	µg/kg	920	86-73-7	D1
Phenanthrene	ND	µg/kg	920	85-01-8	D1
Anthracene	ND	µg/kg	920	120-12-7	D1
Fluoranthene	ND	µg/kg	920	206-44-0	D1
Pyrene	ND	µg/kg	920	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	920	56-55-3	D1
Chrysene	ND	µg/kg	920	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	920	205-99-2	D1, E6
Benzo(k)fluoroanthene	ND	µg/kg	920	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	920	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	920	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	920	53-70-3	D1, E6
Benzo(g,h,i)perylene	ND	µg/kg	920	191-24-2	D1, E6

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	68.8%	D - 106	
Phenol-d6 (AS-2)	81.2%	D - 122	
Nitrobenzene (BS-1)	76.6%	D - 122	
2-Fluorobiphenyl (BS-2)	99.2%	D - 115	
2,4,6-Tribromophenol (AS-3)	119%	D - 166	
Terphenyl-d14 (BS-3)	117%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.

E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Reviewed by: Wendy Dymnikowski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
PQL - Practical Quantitation Limit
* Results reported on a dry weight basis

SVL Analytical, Inc.

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-G3/S-1@2'

Lab #: S377015
 Sampling Date: 03/18/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 92.3%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	8400	µg/kg	903	91-20-3	D1
Acenaphthylene	ND	µg/kg	903	208-96-8	D1
Acenaphthene	33100	µg/kg	9030	83-32-9	D1
Fluorene	22400	µg/kg	9030	86-73-7	D1
Phenanthrene	215000	µg/kg	45100	85-01-8	D1
Anthracene	52100	µg/kg	9030	120-12-7	D1
Fluoranthene	174000	µg/kg	45100	206-44-0	D1
Pyrene	208000	µg/kg	45100	129-00-0	D1, E6
Benzo(a)anthracene	64200	µg/kg	9030	56-55-3	D1, E6
Chrysene	66000	µg/kg	9030	218-01-9	D1, E6
Benzo(b)fluoranthene	ND	µg/kg	903	205-99-2	D1, E6
Benzo(k)fluroanthene	104000	µg/kg	45100	207-08-9	D1, E6
Benzo(a)pyrene	65900	µg/kg	9030	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	28100	µg/kg	9030	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	903	53-70-3	D1, E6
Benzo(g,h,i)perylene	33100	µg/kg	9030	191-24-2	D1, E6

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	70.1%	D - 106	
Phenol-d6 (AS-2)	88.1%	D - 122	
Nitrobenzene (BS-1)	77.4%	D - 122	
2-Fluorobiphenyl (BS-2)	97.8%	D - 115	
2,4,6-Tribromophenol (AS-3)	124%	D - 166	
Terpheny-d14 (BS-3)	304%	D - 205	S11

COMMENTS:

D1 = Sample required dilution due to matrix interference.

S11 = Surrogate recovery was high.

E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Reviewed by: Wendy Dymkowski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results reported on a dry weight basis

SVL Analytical, Inc.

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-G4/S-1@2.5'

Lab #: S377016
 Sampling Date: 03/18/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 91.2%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	913	91-20-3	D1
Acenaphthylene	ND	µg/kg	913	208-96-8	D1
Acenaphthene	ND	µg/kg	913	83-32-9	D1
Fluorene	ND	µg/kg	913	86-73-7	D1
Phenanthrene	ND	µg/kg	913	85-01-8	D1
Anthracene	ND	µg/kg	913	120-12-7	D1
Fluoranthene	1030	µg/kg	913	206-44-0	D1
Pyrene	1350	µg/kg	913	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	913	56-55-3	D1
Chrysene	ND	µg/kg	913	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	913	205-99-2	D1, E6
Benzo(k)fluoroanthene	ND	µg/kg	913	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	913	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	913	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	913	53-70-3	D1, E6
Benzo(g,h,i)perylene	ND	µg/kg	913	191-24-2	D1, E6

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	49.6%	D - 106	
Phenol-d6 (AS-2)	60.8%	D - 122	
Nitrobenzene (BS-1)	59.8%	D - 122	
2-Fluorobiphenyl (BS-2)	76.2%	D - 115	
2,4,6-Tribromophenol (AS-3)	94.5%	D - 166	
Terphenyl-d14 (BS-3)	112%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.

E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Reviewed by: Wendy Dymkowski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-C6/S-1@3'

Lab #: S377017
 Sampling Date: 03/18/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 85.8%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	968	91-20-3	D1
Acenaphthylene	ND	µg/kg	968	208-96-8	D1
Acenaphthene	ND	µg/kg	968	83-32-9	D1
Fluorene	ND	µg/kg	968	86-73-7	D1
Phenanthrene	ND	µg/kg	968	85-01-8	D1
Anthracene	ND	µg/kg	968	120-12-7	D1
Fluoranthene	970	µg/kg	968	206-44-0	D1
Pyrene	1100	µg/kg	968	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	968	56-55-3	D1
Chrysene	ND	µg/kg	968	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	968	205-99-2	D1
Benzo(k)fluoroanthene	1410	µg/kg	968	207-08-9	D1
Benzo(a)pyrene	ND	µg/kg	968	50-32-8	D1
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	968	193-39-5	D1
Dibenz(a,h)anthracene	ND	µg/kg	968	53-70-3	D1
Benzo(g,h,i)perylene	ND	µg/kg	968	191-24-2	D1

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	61.8%	D - 106	
Phenol-d6 (AS-2)	74.2%	D - 122	
Nitrobenzene (BS-1)	72.6%	D - 122	
2-Fluorobiphenyl (BS-2)	96.8%	D - 115	
2,4,6-Tribromophenol (AS-3)	122%	D - 166	
Terphenyl-d14 (BS-3)	126%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.

Reviewed by: Wendy Dymnikowski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results reported on a dry weight basis

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-C5/S-1@3.5'

Lab #: S377018
 Sampling Date: 03/18/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 93.7%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	1780	91-20-3	D1
Acenaphthylene	ND	µg/kg	1780	208-96-8	D1
Acenaphthene	ND	µg/kg	1780	83-32-9	D1
Fluorene	ND	µg/kg	1780	86-73-7	D1
Phenanthrene	ND	µg/kg	1780	85-01-8	D1
Anthracene	ND	µg/kg	1780	120-12-7	D1
Fluoranthene	ND	µg/kg	1780	206-44-0	D1
Pyrene	ND	µg/kg	1780	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	1780	56-55-3	D1
Chrysene	ND	µg/kg	1780	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	1780	205-99-2	D1, E6
Benzo(k)fluoroanthene	ND	µg/kg	1780	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	1780	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	1780	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	1780	53-70-3	D1, E6
Benzo(g,h,i)perylene	ND	µg/kg	1780	191-24-2	D1, E6

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	69.4%	D - 106	
Phenol-d6 (AS-2)	78.8%	D - 122	
Nitrobenzene (BS-1)	81.6%	D - 122	
2-Fluorobiphenyl (BS-2)	105%	D - 115	
2,4,6-Tribromophenol (AS-3)	133%	D - 166	
Terphenyl-d14 (BS-3)	161%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.
 E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Reviewed by: Wendy Dymkowski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

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Certificate of Analysis

EPA Method 8270C - Polycyclic Aromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-E4/S-1@2.5'

Lab #: S377019
 Sampling Date: 03/18/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 91.1%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	2200	µg/kg	1820	91-20-3	D1
Acenaphthylene	ND	µg/kg	1820	208-96-8	D1
Acenaphthene	ND	µg/kg	1820	83-32-9	D1
Fluorene	ND	µg/kg	1820	86-73-7	D1
Phenanthrene	ND	µg/kg	1820	85-01-8	D1
Anthracene	ND	µg/kg	1820	120-12-7	D1
Fluoranthene	2110	µg/kg	1820	206-44-0	D1
Pyrene	3290	µg/kg	1820	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	1820	56-55-3	D1
Chrysene	ND	µg/kg	1820	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	1820	205-99-2	D1, E6
Benzo(k)fluoroanthene	2950	µg/kg	1820	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	1820	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	1820	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	1820	53-70-3	D1, E6
Benzo(g,h,i)perylene	2550	µg/kg	1820	191-24-2	D1, E6

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	71.6%	D - 106	
Phenol-d6 (AS-2)	77.6%	D - 122	
Nitrobenzene (BS-1)	76.8%	D - 122	
2-Fluorobiphenyl (BS-2)	105%	D - 115	
2,4,6-Tribromophenol (AS-3)	131%	D - 166	
Terphenyl-d14 (BS-3)	178%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.
 E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Reviewed by: Wendy Ozminski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-D6/S-1@3'

Lab #: S377020
Sampling Date: 03/18/04
Date Received: 03/19/04
Extraction Date: 03/23/04
Analysis Date: 03/31/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 79.8%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	1040	91-20-3	D1
Acenaphthylene	ND	µg/kg	1040	208-96-8	D1
Acenaphthene	ND	µg/kg	1040	83-32-9	D1
Fluorene	ND	µg/kg	1040	86-73-7	D1
Phenanthrene	6740	µg/kg	1040	85-01-8	D1
Anthracene	1150	µg/kg	1040	120-12-7	D1
Fluoranthene	9050	µg/kg	1040	206-44-0	D1
Pyrene	4220	µg/kg	1040	129-00-0	D1
Benzo(a)anthracene	4520	µg/kg	1040	56-55-3	D1
Chrysene	4960	µg/kg	1040	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	1040	205-99-2	D1, E6
Benzo(k)fluoroanthene	9470	µg/kg	1040	207-08-9	D1, E6
Benzo(a)pyrene	5360	µg/kg	1040	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	1780	µg/kg	1040	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	1040	53-70-3	D1, E6
Benzo(g,h,i)perylene	2350	µg/kg	1040	191-24-2	D1, E6

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	40.1%	D - 106	
Phenol-d6 (AS-2)	48.1%	D - 122	
Nitrobenzene (BS-1)	65.8%	D - 122	
2-Fluorobiphenyl (BS-2)	91.8%	D - 115	
2,4,6-Tribromophenol (AS-3)	114%	D - 166	
Terphenyl-d14 (BS-3)	175%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.

E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Reviewed by: Mandy Ozonickowski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
PQL - Practical Quantitation Limit
* Results reported on a dry weight basis

SVL Analytical, Inc.

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-B7/S-2@6'

Lab #: S377021
 Sampling Date: 03/17/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 82.5%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	1000	91-20-3	D1
Acenaphthylene	ND	µg/kg	1000	208-96-8	D1
Acenaphthene	ND	µg/kg	1000	83-32-9	D1
Fluorene	ND	µg/kg	1000	86-73-7	D1
Phenanthrene	ND	µg/kg	1000	85-01-8	D1
Anthracene	ND	µg/kg	1000	120-12-7	D1
Fluoranthene	ND	µg/kg	1000	206-44-0	D1
Pyrene	ND	µg/kg	1000	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	1000	56-55-3	D1
Chrysene	ND	µg/kg	1000	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	1000	205-99-2	D1
Benzo(k)fluoroanthene	ND	µg/kg	1000	207-08-9	D1
Benzo(a)pyrene	ND	µg/kg	1000	50-32-8	D1
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	1000	193-39-5	D1
Dibenz(a,h)anthracene	ND	µg/kg	1000	53-70-3	D1
Benzo(g,h,i)perylene	ND	µg/kg	1000	191-24-2	D1

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	48.1%	D - 106	
Phenol-d6 (AS-2)	53.1%	D - 122	
Nitrobenzene (BS-1)	54.0%	D - 122	
2-Fluorobiphenyl (BS-2)	59.8%	D - 115	
2,4,6-Tribromophenol (AS-3)	82.7%	D - 166	
Terphenyl-d14 (BS-3)	81.0%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.

Reviewed by: *Wendy Dymnikowski* Date: 4/15/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results reported on a dry weight basis

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-C1/S-2@6.5'

Lab #: S377022
Sampling Date: 03/17/04
Date Received: 03/19/04
Extraction Date: 03/23/04
Analysis Date: 03/31/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 73.7%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	1130	91-20-3	D1
Acenaphthylene	ND	µg/kg	1130	208-96-8	D1
Acenaphthene	ND	µg/kg	1130	83-32-9	D1
Fluorene	ND	µg/kg	1130	86-73-7	D1
Phenanthrene	ND	µg/kg	1130	85-01-8	D1
Anthracene	ND	µg/kg	1130	120-12-7	D1
Fluoranthene	ND	µg/kg	1130	206-44-0	D1
Pyrene	ND	µg/kg	1130	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	1130	56-55-3	D1
Chrysene	ND	µg/kg	1130	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	1130	205-99-2	D1
Benzo(k)fluoroanthene	ND	µg/kg	1130	207-08-9	D1
Benzo(a)pyrene	ND	µg/kg	1130	50-32-8	D1
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	1130	193-39-5	D1
Dibenz(a,h)anthracene	ND	µg/kg	1130	53-70-3	D1
Benzo(g,h,i)perylene	ND	µg/kg	1130	191-24-2	D1

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	45.2%	D - 106	
Phenol-d6 (AS-2)	50.7%	D - 122	
Nitrobenzene (BS-1)	56.6%	D - 122	
2-Fluorobiphenyl (BS-2)	61.8%	D - 115	
2,4,6-Tribromophenol (AS-3)	73.6%	D - 166	
Terphenyl-d14 (BS-3)	122%	D - 205	

COMMENTS:
D1 = Sample required dilution due to matrix interference.

Reviewed by: Wendy Dymnikowski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
PQL - Practical Quantitation Limit
* Results reported on a dry weight basis

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: TP-D5/S-3@9'

Lab #: S377023
 Sampling Date: 03/17/04
 Date Received: 03/19/04
 Extraction Date: 03/23/04
 Analysis Date: 03/31/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 95.0%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	877	91-20-3	D1
Acenaphthylene	ND	µg/kg	877	208-96-8	D1
Acenaphthene	ND	µg/kg	877	83-32-9	D1
Fluorene	ND	µg/kg	877	86-73-7	D1
Phenanthrene	ND	µg/kg	877	85-01-8	D1
Anthracene	ND	µg/kg	877	120-12-7	D1
Fluoranthene	ND	µg/kg	877	206-44-0	D1
Pyrene	ND	µg/kg	877	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	877	56-55-3	D1
Chrysene	ND	µg/kg	877	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	877	205-99-2	D1, E6
Benzo(k)fluroanthene	ND	µg/kg	877	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	877	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	877	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	877	53-70-3	D1, E6
Benzo(g,h,l)perylene	ND	µg/kg	877	191-24-2	D1, E6

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	44.9%	D - 106	
Phenol-d6 (AS-2)	48.3%	D - 122	
Nitrobenzene (BS-1)	49.6%	D - 122	
2-Fluorobiphenyl (BS-2)	58.2%	D - 115	
2,4,6-Tribromophenol (AS-3)	118%	D - 166	
Terphenyl-d14 (BS-3)	132%	D - 205	

COMMENTS:

D1 = Sample required dilution due to matrix interference.
 E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Reviewed by: *Heidy Dymnikowski* Date: 4/15/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results reported on a dry weight basis

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: Method Blank

Lab #: S032304P

Sampling Date:

Date Received:

Extraction Date: 03/23/04

Analysis Date: 03/30/04

Matrix: Soil

Analyst: KBH,CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	167	91-20-3	
Acenaphthylene	ND	µg/kg	167	208-96-8	
Acenaphthene	ND	µg/kg	167	83-32-9	
Fluorene	ND	µg/kg	167	86-73-7	
Phenanthrene	ND	µg/kg	167	85-01-8	
Anthracene	ND	µg/kg	167	120-12-7	
Fluoranthene	ND	µg/kg	167	206-44-0	
Pyrene	ND	µg/kg	167	129-00-0	
Benzo(a)anthracene	ND	µg/kg	167	56-55-3	
Chrysene	ND	µg/kg	167	218-01-9	
Benzo(b)fluoranthene	ND	µg/kg	167	205-99-2	
Benzo(k)fluoroanthene	ND	µg/kg	167	207-08-9	
Benzo(a)pyrene	ND	µg/kg	167	50-32-8	
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	167	193-39-5	
Dibenz(a,h)anthracene	ND	µg/kg	167	53-70-3	
Benzo(g,h,l)perylene	ND	µg/kg	167	191-24-2	

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	35.4%	D - 106	
Phenol-d6 (AS-2)	39.9%	D - 122	
Nitrobenzene (BS-1)	42.4%	D - 122	
2-Fluorobiphenyl (BS-2)	43.2%	D - 115	
2,4,6-Tribromophenol (AS-3)	42.3%	D - 166	
Terphenyl-d14 (BS-3)	81.6%	D - 205	

COMMENTS:

Reviewed by: *Nancy Dymnikowski* Date: *4/6/04*

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results reported on a dry weight basis

SVL Analytical, Inc.

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: Lab Control Sample

Lab #: S032304C

Sampling Date:

Date Received:

Extraction Date: 03/23/04

Analysis Date: 03/31/04

Matrix: Soil

Analyst: KBH,CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	355	µg/kg	167	91-20-3	
Acenaphthylene	375	µg/kg	167	208-96-8	
Acenaphthene	372	µg/kg	167	83-32-9	
Fluorene	434	µg/kg	167	86-73-7	
Phenanthrene	557	µg/kg	167	85-01-8	
Anthracene	552	µg/kg	167	120-12-7	
Fluoranthene	612	µg/kg	167	206-44-0	
Pyrene	626	µg/kg	167	129-00-0	
Benzo(a)anthracene	627	µg/kg	167	56-55-3	
Chrysene	647	µg/kg	167	218-01-9	
Benzo(b)fluoranthene	652	µg/kg	167	205-99-2	
Benzo(k)fluroanthene	617	µg/kg	167	207-08-9	
Benzo(a)pyrene	654	µg/kg	167	50-32-8	
Ideno(1,2,3-c,d)pyrene	663	µg/kg	167	193-39-5	
Dibenz(a,h)anthracene	670	µg/kg	167	53-70-3	
Benzo(g,h,i)perylene	672	µg/kg	167	191-24-2	

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	38.4%	D - 106	
Phenol-d6 (AS-2)	43.6%	D - 122	
Nitrobenzene (BS-1)	42.8%	D - 122	
2-Fluorobiphenyl (BS-2)	43.5%	D - 115	
2,4,6-Tribromophenol (AS-3)	60.7%	D - 166	
Terpheny-d14 (BS-3)	81.9%	D - 205	

COMMENTS:

Reviewed by: Wendy Dymnikowski Date: 4/6/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

SVL Analytical, Inc.

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Quality Control Results

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110115

Sample Name: Lab Control Sample

Lab #: S032304C

Analysis Date: 03/31/04

Units: µg/kg

% Solids: 100%

Analyte	Blank*	Conc. Added*	LCS*	LCS %R	%R Limits	Data Qualifier
Naphthalene	ND	833	355	42.6%	70 - 130	L4
Acenaphthylene	ND	833	375	45.1%	70 - 130	L4
Acenaphthene	ND	833	372	44.6%	70 - 130	L4
Fluorene	ND	833	434	52.1%	70 - 130	L4
Phenanthrene	ND	833	557	66.9%	70 - 130	L4
Anthracene	ND	833	552	66.3%	70 - 130	L4
Fluoranthene	ND	833	612	73.5%	70 - 130	
Pyrene	ND	833	626	75.2%	70 - 130	
Benzo(a)anthracene	ND	833	627	75.2%	70 - 130	
Chrysene	ND	833	647	77.7%	70 - 130	
Benzo(b)fluoranthene	ND	833	652	78.3%	70 - 130	
Benzo(k)fluoranthene	ND	833	617	74.1%	70 - 130	
Benzo(a)pyrene	ND	833	654	78.5%	70 - 130	
Ideno(1,2,3-c,d)pyrene	ND	833	663	79.6%	70 - 130	
Dibenz(a,h)anthracene	ND	833	670	80.4%	70 - 130	
Benzo(g,h,i)perylene	ND	833	672	80.7%	70 - 130	

COMMENTS:

L4 = The associated LCS recovery was below method acceptance limits.

Reviewed by: Blady Dzwinkowski Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results reported on a dry weight basis

LCS - Laboratory Control Sample

MS/MSD - Matrix Spike/Matrix Spike Duplicate

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110115

Matrix: Soil

Certificate of Analysis

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: TP-F5/S-1@3*

Lab #: S377010
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/01/04
Analyst: JAA/CDC
% Solids: 93.0%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	28.3	mg/kg	10.7	
Motor Oil (C24-C44)	80.6	mg/kg	21.5	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	103	50 - 150	

Sample Name: TP-F4/S-1@3*

Lab #: S377011
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/02/04
Analyst: JAA/CDC
% Solids: 93.3%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	45.2	mg/kg	10.6	
Motor Oil (C24-C44)	109	mg/kg	21.2	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	99.3	50 - 150	

Sample Name: TP-F1/S-1@3*

Lab #: S377012
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/02/04
Analyst: JAA/CDC
% Solids: 92.1%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	24.4	mg/kg	10.7	
Motor Oil (C24-C44)	142	mg/kg	21.4	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	105	50 - 150	

Sample Name: TP-F1/S-2@5*

Lab #: S377013
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/02/04
Analyst: JAA/CDC
% Solids: 92.2%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	26.0	mg/kg	10.8	
Motor Oil (C24-C44)	164	mg/kg	21.5	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	100	50 - 150	

Sample Name: TP-F2/S-1@3*

Lab #: S377014
Sampling Date: 03/18/04
Extraction Date: 03/19/04
Analysis Date: 04/02/04
Analyst: JAA/CDC
% Solids: 90.5%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	37.2	mg/kg	11.0	
Motor Oil (C24-C44)	176	mg/kg	22.0	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	108	50 - 150	

COMMENTS:

Reviewed by: Wendy Dymkowski

Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110093

Matrix: Soil

Certificate of Analysis

EPA Method NWTPII - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: TP-G3/S-1@2'

Lab #: S377015

Sampling Date: 03/18/04

Extraction Date: 03/19/04

Analysis Date: 04/02/04

Analyst: JAA/CDC

% Solids: 92.3%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	131	mg/kg	10.8	
Motor Oil (C24-C44)	491	mg/kg	21.6	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	109	50 - 150	

COMMENTS:

Reviewed by: *Mandy Pymankowski*

Date: 4/5/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results calculated on a dry weight basis

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110115

Matrix: Soil

Certificate of Analysis

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: Method Blank

Lab #: S031904P

Sampling Date:

Extraction Date: 03/19/04

Analysis Date: 04/01/04

Analyst: JAA/CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	10.0	
Motor Oil (C24-C44)	ND	mg/kg	20.0	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	102	50 - 150	

Sample Name: Lab Control Sample

Lab #: S031904C

Sampling Date:

Extraction Date: 03/19/04

Analysis Date: 04/01/04

Analyst: JAA/CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	109	mg/kg	10.0	
Motor Oil (C24-C44)	455	mg/kg	20.0	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	97.6	50 - 150	

Sample Name: TP-F5/S-1@3' MS

Lab #: S377010 MS

Sampling Date: 03/18/04

Extraction Date: 03/19/04

Analysis Date: 04/02/04

Analyst: JAA/CDC

% Solids: 93.0%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	144	mg/kg	10.8	
Motor Oil (C24-C44)	521	mg/kg	21.5	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	101	50 - 150	

Sample Name: TP-F5/S-1@3' MSD

Lab #: S377010 MSD

Sampling Date: 03/18/04

Extraction Date: 03/19/04

Analysis Date: 04/02/04

Analyst: JAA/CDC

% Solids: 93.0%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	177	mg/kg	10.8	
Motor Oil (C24-C44)	637	mg/kg	21.5	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	103	50 - 150	

COMMENTS:

Reviewed by: Wendy Dymkowski Date: 4/15/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results calculated on a dry weight basis

MS/MSD - Matrix Spike/Matrix spike duplicate

110115

CHAIN OF CUSTODY RECORD

GEOENGINEERS - GIFFORD
523 EAST SECOND AVE.
SPOKANE, WASHINGTON 99202
(509) 363-3125



DATE 3/18/04
PAGE 1 OF 2
LAB SUL
LAB NO. _____

PROJECT NAME/LOCATION <u>Spokane Convention Center</u>						ANALYSIS REQUIRED										NOTES/COMMENTS									
PROJECT NUMBER <u>0110 - 047-02</u>						NUTPH-Dx PARTS METALS Pb, Cd, Ph, Hg																			(Preserved, filtered, etc.)
PROJECT MANAGER <u>Dave Enos</u>																									
SAMPLED BY <u>Mark Engdahl</u>																									
SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF JARS																				
LAB	GEOENGINEERS	DATE	TIME	MATRIX																					
	TP-F5/S-1@3'	3/18/04	0715	Soil	2/1	X	X	X																	
	TP-F4/S-1@3'		0800		1	X	X	X																	
	TP-F4/S-2@6'		0810		1																	Hold			
	TP-F1/S-1@3'		0830		2	X	X	X																	
	TP-F1/S-2@5'		0840			X	X	X																	
	TP-F2/S-7@3'		0850			X	X	X																	
	TP-G3/S-1@2'		0920			X	X	X																	
	TP-G4/S-1@2.5'		0940			X	X	X																	
	TP-C6/S-1@3'		1000			X	X	X																	
	TP-C6/S-2@6'		1010																			Hold			
	TP-C6/S-3@9'	3/18/04	1020	Soil	2																	Hold			

RELINQUISHED BY SIGNATURE <u>Mark Engdahl</u> PRINTED NAME <u>Mark Engdahl</u> DATE <u>3/19/04</u> TIME <u>0700</u>	FIRM <u>GEI</u>	RELINQUISHED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	FIRM _____	RELINQUISHED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	FIRM _____
RECEIVED BY SIGNATURE <u>Dave Enos</u> PRINTED NAME <u>Waisman</u> DATE <u>3-19-04</u> TIME <u>7:45p</u>	FIRM <u>SUL</u>	RECEIVED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	FIRM _____	RECEIVED BY SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	FIRM _____

ADDITIONAL COMMENTS:

3-5 Day TAT Do Not Destroy / Dispose Matrix/Extract Until Authorized
Dry weight - Basis

CHAIN OF CUSTODY RECORD

GEOENGINEERS - GIFFORD
523 EAST SECOND AVE.
SPOKANE, WASHINGTON 99202
(509) 363-3125



DATE 3/18/04
 PAGE 2 OF 2
 LAB SVL
 LAB NO. _____

PROJECT NAME/LOCATION <u>Spokane Convention Center</u>						ANALYSIS REQUIRED										NOTES/COMMENTS							
PROJECT NUMBER <u>0110-047-02</u>						NW TPH-Dx	PARTS	METALS	Asst Cd, Pb, Hg													(Preserved, filtered, etc.)	
PROJECT MANAGER <u>Dave Enos</u>																							
SAMPLED BY <u>Mark Engdahl</u>																							
SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF																		
LAB	GEOENGINEERS	DATE	TIME	MATRIX	JARS																		
	TP-CS/S-1@3.5'	3/18/04	1045	Soil	2	X	X	X															
	TP-E4/S-1@2.5'	↓	1130	↓	↓	X	X	X															
	TP-D6/S-1@3'	↓	1215	↓	↓	X	X	X															
	TP-D6/S-2@6'	3/18/04	1230	Soil	2														Hold				

RELINQUISHED BY <u>Mark Engdahl</u> FIRM <u>GET</u> SIGNATURE _____ PRINTED NAME <u>Mark Engdahl</u> DATE <u>3/18/04</u> TIME <u>0700</u>	RELINQUISHED BY _____ FIRM _____ SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	RELINQUISHED BY _____ FIRM _____ SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____
RECEIVED BY _____ FIRM <u>SVL</u> SIGNATURE <u>Dave Waisman</u> PRINTED NAME <u>Waisman</u> DATE <u>3-19-04</u> TIME <u>9:45</u>	RECEIVED BY _____ FIRM _____ SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____	RECEIVED BY _____ FIRM _____ SIGNATURE _____ PRINTED NAME _____ DATE _____ TIME _____

ADDITIONAL COMMENTS:
3-5 Day TAT Do Not Destroy/Dispose Matrix/Extract until Authorized
Dry weight-Basis

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891


Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers
 PROJECT: 0110-047-02
 CLIENT SAMPLE ID: TP-C7/S-1@3'
 Sample Collected: 3/17/04 10:00
 Sample Receipt : 3/31/04
 Date of Report : 4/05/04

SVL JOB: 110245
 SAMPLE: 377984

Matrix: ESOIL
 Extraction: TCLP

Determination	Result	Units	Dilution	Method	Analyzed
Lead	0.0786	mg/L Ext		6010B	4/04/04

Reviewed By:  Date 4/5/04
 4/05/04 11:11

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929

Certificate: WA DOE NO. C074; DOH NO. 050

Phone: (208)784-1258 ■ Fax: (208)783-0891

CLIENT : Geo Engineers
PROJECT: 0110-047-02
CLIENT SAMPLE ID: TP-G6/S-1@3'
Sample Collected: 3/17/04 13:30
Sample Receipt : 3/31/04
Date of Report : 4/05/04

SVL JOB: 110245

SAMPLE: 377985

Matrix: ESOIL
Extraction: TCLP

Determination	Result	Units	Dilution	Method	Analyzed
Lead	0.183	mg/L Ext.		6010B	4/04/04

Reviewed By: _____

Date 4/5/04
4/05/04 11:11

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■

Certificate: WA DOE NO. C074; DOH NO. 050
Phone: (208)784-1258 ■ Fax: (208)783-0891

CLIENT : Geo Engineers	SVL JOB: 110245
PROJECT: 0110-047-02	SAMPLE: 377986
CLIENT SAMPLE ID: TP-G4/S-1@2.5'	
Sample Collected: 3/18/04 9:40	
Sample Receipt : 3/31/04	Matrix: ESOIL
Date of Report : 4/05/04	Extraction: TCLP

Determination	Result	Units	Dilution	Method	Analyzed
Lead	1.50	mg/L Ext		6010B	4/04/04

Reviewed By:  Date 4/5/04
4/05/04 11:11

Client :Geo Engineers					SVL JOB No: 110245			
Analyte	Method	Matrix	Units	Prep Blank	True—LCS—Found	LCS %R	Analysis Date	
Lead	6010B	ESOIL	mg/L Ext	<0.0050	1.00 1.04	104.0	4/04/04	

LEGEND:

LCS = Laboratory Control Sample

LCS %R = LCS Percent Recovery

N/A = Not Applicable

Client :Geo Engineers		SVL JOB No: 110245								
Test Method Mtx	QC SAMPLE ID		Duplicate or Found	MSD RPD%	Matrix Spike			Analysis Date		
	Units	Result			Result	SPK ADD	%R			
Pb	6010B E	1 mg/L Ex	0.0786	0.938	M	0.3	0.935	1.00	85.6	4/04/04

LEGEND:

RPD% = $(|SAM - DUP| / ((SAM + DUP) / 2)) * 100$ UDL = Both SAM & DUP not detected. *Result or *Found: Interference required dilution.

RPD% = $(|SPK - MSD| / ((SPK + MSD) / 2)) * 100$ M in Duplicate/MSD column indicates MSD.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC limits for MS recoveries apply only if the spike is at least 1/4 the concentration of the analyte in the sample.

Control limits for the RPD apply only if the concentration of the analyte in the sample is at least five times the reporting limit.

QC Sample 1: SVL SAM No.: 377984 Client Sample ID: TP-C7/S-103'

Rush 3 day TAT
Jm

TCLP Extraction Log
PART I

JOB# : 110245
SVL ANALYTICAL, INC.

CASE #: SAS #: SDG #:

SVL#	M	ClientID	Init. Wt.	mls H2O	Init. pH	mls 1N HCl	pH	mls ext. fluid/type	Sample Wt.	Final pH
		pH 4 Buffer			4.01		4.01			4.00
		pH 7 Buffer			7.01		7.01			7.00
377984	ES	TP-C7/S-1@3'	5g	96.5mls	7.16	3.5mls	1.82	2000mls**1	100g	5.11
377985	ES	TP-G6/S-1@3'	5g	96.5mls	8.86	3.5mls	1.81	2000mls**1	100g	5.23
377986	ES	TP-G4/S-1@2.5'	5g	96.5mls	7.75	3.5mls	1.76	2000mls**1	100g	5.07
377987	ES	EXTRACTION FLUID 1								4.93
377988	ES	EXTRACTION FLUID 2								

Extraction Started By: DA Date/Time: 03/31/04 1430

Extraction Completed By: DA Date/Time: 04/01/04 0830

Client: Geo Engineers
Received: 3/31/04

TCLP Extraction Log
PART II

JOB# : 110245
SVL ANALYTICAL, INC.

CASE #: SAS #: SDG #:

SVL#	M	ClientID	Ext. Fluid pH	Multi-phasic Y/N	% Solids			Part Size Reduction Y/N	Sample Filtration	Air Temp.	RPM
					Wet	Dry	%				
377984	ES	TP-C7/S-1@3'	4.93	N			100%	N	Y	23°C	30
377985	ES	TP-G6/S-1@3'	4.93	N			100%	N	Y	23°C	30
377986	ES	TP-G4/S-1@2.5'	4.93	N			100%	N	Y	23°C	30
377987	ES	EXTRACTION FLUID 1	4.93								
377988	ES	EXTRACTION FLUID 2									

Extraction Started By: Ja Date/Time: 03/31/04 1430

Extraction Completed By: Ja Date/Time: 04/01/04 0830

Client: Geo Engineers
Received: 3/31/04

INFORMATION from CHRIS - March 2004



Spring is almost here.....

Date: 3/30/04

Client/Message:

GeoEngineers - per Mark Ingersol

From: # 110093 & #110115

• Run the following samples for TCRP w/ Pb only:

TP675-1@3' } #110093
TP645-1@3' }

TP645-1@2.5' } #110115

• 3 day rush!

• Price: \$110 x 1.5 = 165 (no discount)



CLIENT: Dave Enos
 Geo Engineers
 523 East 2nd Avenue

SAMPLE RECEIPT CONFIRMATION

SVL JOB No: *from* 110093
 Received: 3/18/04
 Expected Due date: 3/24/04

Spokane WA 99202
 FAX: (509)363-3126

SVL#	M	ClientID	Sampled	Time	By	Received	Sample Comments
376785	S	TP-B7/S-1@3'	3/17/04	8:10	ME	3/18/04	
376786	S	TP-B8/S-1@3'	3/17/04	9:20	ME	3/18/04	
376787	S	TP-C7/S-1@3'	3/17/04	10:00	ME	3/18/04	
376788	S	TP-C1/S-1@3'	3/17/04	11:00	ME	3/18/04	
376789	S	TP-C3/S-1@3'	3/17/04	11:30	ME	3/18/04	
376790	S	TP-E7/S-1@3'	3/17/04	12:30	ME	3/18/04	
376791	S	TP-F7/S-1@3'	3/17/04	12:45	ME	3/18/04	
376792	S	TP-G6/S-1@3'	3/17/04	13:30	ME	3/18/04	
376793	S	TP-D8/S-1@2'	3/17/04	14:10	ME	3/18/04	
376794	S	TP-D5/S-1@3'	3/17/04	15:00	ME	3/18/04	
376795	S	TP-F6/S-1@3'	3/17/04	16:10	ME	3/18/04	

ADDITIONAL COMMENTS FOR JOB: Sample Cooler temp: 5°C.

- [] These samples will be DISPOSED 45 days after job completion.
 [X] These samples will be ARCHIVED 45 days, then you will receive a letter requesting disposal options.

Please contact Ben Martin (208-784-1258) if you have questions regarding the receipt of these samples. 3/31/04 10:47

CLIENT: Dave Enos
 Geo Engineers
 523 East 2nd Avenue

SAMPLE RECEIPT CONFIRMATION

SVL JOB No: ^{from} 110115
 Received: 3/19/04
 Expected Due date: 3/25/04

Spokane WA 99202
 FAX: (509)363-3126

VL#	M	ClientID	Sampled	Time	By	Received	Sample Comments
77010	S	TP-F5/S-1@3'	3/18/04	7:15		3/19/04	
77011	S	TP-F4/S-1@3'	3/18/04	8:00		3/19/04	
77012	S	TP-F1/S-1@3'	3/18/04	8:30		3/19/04	
77013	S	TP-F1/S-2@5'	3/18/04	8:40		3/19/04	
77014	S	TP-F2/S-1@3'	3/18/04	8:50		3/19/04	
77015	S	TP-G3/S-1@2'	3/18/04	9:20		3/19/04	
77016	S	TP-G4/S-1@2.5'	3/18/04	9:40		3/19/04	
77017	S	TP-C6/S-1@3'	3/18/04	10:00		3/19/04	
77018	S	TP-C5/S-1@3.5'	3/18/04	10:45		3/19/04	
77019	S	TP-E4/S-1@2.5'	3/18/04	11:30		3/19/04	
77020	S	TP-D6/S-1@3'	3/18/04	12:15		3/19/04	
77021	S	TP-B7/S-2@6'	3/17/04	8:20		3/19/04	
77022	S	TP-C1/S-2@6.5'	3/17/04	11:10		3/19/04	
77023	S	TP-D5/S-3@9'	3/17/04	15:20		3/19/04	

ADDITIONAL COMMENTS FOR JOB: Sample Cooler temp: 4°C.

- [] These samples will be DISPOSED 45 days after job completion.
- [X] These samples will be ARCHIVED 45 days, then you will receive a letter requesting disposal options.

Please contact Ben Martin (208-784-1258) if you have questions regarding the receipt of these samples. 3/31/04 10:47

CLIENT : Geo Engineers
PROJECT: 0110-047-02

Sample Receipt: 3/18/04
Report Date: 3/26/04

Page 1 of 1
SVL JOB: 110093

SVL ID	CLIENT SAMPLE ID		As 6010B	Cd 6010B	Pb 6010B	Hg 7471A	% Sol. 999
S376785	TP-B7/S-1@3'	3/17/04	7.0mg/kg	<0.20mg/kg	233mg/kg	0.107mg/kg	85.0%
S376786	TP-B8/S-1@3'	3/17/04	22.9mg/kg	2.32mg/kg	383mg/kg	0.173mg/kg	86.4%
S376787	TP-C7/S-1@3'	3/17/04	34.9mg/kg	0.98mg/kg	389mg/kg	0.297mg/kg	89.8%
S376788	TP-C1/S-1@3'	3/17/04	9.3mg/kg	<0.20mg/kg	51.3mg/kg	0.177mg/kg	89.6%
S376789	TP-C3/S-1@3'	3/17/04	11.1mg/kg	<0.20mg/kg	12.2mg/kg	<0.0333mg/kg	93.0%
S376790	TP-E7/S-1@3'	3/17/04	10.9mg/kg	<0.20mg/kg	7.17mg/kg	<0.0333mg/kg	95.1%
S376791	TP-F7/S-1@3'	3/17/04	34.5mg/kg	6.00mg/kg	2810mg/kg	1.21mg/kg	94.2%
S376792	TP-G6/S-1@3'	3/17/04	11.2mg/kg	1.37mg/kg	1570mg/kg	0.307mg/kg	91.6%
S376793	TP-D8/S-1@2'	3/17/04	8.5mg/kg	<0.20mg/kg	589mg/kg	0.168mg/kg	92.3%
S376794	TP-D5/S-1@3'	3/17/04	7.0mg/kg	<0.20mg/kg	44.8mg/kg	0.0850mg/kg	91.6%
S376795	TP-F6/S-1@3'	3/17/04	6.3mg/kg	<0.20mg/kg	73.6mg/kg	0.148mg/kg	91.2%

Soil Samples: As Received Basis

Certificate: WA DOE NO. C074; DOH NO. 050
Reviewed By: _____

[Signature] Date: 3/26/04

Routing
File

APR 02 2004

GeoEngineers

NWTPH-Dx:

The %RSD for the continuing calibration verification for motor oil was above the method acceptance limit; however, since the average %RSD for all target compounds was less than the method acceptance limit, no further action was taken. All samples and the MS/MSD were affected.

4. Surrogate Recovery Requirements

8270C:

Due to the high levels of target compounds and sample matrix interference, sample S376785 required a dilution such that the surrogate concentrations were diluted below the detection limits. Due to sample matrix interference there were high surrogate recoveries for samples S376787, S376791, S376792, S376793, S376794 and S376795. Because of the destructive nature of the sample matrices, no further action was taken.

5. QC Sample (LSC/MS/MSD) Recovery Requirements

8270C:

The % recoveries for naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene and anthracene were below the 70 to 130% acceptance limits in the LCS. The % recoveries for most of the MS/MSD compounds were outside of acceptance limits due to sample matrix interference. Due to the destructive nature of the samples, no further action was taken.

NWTPH-Dx:

The RPD for diesel in the MS/MSD was above 20%. Due to the destructive nature of the sample, no further action was taken.

6. Method Blank Requirements

No problems encountered.

7. Internal Standard(s) Response Requirements

8270C:

Internal standard recoveries did not meet method acceptance criteria due to sample matrix interference for the following samples: S376787, S376788, S376791, S379792, S376793, S376794 and S376795. The target compounds affected by the low internal standard recoveries were flagged on the reports. No further problems encountered

8. Comments

I certify that this data package is in compliance with the terms and conditions of the contract. Release of the data contained in this data package has been authorized by the Laboratory Manager or his designee.

Signature: Wendy Ozminkowski Date: 4/5/04

Wendy Ozminkowski
Organic Laboratory Supervisor

SVL ANALYTICAL, INC.

One Government Gulch

P.O. Box 929

Kellogg, Idaho 83837-0929

Certificate: WA DOE NO. C074; DOH NO. 050
Phone: (208)784-1258 Fax: (208)783-0891

CLIENT : Geo Engineers

PROJECT: 0110-047-02

CLIENT SAMPLE ID: TP-B7/S-1@3'

Sample Collected: 3/17/04 8:10

Sample Receipt : 3/18/04

Date of Report : 3/26/04

As Received Basis

SVL JOB: 110093

SAMPLE: 376785

% Solids: 85.0%

Matrix: SOIL

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	7.0	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.107	mg/kg		7471A	3/25/04
Lead	233	mg/kg		6010B	3/23/04

Reviewed By: _____

Date 3/26/04

3/26/04 10:45

SVL ANALYTICAL, INC.

One Government Gulch

P.O. Box 929

Kellogg, Idaho

83837-0929

Certificate: WA DOE NO. C074; DOH NO. 050
Phone: (208)784-1258 Fax: (208)783-0891

CLIENT : Geo Engineers

PROJECT: 0110-047-02

CLIENT SAMPLE ID: TP-B8/S-1@3'

Sample Collected: 3/17/04 9:20

Sample Receipt : 3/18/04

Date of Report : 3/26/04

As Received Basis

SVL JOB: 110093

SAMPLE: 376786

% Solids: 86.4%

Matrix: SOIL

Determination	Result	Units	Dilution	Method	Analyzed
---------------	--------	-------	----------	--------	----------

Arsenic	22.9	mg/kg		6010B	3/23/04
Cadmium	2.32	mg/kg		6010B	3/23/04
Mercury	0.173	mg/kg		7471A	3/25/04
Lead	383	mg/kg		6010B	3/23/04

Reviewed By: _____



Date 3/26/04

3/26/04 10:45

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■

Certificate: WA DOE NO. C074; DOH NO. 050
Phone: (208)784-1258 ■ Fax: (208)783-0891

CLIENT : Geo Engineers	SVL JOB: 110093
PROJECT: 0110-047-02	SAMPLE: 376787
CLIENT SAMPLE ID: TP-C7/S-1@3'	% Solids: 89.8%
Sample Collected: 3/17/04 10:00	Matrix: SOIL
Sample Receipt : 3/18/04	
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	34.9	mg/kg		6010B	3/23/04
Cadmium	0.98	mg/kg		6010B	3/23/04
Mercury	0.297	mg/kg		7471A	3/25/04
Lead	389	mg/kg		6010B	3/23/04

Reviewed By: *Alle New* Date 3/26/04
3/26/04 10:45

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929

Certificate: WA DOE NO. C074; DOH NO. 050
Phone: (208)784-1258 ■ Fax: (208)783-0891

CLIENT : Geo Engineers	SVL JOB: 110093
PROJECT: 0110-047-02	SAMPLE: 376788
CLIENT SAMPLE ID: TP-C1/S-1@3'	
Sample Collected: 3/17/04 11:00	
Sample Receipt : 3/18/04	% Solids: 89.6%
Date of Report : 3/26/04	Matrix: SOIL
As Received Basis	

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	9.3	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.177	mg/kg		7471A	3/25/04
Lead	51.3	mg/kg		6010B	3/23/04

Reviewed By:  Date 3/26/04
3/26/04 10:45

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929

Certificate: WA DOE NO. C074; DOH NO. 050
Phone: (208)784-1258 ■ Fax: (208)783-0891

CLIENT : Geo Engineers

PROJECT: 0110-047-02

CLIENT SAMPLE ID: TP-C3/S-1@3'

Sample Collected: 3/17/04 11:30

Sample Receipt : 3/18/04

Date of Report : 3/26/04

As Received Basis

SVL JOB: 110093

SAMPLE: 376789

% Solids: 93.0%

Matrix: SOIL

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	11.1	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	<0.0333	mg/kg		7471A	3/25/04
Lead	12.2	mg/kg		6010B	3/23/04

Reviewed By: _____



Date

3/26/04

3/26/04 10:45

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110093
PROJECT: 0110-047-02	SAMPLE: 376790
CLIENT SAMPLE ID: TP-E7/S-1@3'	
Sample Collected: 3/17/04 12:30	% Solids: 95.1%
Sample Receipt : 3/18/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	10.9	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	<0.0333	mg/kg		7471A	3/25/04
Lead	7.17	mg/kg		6010B	3/23/04

Reviewed By: *Ally Davis* Date 3/26/04
3/26/04 10:45

SVL ANALYTICAL, INC.

One Government Gulch

P.O. Box 929

Kellogg, Idaho 83837-0929

Certificate: WA DOE NO. C074; DOH NO. 050
Phone: (208)784-1258 Fax: (208)783-0891

CLIENT : Geo Engineers

PROJECT: 0110-047-02

CLIENT SAMPLE ID: TP-F7/S-1@3'

Sample Collected: 3/17/04 12:45

Sample Receipt : 3/18/04

Date of Report : 3/26/04

As Received Basis

SVL JOB: 110093

SAMPLE: 376791

% Solids: 94.2%

Matrix: SOIL

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	34.5	mg/kg		6010B	3/23/04
Cadmium	6.00	mg/kg		6010B	3/23/04
Mercury	1.21	mg/kg		7471A	3/25/04
Lead	2810	mg/kg		6010B	3/23/04

Reviewed By: _____



Date

3/26/04

3/26/04 10:45

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110093
PROJECT: 0110-047-02	SAMPLE: 376794
CLIENT SAMPLE ID: TP-D5/S-1@3'	
Sample Collected: 3/17/04 15:00	% Solids: 91.6%
Sample Receipt : 3/18/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	7.0	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.0850	mg/kg		7471A	3/25/04
Lead	44.8	mg/kg		6010B	3/23/04

Reviewed By: _____

[Signature] Date 3/26/04
3/26/04 10:45

Client :Geo Engineers

SVL JOB No: 110093

Analyte	Method	Matrix	Units	Prep Blank	True—LCS—Found	LCS %R	Analysis Date	
Arsenic	6010B	SOIL	mg/kg	<1.0	111	114	102.7	3/23/04
Cadmium	6010B	SOIL	mg/kg	<0.20	110	111	100.9	3/23/04
Lead	6010B	SOIL	mg/kg	<0.50	158	172	108.9	3/23/04
Mercury	7471A	SOIL	mg/kg	<0.0333	8.38	7.65	91.3	3/25/04

LEGEND:

LCS = Laboratory Control Sample

LCS %R = LCS Percent Recovery

N/A = Not Applicable

Client :Geo Engineers			SVL JOB No: 110093								
Test Method	Mtx	QC SAMPLE ID		Duplicate or Found	MSD RPD%	Matrix Spike			Analysis Date		
		Units	Result			Result	SPK ADD	%R			
As	6010B S	1	mg/kg	7.0	105	M	1.9	107	100	100.0	3/23/04
As	6010B S	2	mg/kg	6.3	N/A		N/A	111	100	104.7	3/23/04
Cd	6010B S	1	mg/kg	<0.20	93.1	M	0.7	93.8	100	93.8	3/23/04
Cd	6010B S	2	mg/kg	<0.20	N/A		N/A	93.6	100	93.6	3/23/04
Pb	6010B S	1	mg/kg	233	177	M	7.6	191	100	-42.0	3/23/04
Pb	6010B S	1	mg/kg	233	N/A		N/A	307	100	A 74.0	3/23/04
Pb	6010B S	2	mg/kg	73.6	N/A		N/A	361	100	287.4	3/23/04
Pb	6010B S	2	mg/kg	73.6	N/A		N/A	162	100	A 88.4	3/23/04
Hg	7471A S	1	mg/kg	0.107	0.390	M	1.3	0.395	0.167	172.5	3/25/04
Hg	7471A S	2	mg/kg	0.148	N/A		N/A	0.368	0.167	131.7	3/25/04
% Sol.	999 S	1	%	85.0	84.5		0.6	N/A	N/A	N/A	3/22/04

LEGEND:
 RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) UDL = Both SAM & DUP not detected. *Result or *Found: Interference required dilution.
 RPD% = (|SPK - MSD|/((SPK + MSD)/2) * 100) M in Duplicate/MSD column indicates MSD.
 SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added
 QC limits for MS recoveries apply only if the spike is at least 1/4 the concentration of the analyte in the sample.
 Control limits for the RPD apply only if the concentration of the analyte in the sample is at least five times the reporting limit.
 QC Sample 1: SVL SAM No.: 376785 Client Sample ID: TP-B7/S-1@3'
 QC Sample 2: SVL SAM No.: 376795 Client Sample ID: TP-F6/S-1@3'

110015

CHAIN OF CUSTODY RECORD

GEOENGINEERS - GIFFORD
523 EAST SECOND AVE.
SPOKANE, WASHINGTON 99202
(509) 363-3125



DATE 3/17/04
 PAGE 1 OF 1
 LAB SUL
 LAB NO. _____

PROJECT NAME/LOCATION <u>Spokane Convention Center</u>						ANALYSIS REQUIRED										NOTES/COMMENTS										
PROJECT NUMBER <u>0110-047-02</u>						NwTPH-Dy	PAHs (8270 SIM)	METALS	As, Cd, Pb, Hg															(Preserved, filtered, etc.) Per Dave Enos Analyses on Dry Weight Basis Report ^{from 3/18/04} % solids		
PROJECT MANAGER <u>Dave Enos</u>																										
SAMPLED BY <u>Mark Engdahl</u>																										
SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF																					
LAB	GEOENGINEERS	DATE	TIME	MATRIX	JARS																					
	TP-B7/5-1@3'	3/17/04	0810	Soil	1	X	X	X																		
	TP-B7/5-2@6'		0820																			HOLD				
	TP-B8/5-1@3'		0920			X	X	X																		
	TP-B8/5-2@6.5'		0930																			HOLD				
	TP-C7/5-1@3'		1000			X	X	X																		
	TP-C7/5-2@7'		1010																			HOLD				
	TP-C7/5-3@9'		1020																			HOLD				
	TP-C1/5-1@3'		1100			X	X	X																		
	TP-C1/5-2@6.5'		1110																			HOLD				
	TP-C3/5-1@3'		1130			X	X	X																		
	TP-C3/5-2@8'	3/17/04	1140	Soil	1																	HOLD				

RELINQUISHED BY Mark Engdahl FIRM GEI
 SIGNATURE _____
 PRINTED NAME Mark Engdahl
 DATE 3/18/04 TIME 0630

RECEIVED BY Dave Enos FIRM GEI
 SIGNATURE _____
 PRINTED NAME Dave Enos
 DATE 3/18/04 TIME 06:30

RELINQUISHED BY Dave Enos FIRM GEI
 SIGNATURE _____
 PRINTED NAME Dave Enos
 DATE 3/18/04 TIME 08:00

RECEIVED BY Dave Wasman FIRM _____
 SIGNATURE _____
 PRINTED NAME Dave Wasman
 DATE 3-18-04 TIME 8:00a

RELINQUISHED BY _____ FIRM _____
 SIGNATURE _____
 PRINTED NAME _____
 DATE _____ TIME _____

RECEIVED BY _____ FIRM _____
 SIGNATURE _____
 PRINTED NAME _____
 DATE _____ TIME _____

ADDITIONAL COMMENTS:
3-5 DAY TAT - DO NOT DESTROY/REMOVE MATRIX/EXTRACT UNTIL AUTHORIZED
SUL to Bath Samples Arriving 3/19/04 with this Job per Chris
from 3/18/04

CHAIN OF CUSTODY RECORD

GEOENGINEERS - GIFFORD
523 EAST SECOND AVE.
SPOKANE, WASHINGTON 99202
(509) 363-3125



DATE 3/17/04
 PAGE 1 OF 1
 LAB SUL
 LAB NO. _____

PROJECT NAME/LOCATION <u>Spokane Convention Center</u>						ANALYSIS REQUIRED												NOTES/COMMENTS	
PROJECT NUMBER <u>0110-047-02</u>						NWTPT-H-Dx PAHs (E200 SIM) METALS As, Cd, Pb, Hg													(Preserved, filtered, etc.)
PROJECT MANAGER <u>Dave Enos</u>																			
SAMPLED BY <u>Mark Engdahl</u>																			
SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF														
LAB	GEOENGINEERS	DATE	TIME	MATRIX	JARS														
	TP-E7/S-1@3'	3/17/04	1230	Soil	1	X	X	X											
	TP-F7/S-1@3'		1245			X	X	X											
	TP-G6/S-1@3'		1330			X	X	X											
	TP-D8/S-1@2'		1410			X	X	X											
	TP-D5/S-1@3'		1500			X	X	X											
	TP-D5/S-2@6'		1510															Hold	
	TP-D5/S-3@9'		1520															Hold	
	TP-F6/S-1@3'	3/17/04	1610	Soil	1	X	X	X											
	TP-B7/S-3@4-4.5'	3/17/04	0830	Soil	1	Hold												Hold	

RELINQUISHED BY
 SIGNATURE Mark Engdahl
 PRINTED NAME Mark Engdahl
 DATE _____ TIME _____
 FIRM GEF

RECEIVED BY
 SIGNATURE Dave Enos
 PRINTED NAME Dave Enos
 DATE _____ TIME _____
 FIRM _____

RELINQUISHED BY
 SIGNATURE Dave Enos
 PRINTED NAME Dave Enos
 DATE 3/18/04 TIME 8:00
 FIRM GEF

RECEIVED BY
 SIGNATURE Dave Weismann
 PRINTED NAME Dave Weismann
 DATE 3-18-04 TIME 8:00 a
 FIRM GEF

RELINQUISHED BY
 SIGNATURE _____
 PRINTED NAME _____
 DATE _____ TIME _____
 FIRM _____

RECEIVED BY
 SIGNATURE _____
 PRINTED NAME _____
 DATE _____ TIME _____
 FIRM _____

ADDITIONAL COMMENTS:
3-5 DAY TAT DO NOT DESTROY / DISPOSE MATRIX / EXTRACT UNTIL AUTHORIZED

SAMPLE RECEIPT CONFIRMATION

SVL JOB No: 110093
 Received: 3/18/04
 Expected Due date: 3/25/04

By	Received	Sample Comments
ME	3/18/04	
ME	3/18/04	
ME	3/18/04	
ME	3/18/04	
ME	3/18/04	
ME	3/18/04	
ME	3/18/04	
ME	3/18/04	
ME	3/18/04	
ME	3/18/04	
ME	3/18/04	

emp: 5°C.

after job completion.
 then you will receive a letter requesting disposal options.

ou have questions regarding the receipt of these samples. 3/19/04 12:16

DATE, TIME
 FAX NO./NAME
 DURATION
 PAGE(S)
 RESULT
 MODE

03/19 13:58
 915093633126
 00:00:20
 01
 OK
 FINE
 ECM

TRANSMISSION VERIFICATION REPORT

TIME : 03/19/2004 13:58
 NAME : SVL ANALYTICAL
 FAX : 2087830891
 TEL : 2087841258
 SER.# : BRDF3J496071

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110093

Matrix: Soil

Certificate of Analysis

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: TP-B7/S-1@3'

Lab #: S376785

Sampling Date: 03/17/04

Extraction Date: 03/18/04

Analysis Date: 03/22/04

Analyst: JAA/CDC

% Solids: 89.7%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	47.4	mg/kg	27.9	
Motor Oil (C24-C44)	75.9	mg/kg	55.7	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	92.3	50 - 150	

Sample Name: TP-B8/S-1@3'

Lab #: S376786

Sampling Date: 03/17/04

Extraction Date: 03/18/04

Analysis Date: 03/23/04

Analyst: JAA/CDC

% Solids: 83.4%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	259	mg/kg	30.0	
Motor Oil (C24-C44)	1418	mg/kg	600	D2, V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	93.7	50 - 150	

Sample Name: TP-C7/S-1@3'

Lab #: S376787

Sampling Date: 03/17/04

Extraction Date: 03/18/04

Analysis Date: 03/23/04

Analyst: JAA/CDC

% Solids: 86.6%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	76.5	mg/kg	28.9	
Motor Oil (C24-C44)	200	mg/kg	57.7	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	88.7	50 - 150	

Sample Name: TP-C1/S-1@3'

Lab #: S376788

Sampling Date: 03/17/04

Extraction Date: 03/18/04

Analysis Date: 03/23/04

Analyst: JAA/CDC

% Solids: 88.3%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	111	mg/kg	28.3	
Motor Oil (C24-C44)	111	mg/kg	56.6	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	97.4	50 - 150	

Sample Name: TP-C3/S-1@3'

Lab #: S376789

Sampling Date: 03/17/04

Extraction Date: 03/18/04

Analysis Date: 03/23/04

Analyst: JAA/CDC

% Solids: 94.7%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	26.4	
Motor Oil (C24-C44)	ND	mg/kg	52.8	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	90.0	50 - 150	

COMMENTS:

D2 = Sample required dilution due to high concentration of target analyte.

V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average % difference or % drift for all the analytes met method criteria.

Reviewed by: Mandy GminkowskiDate: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results calculated on a dry weight basis

Geo Engineers523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110093

Matrix: Soil

Certificate of Analysis

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: TP-E7/S-1@3'Lab #: S376790
Sampling Date: 03/17/04
Extraction Date: 03/18/04
Analysis Date: 03/25/04
Analyst: JAA/CDC
% Solids: 95.5%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	26.2	
Motor Oil (C24-C44)	ND	mg/kg	52.4	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	94.0	50 - 150	

Sample Name: TP-F7/S-1@3'Lab #: S376791
Sampling Date: 03/17/04
Extraction Date: 03/18/04
Analysis Date: 03/25/04
Analyst: JAA/CDC
% Solids: 92.4%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	51.9	mg/kg	27.1	
Motor Oil (C24-C44)	941	mg/kg	541	D2, V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	98.4	50 - 150	

Sample Name: TP-G6/S-1@3'Lab #: S376792
Sampling Date: 03/17/04
Extraction Date: 03/18/04
Analysis Date: 03/25/04
Analyst: JAA/CDC
% Solids: 88.9%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	77.3	mg/kg	28.1	
Motor Oil (C24-C44)	110	mg/kg	56.2	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	91.1	50 - 150	

Sample Name: TP-D8/S-1@2'Lab #: S376793
Sampling Date: 03/17/04
Extraction Date: 03/18/04
Analysis Date: 03/25/04
Analyst: JAA/CDC
% Solids: 92.5%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	27.0	
Motor Oil (C24-C44)	57.9	mg/kg	54.1	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	95.1	50 - 150	

Sample Name: TP-D5/S-1@3'Lab #: S376794
Sampling Date: 03/17/04
Extraction Date: 03/18/04
Analysis Date: 03/25/04
Analyst: JAA/CDC
% Solids: 87.8%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	43.6	mg/kg	28.5	
Motor Oil (C24-C44)	195	mg/kg	56.9	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	107	50 - 150	

COMMENTS:

D2 = Sample required dilution due to high concentration of target analyte.

V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average % difference or % drift for all the analytes met method criteria.

Reviewed by: Mendy OzminkowskiDate: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
PQL - Practical Quantitation Limit
* Results calculated on a dry weight basis

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110093

Matrix: Soil

Certificate of Analysis

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: TP-F6/S-1@3'

Lab #: S376795

Sampling Date: 03/17/04

Extraction Date: 03/18/04

Analysis Date: 03/25/04

Analyst: JAA/CDC

% Solids: 92.3%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	39.5	mg/kg	27.1	
Motor Oil (C24-C44)	259	mg/kg	54.2	V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	93.0	50 - 150	

COMMENTS:

V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average % difference or % drift for all the analytes met method criteria.

Reviewed by: *Wendy Dyminkowski*

Date: *3/30/04*

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
PQL - Practical Quantitation Limit
* Results calculated on a dry weight basis

Geo Engineers

23 East Second Ave.
 spokane, WA 99202

SVL Job #: 110093

Matrix: Soil

Certificate of Analysis

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: Method Blank

Lab #: S031804P

Sampling Date:

Extraction Date: 03/18/04

Analysis Date: 03/22/04

Analyst: JAA/CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	ND	mg/kg	25.0	
Motor Oil (C24-C44)	ND	mg/kg	50.0	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	73.9	50 - 150	

Sample Name: Lab Control Sample

Lab #: S031804C

Sampling Date:

Extraction Date: 03/18/04

Analysis Date: 03/22/04

Analyst: JAA/CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	213	mg/kg	25.0	
Motor Oil (C24-C44)	933	mg/kg	50.0	

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	89.8	50 - 150	

Sample Name: TP-B7/S-1@3' MS

Lab #: S376785 MS

Sampling Date: 03/17/04

Extraction Date: 03/18/04

Analysis Date: 03/22/04

Analyst: JAA/CDC

% Solids: 89.7%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	157	mg/kg	27.9	
Motor Oil (C24-C44)	625	mg/kg	55.7	D2, V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	99.8	50 - 150	

Sample Name: TP-B7/S-1@3' MSD

Lab #: S376785 MSD

Sampling Date: 03/17/04

Extraction Date: 03/18/04

Analysis Date: 03/22/04

Analyst: JAA/CDC

% Solids: 89.7%

Analyte	Results*	Units	PQL*	Data Qualifier
Diesel (C12-C22)	185	mg/kg	27.9	
Motor Oil (C24-C44)	630	mg/kg	55.7	D2, V8

Surrogate	% Recovery	QC Limits	Data Qualifier
Tricosane	99.0	50 - 150	

COMMENTS:

D2 = Sample required dilution due to high concentration of target analyte.
 V8 = Calibration verification recovery was below the method control limit for this analyte, however,
 the average % difference or % drift for all the analytes met method criteria.

Reviewed by: Wendy Dymnikowski

Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results calculated on a dry weight basis
 MS/MSD - Matrix Spike/Matrix spike duplicate

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Geo Engineers

523 East Second Ave.
Spokane, WA 99202

SVL Job #: 110093

Matrix: Soil

Quality Control Results

EPA Method NWTPH - TPH Diesel Range Organics (C12-C22)/Motor Oil (C24-C44)

Sample Name: Lab Control Sample

Lab #: S031804C

Analysis Date: 03/22/04

Units: mg/kg

% Solids: 100%

Analyte	Blank*	Conc. Added*	LCS*	%R	%R Limits	Data Qualifier
Diesel (C12-C22)	ND	200	213	107%	70 - 130	
Motor Oil (C24-C44)	ND	1000	933	93.3%	70 - 130	

Sample Name: TP-B7/S-1@3' MS/MSD

Lab #: S376785 MS/MSD

Analysis Date: 03/22/04

Units: mg/kg

% Solids: 89.7%

Analyte	Sample*	Conc. Added*	MS*	MSD*	MS %R	MSD %R	RPD	%R Limits	RPD Limits	Data Qualifier
Diesel	47.4	111	157	185	98.7%	123%	22.0%	70 - 130	20	R1
Motor Oil	75.9	557	625	630	98.5%	99.4%	0.9%	70 - 130	20	

COMMENTS:

R1 = RPD exceeded the method control limit.

Reviewed by:

Wendy Ozimkowski

Date:

3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results calculated on a dry weight basis

LCS - Lab Control Sample

MS/MSD - Matrix Spike/Matrix Spike Duplicate

RPD - Relative Percent Difference

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-B7/S-1@3'

Lab #: S376785
 Sampling Date: 03/17/04
 Date Received: 03/18/04
 Extraction Date: 03/22/04
 Analysis Date: 03/25/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 89.7%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	3700	91-20-3	D1
Acenaphthylene	ND	µg/kg	3700	208-96-8	D1
Acenaphthene	ND	µg/kg	3700	83-32-9	D1
Fluorene	ND	µg/kg	3700	86-73-7	D1
Phenanthrene	11300	µg/kg	3700	85-01-8	D1
Anthracene	ND	µg/kg	3700	120-12-7	D1
Fluoranthene	20700	µg/kg	3700	206-44-0	D1
Pyrene	26100	µg/kg	3700	129-00-0	D1
Benzo(a)anthracene	11000	µg/kg	3700	56-55-3	D1
Chrysene	10800	µg/kg	3700	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	3700	205-99-2	D1
Benzo(k)fluoroanthene	18500	µg/kg	3700	207-08-9	D1
Benzo(a)pyrene	11900	µg/kg	3700	50-32-8	D1
Ideno(1,2,3-c,d)pyrene	4010	µg/kg	3700	193-39-5	D1
Dibenz(a,h)anthracene	ND	µg/kg	3700	53-70-3	D1
Benzo(g,h,i)perylene	4660	µg/kg	3700	191-24-2	D1

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)		D - 106	S9
Phenol-d6 (AS-2)		D - 122	S9
Nitrobenzene (BS-1)		D - 122	S9
2-Fluorobiphenyl (BS-2)		D - 115	S9
2,4,6-Tribromophenol (AS-3)		D - 166	S9
Terphenyl-d14 (BS-3)		D - 205	S9

COMMENTS:

D1 = Sample required dilution due to matrix interference.

S9 = The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria. The method control sample recovery was acceptable.

Reviewed by: Wendy Ozminkowski Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-C7/S-1@3'

Lab #: S376787
Sampling Date: 03/17/04
Date Received: 03/18/04
Extraction Date: 03/22/04
Analysis Date: 03/27/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 86.6%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	948	91-20-3	D1
Acenaphthylene	ND	µg/kg	948	208-96-8	D1
Acenaphthene	ND	µg/kg	948	83-32-9	D1
Fluorene	ND	µg/kg	948	86-73-7	D1
Phenanthrene	1270	µg/kg	948	85-01-8	D1
Anthracene	ND	µg/kg	948	120-12-7	D1
Fluoranthene	ND	µg/kg	948	206-44-0	D1
Pyrene	ND	µg/kg	948	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	948	56-55-3	D1
Chrysene	ND	µg/kg	948	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	948	205-99-2	D1, E6
Benzo(k)fluoroanthene	1170	µg/kg	948	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	948	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	948	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	948	53-70-3	D1, E6
Benzo(g,h,i)perylene	ND	µg/kg	948	191-24-2	D1, E6, V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	94.0%	D - 106	
Phenol-d6 (AS-2)	108%	D - 122	
Nitrobenzene (BS-1)	122%	D - 122	
2-Fluorobiphenyl (BS-2)	124%	D - 115	S11
2,4,6-Tribromophenol (AS-3)	137%	D - 166	
Terphenyl-d14 (BS-3)	156%	D - 205	

COMMENTS:
 D1 = Sample required dilution due to matrix interference.
 E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
 S11 = Surrogate recovery was high.
 V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: *Mensky Dymnikowski* Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

APPENDIX D REPORT LIMITATIONS AND GUIDELINES FOR USE¹

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

This report has been prepared for the exclusive use of Spokane Public Facilities District, 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 sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment 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 project site. No one except Spokane Public Facilities District should rely on this environmental report without first conferring with GeoEngineers. This report should not be applied 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 Spokane Convention Center Expansion Project Site. 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, do not 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 after the date of this report, GeoEngineers should be given the opportunity to review our interpretations and recommendations and 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 in advance to such reliance in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

¹ Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-C1/S-1@3'

Lab #: S376788
 Sampling Date: 03/17/04
 Date Received: 03/18/04
 Extraction Date: 03/22/04
 Analysis Date: 03/28/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 88.3%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	186	91-20-3	
Acenaphthylene	ND	µg/kg	186	208-96-8	
Acenaphthene	ND	µg/kg	186	83-32-9	
Fluorene	ND	µg/kg	186	86-73-7	
Phenanthrene	603	µg/kg	186	85-01-8	
Anthracene	ND	µg/kg	186	120-12-7	
Fluoranthene	644	µg/kg	186	206-44-0	
Pyrene	552	µg/kg	186	129-00-0	
Benzo(a)anthracene	253	µg/kg	186	56-55-3	
Chrysene	248	µg/kg	186	218-01-9	
Benzo(b)fluoranthene	ND	µg/kg	186	205-99-2	E6
Benzo(k)fluoroanthene	422	µg/kg	186	207-08-9	E6
Benzo(a)pyrene	207	µg/kg	186	50-32-8	E6
Indeno(1,2,3-c,d)pyrene	ND	µg/kg	186	193-39-5	E6
Dibenz(a,h)anthracene	ND	µg/kg	186	53-70-3	E6
Benzo(g,h,i)perylene	ND	µg/kg	186	191-24-2	E6, V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	76.4%	D - 106	
Phenol-d6 (AS-2)	96.1%	D - 122	
Nitrobenzene (BS-1)	86.6%	D - 122	
2-Fluorobiphenyl (BS-2)	102%	D - 115	
2,4,6-Tribromophenol (AS-3)	151%	D - 166	
Terphenyl-d14 (BS-3)	149%	D - 205	

COMMENTS:
 E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
 V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Wendy Dymnicki Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-C3/S-1@3'

Lab #: S376789
Sampling Date: 03/17/04
Date Received: 03/18/04
Extraction Date: 03/22/04
Analysis Date: 03/28/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 94.7%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	176	91-20-3	
Acenaphthylene	ND	µg/kg	176	208-96-8	
Acenaphthene	ND	µg/kg	176	83-32-9	
Fluorene	ND	µg/kg	176	86-73-7	
Phenanthrene	ND	µg/kg	176	85-01-8	
Anthracene	ND	µg/kg	176	120-12-7	
Fluoranthene	ND	µg/kg	176	206-44-0	
Pyrene	ND	µg/kg	176	129-00-0	
Benzo(a)anthracene	ND	µg/kg	176	56-55-3	
Chrysene	ND	µg/kg	176	218-01-9	
Benzo(b)fluoranthene	ND	µg/kg	176	205-99-2	
Benzo(k)fluoroanthene	ND	µg/kg	176	207-08-9	
Benzo(a)pyrene	ND	µg/kg	176	50-32-8	
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	176	193-39-5	
Dibenz(a,h)anthracene	ND	µg/kg	176	53-70-3	
Benzo(g,h,i)perylene	ND	µg/kg	176	191-24-2	V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	32.7%	D - 106	
Phenol-d6 (AS-2)	39.2%	D - 122	
Nitrobenzene (BS-1)	40.6%	D - 122	
2-Fluorobiphenyl (BS-2)	39.5%	D - 115	
2,4,6-Tribromophenol (AS-3)	68.0%	D - 166	
Terphenyl-d14 (BS-3)	113%	D - 205	

COMMENTS:
V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Wendy Pyminkowski Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

SVL Analytical, Inc.

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-E7/S-1@3'

Lab #: S376790
 Sampling Date: 03/17/04
 Date Received: 03/18/04
 Extraction Date: 03/22/04
 Analysis Date: 03/28/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 95.5%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	174	91-20-3	
Acenaphthylene	ND	µg/kg	174	208-96-8	
Acenaphthene	ND	µg/kg	174	83-32-9	
Fluorene	ND	µg/kg	174	86-73-7	
Phenanthrene	ND	µg/kg	174	85-01-8	
Anthracene	ND	µg/kg	174	120-12-7	
Fluoranthene	ND	µg/kg	174	206-44-0	
Pyrene	ND	µg/kg	174	129-00-0	
Benzo(a)anthracene	ND	µg/kg	174	56-55-3	
Chrysene	ND	µg/kg	174	218-01-9	
Benzo(b)fluoranthene	ND	µg/kg	174	205-99-2	
Benzo(k)fluoroanthene	ND	µg/kg	174	207-08-9	
Benzo(a)pyrene	ND	µg/kg	174	50-32-8	
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	174	193-39-5	
Dibenz(a,h)anthracene	ND	µg/kg	174	53-70-3	
Benzo(g,h,i)perylene	ND	µg/kg	174	191-24-2	V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	33.7%	D - 106	
Phenol-d6 (AS-2)	39.6%	D - 122	
Nitrobenzene (BS-1)	40.3%	D - 122	
2-Fluorobiphenyl (BS-2)	37.4%	D - 115	
2,4,6-Tribromophenol (AS-3)	72.4%	D - 166	
Terphenyl-d14 (BS-3)	125%	D - 205	

COMMENTS:
 V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Mendy Ozminkowski Date: 3/30/04

Nebraska Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results reported on a dry weight basis

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-F7/S-1@3'

Lab #: S376791
Sampling Date: 03/17/04
Date Received: 03/18/04
Extraction Date: 03/22/04
Analysis Date: 03/28/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 92.4%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	901	91-20-3	D1
Acenaphthylene	ND	µg/kg	901	208-96-8	D1
Acenaphthene	ND	µg/kg	901	83-32-9	D1
Fluorene	ND	µg/kg	901	86-73-7	D1
Phenanthrene	ND	µg/kg	901	85-01-8	D1
Anthracene	ND	µg/kg	901	120-12-7	D1
Fluoranthene	ND	µg/kg	901	206-44-0	D1
Pyrene	ND	µg/kg	901	129-00-0	D1, E6
Benzo(a)anthracene	ND	µg/kg	901	56-55-3	D1, E6
Chrysene	ND	µg/kg	901	218-01-9	D1, E6
Benzo(b)fluoranthene	ND	µg/kg	901	205-99-2	D1, E6
Benzo(k)fluoroanthene	ND	µg/kg	901	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	901	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	901	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	901	53-70-3	D1, E6
Benzo(g,h,i)perylene	ND	µg/kg	901	191-24-2	D1, E6, V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	99.8%	D - 106	
Phenol-d6 (AS-2)	112%	D - 122	
Nitrobenzene (BS-1)	126%	D - 122	S11
2-Fluorobiphenyl (BS-2)	124%	D - 115	S11
2,4,6-Tribromophenol (AS-3)	134%	D - 166	
Terphenyl-d14 (BS-3)	275%	D - 205	S11, E6

COMMENTS:
D1 = Sample required dilution due to matrix interference.
E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
S11 = Surrogate recovery was high.
V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Melinda Dymnikowski Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-G6/S-1@3'

Lab #: S376792
Sampling Date: 03/17/04
Date Received: 03/18/04
Extraction Date: 03/22/04
Analysis Date: 03/28/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 88.9%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	932	91-20-3	D1
Acenaphthylene	ND	µg/kg	932	208-96-8	D1
Acenaphthene	ND	µg/kg	932	83-32-9	D1
Fluorene	ND	µg/kg	932	86-73-7	D1
Phenanthrene	2920	µg/kg	932	85-01-8	D1
Anthracene	ND	µg/kg	932	120-12-7	D1
Fluoranthene	5020	µg/kg	932	206-44-0	D1
Pyrene	8010	µg/kg	932	129-00-0	D1
Benzo(a)anthracene	2450	µg/kg	932	56-55-3	D1
Chrysene	2410	µg/kg	932	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	932	205-99-2	D1, E6
Benzo(k)fluoroanthene	3600	µg/kg	932	207-08-9	D1, E6
Benzo(a)pyrene	2120	µg/kg	932	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	978	µg/kg	932	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	932	53-70-3	D1, E6
Benzo(g,h,i)perylene	1210	µg/kg	932	191-24-2	D1, E6, V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	94.6%	D - 106	
Phenol-d6 (AS-2)	115%	D - 122	
Nitrobenzene (BS-1)	106%	D - 122	
2-Fluorobiphenyl (BS-2)	122%	D - 115	S11
2,4,6-Tribromophenol (AS-3)	155%	D - 166	
Terphenyl-d14 (BS-3)	255%	D - 205	S11

COMMENTS:
 01 = Sample required dilution due to matrix interference.
 06 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
 11 = Surrogate recovery was high.
 08 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Mandy Ozminkowski Date: 3/30/04

Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results reported on a dry weight basis

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-D8/S-1@2'

Lab #: S376793
Sampling Date: 03/17/04
Date Received: 03/18/04
Extraction Date: 03/22/04
Analysis Date: 03/28/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 92.5%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	180	91-20-3	
Acenaphthylene	ND	µg/kg	180	208-96-8	
Acenaphthene	ND	µg/kg	180	83-32-9	
Fluorene	ND	µg/kg	180	86-73-7	
Phenanthrene	225	µg/kg	180	85-01-8	
Anthracene	ND	µg/kg	180	120-12-7	
Fluoranthene	657	µg/kg	180	206-44-0	
Pyrene	1150	µg/kg	180	129-00-0	E6
Benzo(a)anthracene	400	µg/kg	180	56-55-3	E6
Chrysene	377	µg/kg	180	218-01-9	E6
Benzo(b)fluoranthene	ND	µg/kg	180	205-99-2	E6
Benzo(k)fluoroanthene	663	µg/kg	180	207-08-9	E6
Benzo(a)pyrene	393	µg/kg	180	50-32-8	E6
Ideno(1,2,3-c,d)pyrene	218	µg/kg	180	193-39-5	E6
Dibenz(a,h)anthracene	ND	µg/kg	180	53-70-3	E6
Benzo(g,h,i)perylene	261	µg/kg	180	191-24-2	E6, V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	81.5%	D - 106	
Phenol-d6 (AS-2)	102%	D - 122	
Nitrobenzene (BS-1)	90.5%	D - 122	
2-Fluorobiphenyl (BS-2)	109%	D - 115	
2,4,6-Tribromophenol (AS-3)	159%	D - 166	
Terphenyl-d14 (BS-3)	258%	D - 205	S11, E6

COMMENTS:
 6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
 11 = Surrogate recovery was high.
 8 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Mandy Dyminkowski Date: 3/30/04

Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

SVL Analytical, Inc.

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Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-D5/S-1@3'

Lab #: S376794
 Sampling Date: 03/17/04
 Date Received: 03/18/04
 Extraction Date: 03/22/04
 Analysis Date: 03/28/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 87.8%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	938	91-20-3	D1
Acenaphthylene	ND	µg/kg	938	208-96-8	D1
Acenaphthene	ND	µg/kg	938	83-32-9	D1
Fluorene	ND	µg/kg	938	86-73-7	D1
Phenanthrene	1190	µg/kg	938	85-01-8	D1
Anthracene	ND	µg/kg	938	120-12-7	D1
Fluoranthene	1620	µg/kg	938	206-44-0	D1
Pyrene	3060	µg/kg	938	129-00-0	D1, E6
Benzo(a)anthracene	ND	µg/kg	938	56-55-3	D1, E6
Chrysene	ND	µg/kg	938	218-01-9	D1, E6
Benzo(b)fluoranthene	ND	µg/kg	938	205-99-2	D1, E6
Benzo(k)fluoroanthene	1430	µg/kg	938	207-08-9	D1, E6
Benzo(a)pyrene	ND	µg/kg	938	50-32-8	D1, E6
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	938	193-39-5	D1, E6
Dibenz(a,h)anthracene	ND	µg/kg	938	53-70-3	D1, E6
Benzo(g,h,i)perylene	ND	µg/kg	938	191-24-2	D1, E6, V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	115%	D - 106	S11
Phenol-d6 (AS-2)	132%	D - 122	S11
Nitrobenzene (BS-1)	126%	D - 122	S11
2-Fluorobiphenyl (BS-2)	144%	D - 115	S11
2,4,6-Tribromophenol (AS-3)	166%	D - 166	
Terphenyl-d14 (BS-3)	344%	D - 205	S11, E6

COMMENTS:
 D1 = Sample required dilution due to matrix interference.
 E6 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
 S11 = Surrogate recovery was high.
 V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Mendy Dymnikowski Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-F6/S-1@3'

Lab #: S376795
Sampling Date: 03/17/04
Date Received: 03/18/04
Extraction Date: 03/22/04
Analysis Date: 03/28/04
Matrix: Soil
Analyst: KBH,CDC
% Solids: 83.4%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	999	91-20-3	D1,E6
Acenaphthylene	ND	µg/kg	999	208-96-8	D1
Acenaphthene	ND	µg/kg	999	83-32-9	D1
Fluorene	ND	µg/kg	999	86-73-7	D1
Phenanthrene	4080	µg/kg	999	85-01-8	D1
Anthracene	ND	µg/kg	999	120-12-7	D1
Fluoranthene	5840	µg/kg	999	206-44-0	D1
Pyrene	10400	µg/kg	999	129-00-0	D1, E2, E6
Benzo(a)anthracene	2660	µg/kg	999	56-55-3	D1,E6
Chrysene	2570	µg/kg	999	218-01-9	D1,E6
Benzo(b)fluoranthene	ND	µg/kg	999	205-99-2	D1,E6
Benzo(k)fluoroanthene	4530	µg/kg	999	207-08-9	D1,E6
Benzo(a)pyrene	2700	µg/kg	999	50-32-8	D1,E6
Indeno(1,2,3-c,d)pyrene	1980	µg/kg	999	193-39-5	D1,E6
Dibenz(a,h)anthracene	ND	µg/kg	999	53-70-3	D1,E6
Benzo(g,h,i)perylene	2660	µg/kg	999	191-24-2	D1, E6, V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	110%	D - 106	S11
Phenol-d6 (AS-2)	127%	D - 122	S11
Nitrobenzene (BS-1)	131%	D - 122	S11, E6
2-Fluorobiphenyl (BS-2)	145%	D - 115	S11
2,4,6-Tribromophenol (AS-3)	179%	D - 166	S11
Terphenyl-d14 (BS-3)	328%	D - 205	S11, E6

COMMENTS:

- 1 = Sample required dilution due to matrix interference.
- 2 = Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to sample matrix.
- 3 = Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
- 11 = Surrogate recovery was high.
- 3 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Wendy Dymnikowski Date: 3/30/04

Washington Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
PQL - Practical Quantitation Limit
* Results reported on a dry weight basis

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: Method Blank

Lab #: S032204P

Sampling Date:

Date Received:

Extraction Date: 03/22/04

Analysis Date: 03/24/04

Matrix: Soil

Analyst: KBH,CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	167	91-20-3	
Acenaphthylene	ND	µg/kg	167	208-96-8	
Acenaphthene	ND	µg/kg	167	83-32-9	
Fluorene	ND	µg/kg	167	86-73-7	
Phenanthrene	ND	µg/kg	167	85-01-8	
Anthracene	ND	µg/kg	167	120-12-7	
Fluoranthene	ND	µg/kg	167	206-44-0	
Pyrene	ND	µg/kg	167	129-00-0	
Benzo(a)anthracene	ND	µg/kg	167	56-55-3	
Chrysene	ND	µg/kg	167	218-01-9	
Benzo(b)fluoranthene	ND	µg/kg	167	205-99-2	
Benzo(k)fluoroanthene	ND	µg/kg	167	207-08-9	
Benzo(a)pyrene	ND	µg/kg	167	50-32-8	
Ideno(1,2,3-c,d)pyrene	ND	µg/kg	167	193-39-5	
Dibenz(a,h)anthracene	ND	µg/kg	167	53-70-3	
Benzo(g,h,i)perylene	ND	µg/kg	167	191-24-2	

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	29.3%	D - 106	
Phenol-d6 (AS-2)	31.2%	D - 122	
Nitrobenzene (BS-1)	33.2%	D - 122	
2-Fluorobiphenyl (BS-2)	32.4%	D - 115	
2,4,6-Tribromophenol (AS-3)	23.9%	D - 166	
Terphenyl-d14 (BS-3)	85.9%	D - 205	

COMMENTS:

Reviewed by: Mendy Dymnikowski Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results reported on a dry weight basis

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: Lab Control Sample

Lab #: S032204C

Sampling Date:

Date Received:

Extraction Date: 03/22/04

Analysis Date: 03/24/04

Matrix: Soil

Analyst: KBH,CDC

% Solids: 100%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	235	µg/kg	167	91-20-3	
Acenaphthylene	245	µg/kg	167	208-96-8	
Acenaphthene	242	µg/kg	167	83-32-9	
Fluorene	285	µg/kg	167	86-73-7	
Phenanthrene	488	µg/kg	167	85-01-8	
Anthracene	489	µg/kg	167	120-12-7	
Fluoranthene	608	µg/kg	167	206-44-0	
Pyrene	655	µg/kg	167	129-00-0	
Benzo(a)anthracene	638	µg/kg	167	56-55-3	
Chrysene	657	µg/kg	167	218-01-9	
Benzo(b)fluoranthene	658	µg/kg	167	205-99-2	
Benzo(k)fluoroanthene	663	µg/kg	167	207-08-9	
Benzo(a)pyrene	665	µg/kg	167	50-32-8	
Ideno(1,2,3-c,d)pyrene	648	µg/kg	167	193-39-5	
Dibenz(a,h)anthracene	649	µg/kg	167	53-70-3	
Benzo(g,h,i)perylene	647	µg/kg	167	191-24-2	

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	25.0%	D - 106	
Phenol-d6 (AS-2)	28.5%	D - 122	
Nitrobenzene (BS-1)	29.1%	D - 122	
2-Fluorobiphenyl (BS-2)	28.7%	D - 115	
2,4,6-Tribromophenol (AS-3)	51.1%	D - 166	
Terphenyl-d14 (BS-3)	83.0%	D - 205	

COMMENTS:

Reviewed by: Wendy Dyminkowska Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

Quality Control Results

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: Lab Control Sample

Lab #: S032204C

Analysis Date: 03/24/04

Units: µg/kg

% Solids: 100%

Analyte	Blank*	Conc. Added*	LCS*	LCS %R	%R Limits	Data Qualifier
Naphthalene	ND	833	235	28.2%	70 - 130	L4
Acenaphthylene	ND	833	245	29.4%	70 - 130	L4
Acenaphthene	ND	833	242	29.0%	70 - 130	L4
Fluorene	ND	833	285	34.2%	70 - 130	L4
Phenanthrene	ND	833	488	58.6%	70 - 130	L4
Anthracene	ND	833	489	58.7%	70 - 130	L4
Fluoranthene	ND	833	608	73.0%	70 - 130	
Pyrene	ND	833	655	78.6%	70 - 130	
Benzo(a)anthracene	ND	833	638	76.6%	70 - 130	
Chrysene	ND	833	657	78.9%	70 - 130	
Benzo(b)fluoranthene	ND	833	658	79.0%	70 - 130	
Benzo(k)fluoroanthene	ND	833	663	79.6%	70 - 130	
Benzo(a)pyrene	ND	833	665	79.8%	70 - 130	
Indeno(1,2,3-c,d)pyrene	ND	833	648	77.8%	70 - 130	
Dibenz(a,h)anthracene	ND	833	649	77.9%	70 - 130	
Benzo(g,h,i)perylene	ND	833	647	77.7%	70 - 130	

COMMENTS:

L4 = The associated LCS recovery was below method acceptance limits.

Reviewed by:

*Mendy Dymnikowski*Date: *3/30/04*

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

* Results reported on a dry weight basis

LCS - Laboratory Control Sample

MS/MSD - Matrix Spike/Matrix Spike Duplicate

Quality Control Results

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

523 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-C3/S-1@3' MS/MSD

Lab #: S376789MS/MSD

Analysis Date: 03/28/04

Units: µg/kg

% Solids: 94.7%

Analyte	Sample	Conc. added	MS	MSD	MS %R	MSD %R	RPD	%R Limits	RPD Limits	Data Qualifier
Naphthalene	ND	880	408	367	46.3%	41.7%	10.6%	70 - 130	20	M7
Acenaphthylene	ND	880	424	413	48.1%	46.9%	2.5%	70 - 130	20	M7
Acenaphthene	ND	880	421	407	47.9%	46.3%	3.3%	70 - 130	20	M7
Fluorene	ND	880	602	573	68.4%	65.1%	5.0%	70 - 130	20	M7
Phenanthrene	ND	880	1010	1160	115%	132%	13.8%	70 - 130	20	M6
Anthracene	ND	880	1030	1030	117%	117%	0.0%	70 - 130	20	
Fluoranthene	ND	880	1240	1650	141%	188%	28.4%	70 - 130	20	M1, R1
Pyrene	ND	880	1070	1320	122%	150%	20.9%	70 - 130	20	M1, R1
Benzo(a)anthracene	ND	880	1130	1250	128%	142%	10.1%	70 - 130	20	M1
Chrysene	ND	880	1180	1360	134%	155%	14.2%	70 - 130	20	M1
Benzo(b)fluoranthene	ND	880	1130	1430	128%	163%	23.4%	70 - 130	20	M1, R1
Benzo(k)fluoranthene	ND	880	1120	1220	127%	139%	8.5%	70 - 130	20	M1
Benzo(a)pyrene	ND	880	955	1080	109%	123%	12.3%	70 - 130	20	
Ideno(1,2,3-c,d)pyrene	ND	880	503	587	57.2%	66.7%	15.4%	70 - 130	20	M2
Dibenz(a,h)anthracene	ND	880	513	570	58.3%	64.8%	10.6%	70 - 130	20	M2
Benzo(g,h,i)perylene	ND	880	432	518	49.1%	58.8%	18.1%	70 - 130	20	M2

Comments:

M1 = Matrix spike recovery was high, the method control sample recovery was acceptable.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.

M6 = Matrix spike recovery was high

M7 = Matrix spike recovery was low

R1 = RPD exceeded the method control limit.

Reviewed by: Wendy Dyminkowski

Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL

PQL - Practical Quantitation Limit

LCS - Lab Control Sample

MS/MSD - Matrix Spike/Matrix Spike Duplicate

RPD - Relative Percent Difference

TRANSMISSION VERIFICATION REPORT

TIME : 03/31/2004 12:09
 NAME : SVL ANALYTICAL
 FAX : 2087830891
 TEL : 2087841258
 SER.# : BROF3J496071

DATE, TIME
 FAX NO./NAME
 DURATION
 PAGE(S)
 RESULT
 MODE

03/31 12:09
 915093633126
 00:00:19
 01
 OK
 FINE
 ECM

SVL ANALYTICAL, INC.
 One Government Gulch - Kellogg, ID 83837-0

SAMPLE RECEIPT CONFIRMATION

CLIENT: Dave Enos
 Geo Engineers
 523 East 2nd Avenue

Spokane WA 99202
 FAX: (509)363-3126

SVL#	M	ClientID	Sampled	Time	By	Received	Sample Comments
377984	E	TP-C7/S-1@3'	3/17/04	10:00	ME	3/31/04	
377985	E	TP-G6/S-1@3'	3/17/04	13:30	ME	3/31/04	
377986	E	TP-G4/S-1@2.5'	3/18/04	9:40	ME	3/31/04	
377987	E	EXTRACTION FLUID 1	3/18/04	:	ME	3/31/04	
377988	E	EXTRACTION FLUID 2	3/18/04	:	ME	3/31/04	

ADDITIONAL COMMENTS FOR JOB: Sample Cooler/Container temp not measured upon receipt

- [] These samples will be DISPOSED 45 days after job completion.
- [X] These samples will be ARCHIVED 45 days, then you will receive a letter request.

Please contact Ben Martin (208-784-1258) if you have questions regarding the receipt.

CLIENT : Geo Engineers
PROJECT: 0110-047-02

Sample Receipt: 3/18/04
Report Date: 3/26/04

Page 1 of 1
SVL JOB: 110093

SVL ID	CLIENT SAMPLE ID		As 6010B	Cd 6010B	Pb 6010B	Hg 7471A	% Sol. 999
S376785	TP-B7/S-1@3'	3/17/04	7.0mg/kg	<0.20mg/kg	233mg/kg	0.107mg/kg	85.0%
S376786	TP-B8/S-1@3'	3/17/04	22.9mg/kg	2.32mg/kg	383mg/kg	0.173mg/kg	86.4%
S376787	TP-C7/S-1@3'	3/17/04	34.9mg/kg	0.98mg/kg	389mg/kg	0.297mg/kg	89.8%
S376788	TP-C1/S-1@3'	3/17/04	9.3mg/kg	<0.20mg/kg	51.3mg/kg	0.177mg/kg	89.6%
S376789	TP-C3/S-1@3'	3/17/04	11.1mg/kg	<0.20mg/kg	12.2mg/kg	<0.0333mg/kg	93.0%
S376790	TP-E7/S-1@3'	3/17/04	10.9mg/kg	<0.20mg/kg	7.17mg/kg	<0.0333mg/kg	95.1%
S376791	TP-F7/S-1@3'	3/17/04	34.5mg/kg	6.00mg/kg	2810mg/kg	1.21mg/kg	94.2%
S376792	TP-G6/S-1@3'	3/17/04	11.2mg/kg	1.37mg/kg	1570mg/kg	0.307mg/kg	91.6%
S376793	TP-D8/S-1@2'	3/17/04	8.5mg/kg	<0.20mg/kg	589mg/kg	0.168mg/kg	92.3%
S376794	TP-D5/S-1@3'	3/17/04	7.0mg/kg	<0.20mg/kg	44.8mg/kg	0.0850mg/kg	91.6%
S376795	TP-F6/S-1@3'	3/17/04	6.3mg/kg	<0.20mg/kg	73.6mg/kg	0.148mg/kg	91.2%

Soil Samples: As Received Basis

Certificate: WA DOE NO. C074; DOH NO. 050
Reviewed By: _____



Date: 3/26/04

Routing
File

APR 02 2004

GeoEngineers

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110093
PROJECT: 0110-047-02	SAMPLE: 376792
CLIENT SAMPLE ID: TP-G6/S-1@3'	
Sample Collected: 3/17/04 13:30	% Solids: 91.6%
Sample Receipt : 3/18/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	11.2	mg/kg		6010B	3/23/04
Cadmium	1.37	mg/kg		6010B	3/23/04
Mercury	0.307	mg/kg		7471A	3/25/04
Lead	1570	mg/kg		6010B	3/23/04

Reviewed By: _____ Date 3/26/04
[Signature]
3/26/04 10:45

CLIENT : Geo Engineers

SVL JOB: 110093

PROJECT: 0110-047-02

SAMPLE: 376793

CLIENT SAMPLE ID: TP-D8/S-1@2'

Sample Collected: 3/17/04 14:10

% Solids: 92.3%

Sample Receipt : 3/18/04

Matrix: SOIL

Date of Report : 3/26/04

As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	8.5	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.168	mg/kg		7471A	3/25/04
Lead	589	mg/kg		6010B	3/23/04

Reviewed By: _____



Date

3/26/04

3/26/04 10:45

SVL ANALYTICAL, INC.

One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

Certificate: WA DOE NO. C074; DOH NO. 050

CLIENT : Geo Engineers	SVL JOB: 110093
PROJECT: 0110-047-02	SAMPLE: 376795
CLIENT SAMPLE ID: TP-F6/S-1@3'	
Sample Collected: 3/17/04 16:10	% Solids: 91.2%
Sample Receipt : 3/18/04	Matrix: SOIL
Date of Report : 3/26/04	As Received Basis

Determination	Result	Units	Dilution	Method	Analyzed
Arsenic	6.3	mg/kg		6010B	3/23/04
Cadmium	<0.20	mg/kg		6010B	3/23/04
Mercury	0.148	mg/kg		7471A	3/25/04
Lead	73.6	mg/kg		6010B	3/23/04

Reviewed By: _____



Date

3/26/04

3/26/04 10:45

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

23 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-B8/S-1@3'

Lab #: S376786
 Sampling Date: 03/17/04
 Date Received: 03/18/04
 Extraction Date: 03/22/04
 Analysis Date: 03/25/04
 Matrix: Soil
 Analyst: KBH,CDC
 % Solids: 83.4%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	ND	µg/kg	3980	91-20-3	D1
Acenaphthylene	ND	µg/kg	3980	208-96-8	D1
Acenaphthene	ND	µg/kg	3980	83-32-9	D1
Fluorene	ND	µg/kg	3980	86-73-7	D1
Phenanthrene	ND	µg/kg	3980	85-01-8	D1
Anthracene	ND	µg/kg	3980	120-12-7	D1
Fluoranthene	ND	µg/kg	3980	206-44-0	D1
Pyrene	ND	µg/kg	3980	129-00-0	D1
Benzo(a)anthracene	ND	µg/kg	3980	56-55-3	D1
Chrysene	ND	µg/kg	3980	218-01-9	D1
Benzo(b)fluoranthene	ND	µg/kg	3980	205-99-2	D1
Benzo(k)fluoroanthene	ND	µg/kg	3980	207-08-9	D1
Benzo(a)pyrene	ND	µg/kg	3980	50-32-8	D1
Indeno(1,2,3-c,d)pyrene	ND	µg/kg	3980	193-39-5	D1
Dibenz(a,h)anthracene	ND	µg/kg	3980	53-70-3	D1
Benzo(g,h,i)perylene	ND	µg/kg	3980	191-24-2	D1

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)		D - 106	S9
Phenol-d6 (AS-2)		D - 122	S9
Nitrobenzene (BS-1)		D - 122	S9
2-Fluorobiphenyl (BS-2)		D - 115	S9
2,4,6-Tribromophenol (AS-3)		D - 166	S9
Terphenyl-d14 (BS-3)		D - 205	S9

COMMENTS:

D1 = Sample required dilution due to matrix interference.
 S9 = The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria. The method control sample recovery was acceptable.

Reviewed by: Wendy Dymkowski Date: 3/30/04

Idaho Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
 PQL - Practical Quantitation Limit
 * Results reported on a dry weight basis

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

23 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-C3/S-1@3' MS

Lab #: S376789MS

Sampling Date: 03/17/04

Date Received: 03/18/04

Extraction Date: 03/22/04

Analysis Date: 03/28/04

Matrix: Soil

Analyst: KBH,CDC

% Solids: 94.7%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	408	µg/kg	176	91-20-3	
Acenaphthylene	424	µg/kg	176	208-96-8	
Acenaphthene	421	µg/kg	176	83-32-9	
Fluorene	602	µg/kg	176	86-73-7	
Phenanthrene	1010	µg/kg	176	85-01-8	
Anthracene	1030	µg/kg	176	120-12-7	
Fluoranthene	1240	µg/kg	176	206-44-0	
Pyrene	1070	µg/kg	176	129-00-0	
Benzo(a)anthracene	1130	µg/kg	176	56-55-3	
Chrysene	1180	µg/kg	176	218-01-9	
Benzo(b)fluoranthene	1130	µg/kg	176	205-99-2	
Benzo(k)fluoranthene	1120	µg/kg	176	207-08-9	
Benzo(a)pyrene	955	µg/kg	176	50-32-8	
Ideno(1,2,3-c,d)pyrene	503	µg/kg	176	193-39-5	
Dibenz(a,h)anthracene	513	µg/kg	176	53-70-3	
Benzo(g,h,i)perylene	432	µg/kg	176	191-24-2	V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	37.1%	D - 106	
Phenol-d6 (AS-2)	43.8%	D - 122	
Nitrobenzene (BS-1)	44.6%	D - 122	
2-Fluorobiphenyl (BS-2)	41.4%	D - 115	
2,4,6-Tribromophenol (AS-3)	110%	D - 166	
Terphenyl-d14 (BS-3)	126%	D - 205	

COMMENTS:

V8 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Wandy Ozminkowski Date: 3/30/04

Nevada Cert. # ID-19-2004-19; Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
PQL - Practical Quantitation Limit
* Results reported on a dry weight basis
MS - Matrix Spike

SVL Analytical, Inc.

One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837-0929 * Phone:(208) 784-1258 * Fax:(208) 783-0891

Certificate of Analysis

EPA Method 8270C - Polyaromatic Hydrocarbons (PAHs)

Geo Engineers

23 E. 2nd Ave.
Spokane, WA 99202

SVL Job #: 110093

Sample Name: TP-C3/S-1@3' MSD

Lab #: S376789MSD

Sampling Date: 03/17/04

Date Received: 03/18/04

Extraction Date: 03/22/04

Analysis Date: 03/28/04

Matrix: Soil

Analyst: KBH,CDC

% Solids: 94.7%

Analyte	Results*	Units	PQL*	Cas #	Data Qualifier
Naphthalene	367	µg/kg	176	91-20-3	
Acenaphthylene	413	µg/kg	176	208-96-8	
Acenaphthene	407	µg/kg	176	83-32-9	
Fluorene	573	µg/kg	176	86-73-7	
Phenanthrene	1160	µg/kg	176	85-01-8	
Anthracene	1030	µg/kg	176	120-12-7	
Fluoranthene	1650	µg/kg	176	206-44-0	
Pyrene	1320	µg/kg	176	129-00-0	
Benzo(a)anthracene	1250	µg/kg	176	56-55-3	
Chrysene	1360	µg/kg	176	218-01-9	
Benzo(b)fluoranthene	1430	µg/kg	176	205-99-2	
Benzo(k)fluoroanthene	1220	µg/kg	176	207-08-9	
Benzo(a)pyrene	1080	µg/kg	176	50-32-8	
Indeno(1,2,3-c,d)pyrene	587	µg/kg	176	193-39-5	
Dibenz(a,h)anthracene	570	µg/kg	176	53-70-3	
Benzo(g,h,i)perylene	518	µg/kg	176	191-24-2	V8

Surrogate	%R	%R Limits	Data Qualifier
2-Fluorophenol (AS-1)	32.1%	D - 106	
Phenol-d6 (AS-2)	38.9%	D - 122	
Nitrobenzene (BS-1)	39.4%	D - 122	
2-Fluorobiphenyl (BS-2)	39.0%	D - 115	
2,4,6-Tribromophenol (AS-3)	118%	D - 166	
Terphenyl-d14 (BS-3)	139%	D - 205	

COMMENTS:

8 = Calibration verification recovery was below the method control limit for this analyte, however, the average %difference of %drift for all the analytes met method criteria.

Reviewed by: Wendy Dymkowski Date: 3/30/04

Washington Accred. # C074; Arizona Lic. # AZ0538; California Cert. # 2080; Idaho Accred. # ID00019; Montana Cert. # CERT0027; Colorado Cert. #08/13/03

ND = not detected at stated PQL
PQL - Practical Quantitation Limit
* Results reported on a dry weight basis
MSD - Matrix Spike Duplicate

Have we delivered World Class Client Service?
Please let us know by visiting [www. geoengineers.com/feedback](http://www.geoengineers.com/feedback).

