REMEDIAL INVESTIGATION

Crownhill Elementary School

Prepared for: Bremerton School District

Project No. 100094 • October 2013 Public Review Draft

Aspect CONSULTING

earth + water

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PRELIMINARY

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Executive Summary

This Remedial Investigation (RI) report addresses the nature and extent of soil, groundwater, and air quality impacts associated with historical landfill activities at the Crownhill Elementary School (School) property. Because the landfill materials were found to extend beyond the boundaries of the School property, the RI study area (the Site) was expanded to include the Bremerton United Methodist Church (Church) property and adjacent residential properties.

Aspect Consulting prepared this RI on behalf of the Bremerton School District (BSD) and in accordance with Agreed Order No. DE7916 between BSD and the Washington Department of Ecology (Ecology). RI information will be used in preparing a Feasibility Study (FS) that evaluates remedial action alternatives. Screening levels used in this RI to evaluate contaminant concentrations are based on unrestricted site use for protection against direct contact (soil), drinking water consumption (groundwater), and vapor inhalation (air) exposures.

Historical Activities

Activities that pre-date BSD ownership of the property resulted in subsurface contamination that is the subject of this RI. The property was used for sand and gravel mining up to the 1930s, as a municipal/industrial landfill in the 1930s and 1940s, and as a Kitsap County maintenance facility in the 1940s. BSD acquired the property from Kitsap County in 1954, and the original school was constructed in 1956. That school partially burned down in 1993, and construction of the current school building was completed in 1996.

Landfilling activities are the primary source of the subsurface contamination identified in this RI. Using multiple lines of evidence (e.g., historical photographs, site assessment activity, and construction observations), two generalized areas of landfill accumulation were identified. These two areas cover approximately 5.5 acres and are located primarily on the School and Church properties. While landfill depths were typically less than 15 feet, explorations have identified landfilled materials in some areas extending to depths up to 40 feet. Contaminants exceeding screening levels correlate directly with the occurrence of landfilled materials.

Soil and Groundwater Impacts

Constituents of potential concern in the landfilled materials include six metals (primarily arsenic and lead), petroleum hydrocarbons in the diesel and motor oil ranges, trichloroethene (TCE), and carcinogenic polycyclic aromatic hydrocarbons (cPAHs). Arsenic and lead were frequently noted above soil screening levels within landfilled materials, while the screening level for cPAHs was exceeded at just one sampling location. Soil and groundwater data demonstrate that downward migration of metals and cPAHs beneath the landfill base is very limited. Like cPAHs, TCE exceeded its soil screening level at just one landfill sampling location. However, TCE is much more mobile in the subsurface environment, and it was detected in groundwater as well.

Disposal of petroleum-based liquids in the north landfill area has resulted in petroleum hydrocarbon contamination in soil beneath the landfill that extends down to the regional water table at a depth of about 120 feet. Separate-phase petroleum product (also known as light non-aqueous-phase liquid, or LNAPL) occupies soil pore spaces throughout this depth range, and an LNAPL layer has accumulated on the water table. Due to the age of the release (60+ years) and the fact that LNAPL becomes less mobile (i.e., more viscous) over time, LNAPL migration has likely ceased. That is, the LNAPL in the soil column is no longer migrating downward, and the water table LNAPL layer is no longer increasing in thickness or areal extent.

Results of quarterly groundwater monitoring indicate that screening level exceedances are confined to the School property and, similar to the LNAPL, it is unlikely that dissolved contaminant plumes are advancing. Groundwater beneath the LNAPL contains total petroleum hydrocarbon (TPH) concentrations in the diesel and motor oil ranges that exceed the corresponding screening levels. This constitutes the primary impact to groundwater quality at the Site; however, TPH exceedances extend only a short distance downgradient of the LNAPL area. TCE exceeds its screening level at one well in the northern portion of the north landfill area, but only by about a factor of two. And, finally, arsenic exceeds its screening level at one well downgradient of the LNAPL area, outside the north landfill footprint. Observations suggest that this exceedance is the result of atypical geochemical conditions created by the presence of petroleum hydrocarbons.

No drinking water wells were identified within one mile downgradient of the Site.

Vapor Intrusion Evaluation

Two rounds of sub-slab vapor sampling were completed at six locations inside the School building to assess the potential for vapor intrusion (VI) from the underlying landfill materials. The August 2010 sampling event was conducted before the start of the school year and while the building's HVAC system was off. The November 2010 sampling event was conducted during the school day, with the building's HVAC system operating. In the first sampling event, screening level exceedances were measured for hydrogen sulfide (at two locations) and chloroform (at one location). Results of the second sampling event did not indicate any screening level exceedances, and hydrogen sulfide and chloroform were not detected in any sample. Since the November event better represented student exposure conditions under a weather pattern conducive of VI, these two compounds are not considered to be a VI concern.

Operation of the school's HVAC system appears to provide some positive pressurization in the building (relative to outdoor air), and this decreases VI potential. The Ecology-approved VI assessment report for the November sampling event recommended that the standard practice of running the HVAC system throughout the school day be continued. As long as this is done, indoor air concentrations due to VI are expected to remain below levels of concern.

Interim Actions

Two interim actions were completed while the RI was underway. A soil removal interim action was first conducted to ensure protective conditions were maintained as the RI/FS process was completed. The RI implemented a grid-based sampling approach to identify near-surface soil concentrations exceeding unrestricted land use screening levels.

Exceedances were identified at less than 1-foot depth within a roughly 5,800-square-foot area situated primarily on the Church property. Soil in this area was excavated to 1-foot depth and disposed of off site. A geotextile fabric was then placed in the excavation, and fill soil was imported and hydroseeded to provide a finished clean soil and sod barrier layer at least one foot thick.

Ecology subsequently requested that a second interim action be conducted at two locations on the School property where lead screening level exceedances were identified in the 1- to 3-foot depth range, to better ensure the long-term integrity of the barrier layer. These areas, which together comprise approximately 7,300 square feet, were covered with a geotextile fabric (placed directly on the undisturbed ground surface), and an additional 1-foot thickness of fill soil was imported and hydroseeded to supplement the pre-existing clean soil and sod barrier layer.

The need for additional remedial actions to protect against direct contact exposure is evaluated in the FS.

Next Steps

The RI has gathered sufficient technical information to delineate the nature and extent of contamination associated with the Site. This information will be used to prepare an FS that develops remedial action objectives and evaluates a range of remedial alternatives to achieve those objectives. Based on this alternatives evaluation, a Cleanup Action Plan (CAP) will be developed detailing the selected remedy.

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1 Introduction

This Remedial Investigation (RI) report addresses environmental contamination associated with historical landfilling activities at the Bremerton School District Crownhill Elementary School Site (Site). It has been prepared as required and in accordance with the Agreed Order between the Washington Department of Ecology (Ecology) and the Bremerton School District (BSD) dated September 20, 2010 (Agreed Order No. DE7916). The purpose of the RI is to collect and interpret sufficient information to characterize environmental conditions at the Site. This characterization will be used in preparing a Feasibility Study (FS) that evaluates alternative remedial actions.

Following this introductory section, the report is organized as follows:

- **Section 2** – The **Site Background** section provides information on Site location, history, and land use;
- **Section 3** – The **Environmental Setting** section presents information on Site physical setting and hydrogeology. This section includes the interpreted extent of landfill activity and an overview of the project area hydrogeologic setting;
- **Section 4** – A **Summary of Completed Investigations** describes the purpose and scope of each investigation conducted at the Site, including maps and tables, with a summary of the existing data set;
- **Section 5** – **Regulations and Proposed Screening Levels** are identified for the purposes of comparing chemical concentrations and identifying potential exposure pathways;
- **Section 6** – **Interim Actions** summarizes interim remedial measures that have been implemented to date;
- **Section 7** – The **Nature and Extent of Contamination** describes the distribution of chemicals in environmental media at the Site;
- **Section 8** – The **Conceptual Site Model** integrates available information to understand how hazardous substances move through the study area and potentially come into contact with human and ecological receptors;
- **Section 9 –** A brief **Conclusions** section is provided; and
- **References** are provided at the end of the main report text.

2 Site Background

2.1 Location and Description

The Crownhill Elementary School (School) is located at 1500 Rocky Point in Bremerton, Washington (Figure 1). The School property, owned by BSD, is located in the northwest

quarter of Section 15 of Township 24 North, Range 1 East. The Kitsap County tax identification number for the property is 152401-2-027-2005. According to assessor records, the property includes approximately 10.41 acres.

As stated in the Agreed Order, *the Site includes property owned by BSD and is defined by the extent of contamination caused by the release of hazardous substances at the Site, which may extend to adjacent properties*. Adjacent properties are primarily residential, with the Bremerton United Methodist Church (Church) located on the adjacent property to the south. Assessor records indicate that the property and surrounding neighborhood are zoned by the City of Bremerton for low density residential use (R-10).

The School includes two buildings: a two-story slab-on-grade main building (approximately 49,000 square feet) and a portable classroom building (approximately 1,800 square feet). An asphalt pavement driveway surrounds the main building, and a paved parking area is located to the west. The majority of the ground surface on the remainder of the property is grass and bare soil in the playfields and wood chips under the play equipment at the northeast and southwest corners of the property.

Electrical and gas service to the School are provided by Puget Sound Energy and Cascade Natural Gas, respectively. Water and sanitary sewer service are provided by the City of Bremerton.

2.2 Parcel Ownership History

The current School property was historically divided into multiple parcels that have a complex history of ownership. Figure 2 shows a 2009 aerial photo with current parcel ownership (including adjacent parcels) superimposed, along with corresponding aerial photos and historical parcel ownership from the mid-1940s and mid-1950s. Figure 3 provides a more detailed history of School property ownership since 1920. Parcels were owned by Kitsap County and numerous private individuals prior to BSD acquiring the School property in 1954.

2.3 Historical Use of Study Area

This historical overview has been compiled from previous reports, including historical document reviews completed by Landau and Associates (Landau, 1994) and Associated Earth Sciences, Inc. (AESI, 1998). Three figures are provided depicting past activities, including an aerial photograph from 1946 (Figure 4), historical building photographs (Figure 5), and an aerial photograph from 1956 (Figure 6).

Sand and Gravel Mining (1930s and possibly earlier)

In the 1930s and possibly earlier, the School property was used for mining sand and gravel, which resulted in excavations or borrow pits.

Municipal and Industrial Waste Landfilling (1930s and 1940s)

The mining borrow pits were later filled with various materials including municipal and industrial wastes and soil. There were two areas of landfilling activity, one in the northern portion of the School property and one in the southern. Disturbed areas are also noted west of Dora Avenue in the 1946 aerial photograph (Figure 4). It is not known if landfilling activity occurred in any of these areas.

North Landfill Area. The northern pit was located in the area of the present-day athletic fields and the northern portion of the main school building (AESI, 1998). Based on stereoscopic review of a 1946 aerial photograph, a large pit, about 400 by 200 feet, was located in the area of the current ball field (Landau, 1994). Landau estimated the depth of the pit to be 10-15 feet deep and up to 25 feet deep in some areas. A graded area south of the pit likely provided truck access and may have been a surface covering a previously filled portion of the pit. Evidence of the landfill activity in the partially-filled pit is apparent in the 1946 aerial photograph. Aspect concurs with Landau's interpretation of site features as identified on Figure 4.

In the 1940s, the north landfill area was reportedly used for disposal of a variety of industrial-type waste materials trucked to the site by the US Navy from the Puget Sound Naval Shipyard (AESI, 1998). Anecdotal information indicates that during the 1940s, the Navy disposed of items such as oils, machinery parts, and scrap metal in the depression located at the north end of the site (Parametrix, 1993). Information from probate files of the former property owner, Mr. W.A. Parker, indicate that the Navy paid Parker on a "Navy Yard Garbage Disposal Contract" in 1945, 1946, and 1947 (AESI, 1998).

South Landfill Area. The south landfill area was located along the southeastern property boundary (Figure 4). Interviews suggest that this area was used for disposal and burning of household or municipal waste in the 1930s (AESI, 1998). By 1946, this area appears to have been filled. However, stereoscopic interpretation of the photograph indicates scattered mounds, small pits, and a debris area still present on the eastern portion of this area (Figure 4). The county buildings, discussed below, are present on the western portion of the south landfill area.

Interpreted Extent of Landfilling Activities. The extent of landfilling activities was interpreted based on review of the following:

- 1946 aerial photograph;
- Boring logs, including observations from the 50-foot grid sampling program conducted for the RI; and
- Construction records from installation of utilities for the present-day School.

If any of these records included reference to landfill debris, the area was included within the interpreted footprint of landfilling activities, which is superimposed on the 1946 and 1956 aerial photos (Figures 4 and 6, respectively). This interpreted extent of landfilling activities will be carried forward in the discussion of the conceptual site model (Section 8).

Kitsap County Maintenance Facility (1940s and 1950s)

Kitsap County maintenance facilities were located on the present-day School property during the 1940s and 1950s. At least five buildings were present on the property during County ownership of the property, historic photos of which are provided on Figure 5. Based on the 50-year title search provided in the Landau report, the County owned a portion of the property since 1942. The County operated a "Road Shop" where equipment was stored and maintained (AESI, 1998). Two fuel pumps are visible in the building photograph 5 on Figure 5.

Crownhill Elementary School (mid-1950s to present)

BSD acquired the parcels that comprise the current School property in 1954. Figure 5 provides site photographs from the property appraisal completed in late 1953 prior to the property transfer.

A topographic survey of the property was conducted in 1954 in preparation for school construction. The site topography at that time was very similar to the topography noted in the 1946 aerial photograph. Two 20- to 25-foot-deep depressions remained in the northern portion of the property. Photographs 1 and 2 on Figure 5 depict this portion of the site.

The site was regraded prior to construction of the school. Figure 6 shows the cut-fill line for this regrading, illustrating where filling was necessary to bring the property to its approximate current grade.

The original school building was constructed in 1956 and partially burned down in 1993. The burned sections and remaining portions of the school were demolished later that year. The current school building was constructed in the mid-1990s with construction completed in 1996.

Parcels South of School Property

The interpreted history of the properties south and southwest of the School property is based on aerial photo review, reverse city directories, and Kitsap County parcel records.

Present-day Church Property: In the 1946 aerial photo (Figure 4), the northern portion of the present-day Church property appears to be under similar uses as the present-day School property. A large pit is visible approximately 100 feet south of the present-day School property. In the 1956 aerial photo (Figure 6), this area has been filled and several pick-up trucks are located on the property. A dark soil patch is visible at the north end of the property, approximately 50 feet south of the present day School property. Ace Paving is listed in the reverse city directory for 1960. This portion of the property appears to have remained under commercial use at least through 1965. In the 1970s and 1980s, the lot was vacant with bare soil and sparse vegetation. The building located on the southern portion of the property was constructed in 1965, according to assessor records.

Properties West of Dora Avenue: In the 1946 aerial photo, earthwork activities and scattered buildings are present to the southwest of the present-day School property. As indicated on Figure 4, a soil mound was located between the south end of Dora Avenue and Marine Drive. By 1956, the residences currently present on the west side of Dora Avenue just west of the School property were built. According to assessor records, residences located further south on Dora were constructed more recently, in 1999 and 2000.

3 Environmental Setting

3.1 Topography and Surface Water Features

Physical setting sources reviewed during the site assessment included the United States Geological Survey (USGS) 7.5-minute Bremerton West topographic quadrangle map (USGS, 1981). Topography in the area slopes towards Oyster Bay located to the south-southwest. The western edge of the site is approximately 800 feet from Oyster Bay, which extends south off of Dyes Inlet. Topography in the area surrounding the School property is shown on Figures 1 and 7.

Based on a review of as-built drawings for school construction, the main portion of the property, including the main building, parking lot, and playfields, was leveled to elevations between 135 and 138 feet (City of Bremerton vertical datum). The southern and western property boundaries slope to the south-southwest to elevations of approximately 130 feet at Dora Avenue and 123 feet at Rocky Point Road. An approximate 10- to 20-foot-high berm is located along the southern portion of the eastern property boundary. Adjacent parcels along the northern portion of the School property boundary are at a higher elevation of approximately 155 feet.

3.2 Habitat Biological Communities

The School property consists of a centralized building complex and pavement surrounded by approximately 6 acres of open space playfields and perimeter landscaping. Bordered on all sides by residential parcels zoned for low-density residential development, the property is not located on or directly adjacent to an area where management or land use plans will maintain or restore native or semi-native vegetation. There is little native vegetative cover, given that large grass playfields and landscaped plants and shrubs surround the school buildings. It is unlikely that the property will be used by threatened or endangered species nor State priority species or species of concern. Sparse stands of coniferous and deciduous trees are present along much of the School property boundary. Residential parcels within 500 feet of the School property include patchy stands of coniferous and deciduous trees, but do not provide large (e.g., greater than 10 acres) contiguous habitat area.

3.3 Hydrogeologic Conditions

An understanding of Site hydrogeologic conditions has been refined based on deep drilling conducted during the RI. The regional surficial geologic conditions are shown on Figure 7, and a hydrogeologic cross section based on regional conditions and site-specific drilling is presented on Figure 8. Boring logs and well construction diagrams are compiled in Appendix A.

The Site lies on a gently sloping upland at the base of the peninsula between Oyster Bay and Phinney Bay. Quaternary glacial and tectonic processes appear to have been a significant factor in the development of the topography and geologic units of the Site area. Regional geologic maps show the regional geology as consisting of (from generally younger to older) Vashon recessional glacial outwash and/or Vashon ice contact deposit,

Vashon glacial till, which locally lies above Vashon advance outwash, and some Pre-Vashon non-glacial soils below the glacial units.

Logs of soil borings and monitoring wells completed at the Site indicate a subsurface geology in general accordance with the regionally mapped geology, with several exceptions. The first exception is that there appears to be very little glacial till present at the Site. And, as previously noted, there is a considerable area of fill and landfilled material in portions of the Site.

Based on the maps and boring logs, site geologic units can be categorized as follows:

- **Surficial Fill** – Surficial fill is present in the upper 4 to 5 feet of most borings, although it is up to about 15 feet thick in a few locations. This generally consists of loose to medium dense or soft to stiff sand and gravel, sandy silt, and silty sand. Landfilled materials are present in portions of the Site, at maximum reported depths of approximately 40 feet (borings MW-5 and TER-B-19).
- **Recessional Outwash** – The uppermost native soil materials appear to consist of recessional glacial outwash and/or ice contact deposits. The recessional/ice contact deposits generally consist of medium dense to dense, or stiff to very stiff silty fine sand and sandy silt. Small areas of hard silty clay were also reported in what are interpreted to be ice contact deposits.
- **Weathered Glacial Till** – Although regional geologic mapping suggest till would be present at the Site below the recessional and ice contact deposits, little was present in the borings. Weathered till-like soils were noted in several borings in the southeast portion of the Site. Till was either not present, or was removed from the rest of the Site during sand and gravel borrow operations.
- **Advance Outwash** – The deepest borings (MW-1 through MW-16, and NG-E6-HSA) encountered what is interpreted as Vashon advance glacial outwash below the fill and recessional deposits. The majority of the advance outwash soils were logged as dense to very dense, light brown to gray-brown, slightly silty and slightly gravelly to gravelly fine and medium grained sand. This advance outwash unit extends to depths of about 110 feet throughout the Site. The upper portion of the advance outwash unit contains lenses or strata of soils logged as hard silt and sandy silt, to very dense silty sand with variable gravel content. This zone of silty soils occurs to depths of about 30 to 50 feet and appears to be relatively continuous between the deeper borings. This silty outwash zone does not appear to form a local groundwater perching layer.
- **Glaciolacustrine Deposits** – Silt and clay that was deposited in a proglacial lake was encountered below the advance outwash deposits in MW-4 and MW-6. This glaciolacustrine unit is hard, gray, thinly laminated, and contains lamina of sandy silt. It commonly contains lenses and thin beds of silty fine sand. This deposit is interpreted to date from the early phase of the Vashon ice sheet advance and thus correlates with the Lawton Clay unit of the Seattle area (it is also known as “transitional beds”). It forms an aquitard and, where laterally extensive, can perch groundwater. Well MW-3 was completed in groundwater that is apparently perched on this layer.

- **Pre-Vashon Deposits** – Deposits of nonglacial origin, deposited before the most recent regional glacial advance (the Vashon stade of the Fraser glaciation) were encountered below the advance outwash in the deeper borings. These deposits were logged as very dense sand and gravelly sand, with discontinuous layers or lenses of silty sand and hard sandy silt with variable amounts of gravel. This pre-Vashon deposit is distinguished from the outwash soils above it by the presence of disseminated fine organic matter and dark brown, yellow brown, and blue gray colors. Geologic mapping by Deeter (1979) suggests this pre-Fraser non-glacial deposit crops out at the ground surface along the west side of Phinney Bay. The total thickness of this unit is not known. Wells completed in this unit have variable groundwater levels, suggesting limited lateral hydraulic continuity due to the presence of silty beds within this unit.

Soils in borings MW-4, MW-5, MW-6, MW-8, MW-12, MW-13, and NG-E6-HSA exhibited shearing or brecciation (fracturing of soil into angular fragments), steeply inclined bedding, and vertical sand injections, all indications of post-depositional movement of the soils. Disturbance to original soil bedding features can occur from tectonic processes, modern or ancient landslides, glacial ice push, and by the drilling and sampling process. If extensive shearing has occurred along linear zones, the sheared zones can become partial barriers to groundwater movement, and in less common cases the sheared zones can become preferential pathways for groundwater movement. Due to the highly variable nature of strata within disturbed zones, groundwater levels are observed to be variable between nearby and adjacent monitoring wells. This indicates the presence of abrupt changes in soil hydraulic properties that may result in localized areas of groundwater perching or preferential drainage.

3.3.1 Groundwater Occurrence

The regional water table occurs at a depth of about 120 to 130 feet below grade at Crownhill with a southwesterly flow direction anticipated. Site topography and water level measurements suggest groundwater will be mounded in the central portion of the uplands between Oyster Bay and Phinney Bay, and the water table will descend gently toward both shorelines. Cross section A-A' (Figure 8) illustrates the relationship of the geologic units and the regional water table.

Monitoring well locations and groundwater elevations measured in Fall 2012 are shown on Figure 9. Groundwater at the site was measured in deep monitoring wells MW-1 through MW-16 (except MW-3) at about elevation 2 to 27 feet. Groundwater in MW-3 was measured at about elevation 52 and is apparently perched on a silty sand stratum. As shown on Figure 9, water levels measured in wells completed at the regional water table do not exhibit a uniform hydraulic gradient across the site. While groundwater elevations tend to decrease towards the south and west, it appears that the limited hydraulic continuity within the pre-Vashon deposits impedes uniform flow.

3.3.2 Aquifer Characteristics

The discussion below provides a summary of aquifer characteristics based on the data collected during the RI. Methodologies and data analysis techniques are consistent with those presented in the Ecology-approved Sampling and Analysis Plan (SAP; Aspect, 2011b).

Hydraulic Conductivity Measurements

Hydraulic conductivity measurements are based on slug tests completed at wells MW-1, MW-2, and MW-4 through MW-7. Values range between 0.0027 and 0.055 cm/sec (7.6 and 156 ft/day) with a geometric mean of 0.012 cm/sec (34 ft/day). Estimated hydraulic conductivities at each well location are summarized in Table B-2 (Appendix B), and graphs of the slug response with fit lines are also provided in Appendix B.

Tidal Variability

A 72-hour tidal study was completed from July 21-23, 2011 using wells completed at the regional water table, MW-1, MW-2, and MW-4 through MW-7. A graph depicting the data collected during the tidal study is presented in Appendix B. The tidal data from each well were analyzed using the method of Serfes (1991) to derive an averaged groundwater elevation for the study period. Minimal tidal response was observed across the site. Further analysis of the transducer data indicates that instantaneous measurements collected from the wells were within 0.05 feet of the tidally-averaged groundwater elevation for the study period, with an overall average of 0.02 feet different from the tidally-averaged elevation. Based on this analysis, it is our conclusion that future tidal surveys are not necessary at the Site and that rounds of same-day water level measurements are appropriate for monitoring groundwater elevation and interpreting flow direction.

4 Summary of Completed Investigations

4.1 Pre-RI Investigations

Information and data available from previous environmental reports have been incorporated into this report. A summary of the previous investigations is provided below while analytical results are discussed later in the report in Section 5. Exploration locations are depicted on Figure 11.

4.1.1 Geotechnical Evaluation (RZA AGRA, 1992)

RZA AGRA conducted a limited subsurface exploration and geotechnical evaluation of the site for planned additions to the former elementary school. Work included four hollow stem auger explorations (RZA-B-1 through RZA-B-4) and one hand auger boring (RZA-HB-1) in the area of the proposed classroom additions. The hollow stem auger explorations were completed to depths of 9 to 14 feet. The hand auger was completed to a depth of 3.5 feet. No chemical analyses were included in the scope of work.

4.1.2 Limited Environmental Assessment (Parametrix, 1993)

In late 1993, Parametrix conducted a limited environmental assessment of the site to verify the presence or absence of petroleum hydrocarbons, select metals, and radioactive materials in soil. Work included the following:

- Five hollow stem auger explorations (PAR-B-1 through PAR-B-4) to a depth of 21 feet.
- Submittal of two soil samples from each boring for analysis of the following:

- Total petroleum hydrocarbons (TPH) by EPA Method 418.1;
- Arsenic, barium, cadmium, chromium, lead, selenium, silver, copper, zinc by EPA Method 6010; and
- Mercury by EPA Method 7471.

4.1.3 Historical Document Review (Landau, 1994)

A historical document review was conducted by Landau Associates in 1994. This study included stereoscopic review of a 1946 aerial photograph of the site (Figure 4) and a review of parcel ownership. Information from their review has been incorporated into Section 2 above.

4.1.4 Exploration and Geotech Evaluation (RZA AGRA, 1994)

RZA AGRA conducted a limited subsurface exploration and geotechnical evaluation for the proposed new elementary school. Work included four additional hollow stem auger explorations (RZA-B-5 through RZA-B-8). Borings were complete to depths of 16.5 to 31.5 feet. No chemical analyses were included in the scope of work.

4.1.5 Shallow Soil Sampling (Parametrix, 1994)

Parametrix completed an assessment of shallow soil in the playfield areas of the elementary school. These areas were thought to have the greatest potential exposure to school children. Work included the following:

- Ten explorations (PAR-HB-1 through PAR-HB-10) to a depth of 2 feet. Soil samples were collected from a depth of 0.5 and 2 feet.
- Submittal of 10 soil samples collected from a depth of 0.5 feet for analysis of:
  - TPH identification by Washington TPH-HCID. Select soils were submitted for follow-up analysis of TPH in the diesel and motor oil ranges by WTPH-Dx.
  - Total metals cadmium and lead by EPA Method 6010 and mercury by EPA Method 7470.
- Submittal of 2 soil samples from a depth of 0.5 feet for analysis of total metals arsenic and zinc by EPA Method 7060 and 6010, respectively.
- Submittal of 3 soil samples from a depth of 0.5 feet for analysis of volatile organic compounds (VOCs) by EPA Method 8240.
- Submittal of 2 soil samples from a depth of 2 feet for analysis of total metals lead by EPA Method 6010, and 1 soil sample for mercury by EPA Method 7471.

4.1.6 Phase I Construction (AGRA, 1994)

In 1994, AGRA started construction of the new elementary school. Earthwork consisted of placing a structural fill pad beneath the building footprint and installing underground utilities to the building. Environmental work conducted during this phase of construction included sampling and analysis of soil for disposal characterization purposes, ambient air quality monitoring for lead and asbestos, and a soil gas survey to screen for the presence of VOCs. Soil quality analyses focused on excavated stockpile testing for waste disposal profiling.

4.1.7 Subsurface Environmental Site Assessment (AGRA, 1995)

In December 1994 and January 1995, AGRA completed a soil and groundwater investigation to assess whether leaching of contaminants from landfill materials had impacted underlying native soils and groundwater. The scope of work included:

- Installation of three monitoring wells (AGR-MW-1, -2, and -3). Wells were screened between 69 and 131 feet below ground surface (bgs).
- One soil boring (AGR-B1-A) to a depth of 51.5 feet.
- Submittal of 2 to 3 soil samples from each boring (10 total) for analysis of:
  - VOCs by EPA Method 8260;
  - Semi-volatile organic compounds (SVOCs) by EPA Method 8270; and
  - Metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver by EPA Method 6010.
- Submittal of groundwater samples from the 3 new monitoring wells for analysis of:
  - VOCs by EPA Method 8260;
  - SVOCs by EPA Method 8270; and
  - Dissolved metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver by EPA Method 6010.

4.1.8 Additional Surface Soil Sampling (Kitsap County, 2009)

Kitsap County Health District completed a surface soil assessment in 2009. Work included the following:

- Collection of twenty-two surface soil samples (KCCS-1 through KCCS-22) from a depth of 0.08 to 2.25 feet.
- Collection of one tap water sample (CW-1).
- Submittal of soil samples for analysis of arsenic, cadmium, chromium, and lead by EPA Method 6010B and mercury by EPA Method 7471A.
- Submittal of tap water sample for analysis of arsenic, cadmium, chromium, and lead by EPA Method 200.8 and mercury by EPA Method 7470A.

4.1.9 Additional Subsurface Sampling (Terracon, 2010)

In 2009, Terracon completed additional sampling throughout the site to supplement the existing sampling data from the previous investigations summarized above. Specifically, the objectives of the investigation program were to determine the thickness of the imported fill overlying the landfill materials and provide additional soil analytical data. Work included the following:

- Twenty-two borings (TER-B-1 through TER-B-22) up to a depth of 40 feet.
- Installation of two shallow (12-foot-deep) borings.
- Submittal of up to three soil samples from each boring for laboratory analysis of:
  - TPH in the diesel and motor oil ranges by NWTPH-Dx;

- Total metals arsenic, cadmium, chromium, lead, and mercury by EPA Method 7471A;
- VOCs by EPA Method 8260; and
- SVOCs by EPA Method 8270.

4.1.10 Sub-Slab Soil Vapor Sampling (Aspect, 2010)

The purpose of the sub-slab soil vapor sampling was to further evaluate whether the potential exists for air in the school to be unacceptably impacted by vapor intrusion. Sampling was conducted in accordance with the site-specific Soil Vapor Intrusion Assessment Work Plan (Aspect, 2010a). Prior to sampling, a screening process was used to develop a list of 16 contaminants of potential concern (COPCs), including 15 VOCs plus hydrogen sulfide. As discussed in the Work Plan, a major reason for choosing to sample sub-slab vapor rather than sampling indoor air directly is that, for many of the COPCs, the analytical laboratory's reporting limits were considerably higher than the corresponding Method B air cleanup levels. Sampling sub-slab vapor allows a cross-slab attenuation factor of 10 to be applied, which effectively raises the target concentrations against which the sampling results are compared.

The sampling program included the following:

- Collecting two rounds of sub-slab soil vapor samples (on August 19 and November 17, 2010) from 6 locations inside the school building (SSV-1 through SSV-6; Figure 11); and
- Submitting the samples for laboratory analysis of COPCs.

The sub-slab vapor sampling locations within the Crownhill Elementary School are shown on Figure 13.

4.2 RI Investigations

This section provides a description of the investigation work completed during the RI period (March 2011 through November 2012). Investigations were completed to delineate the extent of landfilled materials and LNAPL, and to characterize hydrogeologic conditions and soil, LNAPL, groundwater, and soil vapor quality. This work was completed in accordance with the Agreed Order and done under Ecology-approved work plans as identified below. Exploration locations are shown on Figure 11. Boring logs and well completion diagrams are provided in Appendix A. Laboratory reports are provided in Appendix I.

4.2.1 Soil Sampling

The purpose of the soil sampling proposed for the RI was to address chemical data gaps identified in the RI Work Plan as well as characterization of the lateral and vertical bounds of landfilled materials and potential mobilization of contaminants from soil to groundwater. The initial soil sampling program was completed in Spring 2011 as outlined in the RI Work Plan and SAP (Aspect, 2011a and 2011b). It included the following:

- 50-foot grid sampling of soil conditions to a depth of 15 feet bgs. This broad assessment covered the footprints of the north and south landfill areas and included the entire Crownhill property as well as the northern portion of the

Church property. Samples were collected for laboratory analysis from three depth intervals: 0 to 3, 6 to 9, and 12 to 15 feet bgs.

- Off-property drilling at 9 locations in the neighborhood area to the southwest of the Crownhill property to assess the potential presence of historical landfilled materials; and
- Deeper borings at five locations to assess landfilled material depth and soil beneath the landfilled material. Four of these borings were completed to the regional water table and completed as monitoring wells (MW-4 through MW-7).

A supplemental sampling program was developed to address data gaps identified by BSD and Ecology, including further hydrogeologic characterization, delineation of TPH in groundwater, and further characterization of the vertical extent of landfilled materials and quality of native soils beneath landfilled materials. The supplemental sampling was completed in accordance with Ecology-approved work plans (Aspect, 2011c and 2011d). The program was completed in December 2011 and included the following:

- Drilling four additional deep borings for completion as monitoring wells (MW-8 through MW-11);
- One additional shallow boring (15-foot depth) to bound lead impacts on the east side of the Site; and
- Additional near-surface soil sampling on a 25-foot grid spacing in two areas where the original 50-foot grid sampling showed the potential for soil quality exceedances within 3 feet of ground surface. These areas were located near the portable classroom trailer and near the property boundary between the Crownhill and Church properties (see surface soil samples shown on Figure 11). Soil samples were collected for laboratory analysis from a depth interval of 0 to 1 foot bgs.

A final phase of investigation was conducted in October/November 2012 in accordance with an Ecology-approved work plan (Aspect, 2012b). The primary purpose of this phase was to provide additional information on deep petroleum hydrocarbon impacts to soil and groundwater in the north landfill area, with an emphasis on characterization of LNAPL nature and extent. It included the following:

- Drilling five additional deep borings for completion as monitoring wells (MW-12 through MW-16); and
- Additional near-surface soil sampling on the Church property to further delineate arsenic impacts in an area where a modest soil quality exceedance was detected within 3 feet of ground surface in the original 50-foot grid sampling event. A 0- to 1-foot sample was collected from the same location (SG-J10), and 0- to 1-foot and 0- to 3-foot samples were collected 50 feet south of that location (SG-J11).

Soil quality test results are tabulated in Appendix D (Tables D-2 and D-3), and summarized in Table 5.

4.2.2 Monitoring Well Installation

Three groundwater monitoring wells (MW-1 through MW-3) were installed at the Site in December 1994/January 1995, prior to the RI. An additional 13 wells (MW-4 through

MW-16) were installed in three phases (in March and December 2011 and October 2012) over the course of the RI. Table 1 provides a summary of well construction information for all Site wells. Monitoring wells MW-4 through MW-16 were installed, developed, and surveyed in accordance with the SAP (Aspect, 2011b), and Aspect surveyed top-of-casing elevations into the pre-existing well network (wells MW-1 through MW-3). The surveys were completed with an accuracy of +/- 0.01 feet. Well construction diagrams are included in Appendix A.

4.2.3 LNAPL Characterization

In this report, LNAPL refers to separate-phase petroleum hydrocarbon liquids in the subsurface. LNAPL is found within the landfilled materials, in vadose zone soils, and floating on the groundwater table. LNAPL characterization activities included the following:

- An oil/water interface probe was used to monitor the wells for LNAPL presence and layer thickness as described below in Section 4.2.4, in order to help delineate the extent of LNAPL.
- A simple bailing test was conducted at well MW-13 in November 2012, so that the potential effectiveness of physical LNAPL removal technologies can be semi-quantitatively assessed in the FS evaluation. The test demonstrated that the well, which had an LNAPL layer thickness estimated at 0.99 feet at the start of the test, was slow to refill when the LNAPL was removed (see Appendix E for the bailing test field report and photographs). Approximately 900 milliliters (mL) of LNAPL was bailed from the 2-inch-diameter well over a 2-hour test period (refer to the LNAPL removal log in Table 7). Bailing LNAPL from MW-8 (in which an estimated 0.2-foot-thick layer had been measured the previous month) was also attempted, but less than 5 mL of LNAPL could be recovered from that well.
- An LNAPL sample was collected from well MW-13 during the bailing test and submitted for laboratory analysis/determination of the following:
  - TPH in the diesel and motor oil ranges (NWTPH-Dx);
  - Chlorinated VOCs (EPA 8260);
  - Specific gravity (ASTM D-1298);
  - Pensky-Martin closed cup flash point (ASTM D-93); and
  - Kinematic viscosity (ASTM D-445).

  Laboratory results are summarized in Table 8.

4.2.4 Groundwater and LNAPL Thickness Monitoring

The purpose of the groundwater monitoring program was to characterize groundwater occurrence and evaluate groundwater quality at the Site. Figure 9 shows the locations of the Site's 16 monitoring wells. Monitoring was conducted on roughly a quarterly basis between April 2011 and August 2013. For the first seven rounds (April 2011 through

October 2012), all existing monitoring wells except MW-3 were sampled[1]. Groundwater samples were submitted for laboratory analysis of the following:

- TPH in the diesel and motor oil ranges (Method NWTPH-Dx);
- Total and dissolved metals (arsenic, copper, lead) (EPA Method 6010);
- VOCs (EPA Method 8260);
- PAHs (EPA Method 8270 modified); and
- SVOCs (EPA Method 8270).

In November 2012, newly-installed monitoring wells MW-12 through MW-16 (installed primarily for the purpose of delineating the extent of LNAPL) were sampled in accordance with Aspect, 2012b, for the following:

- TPH in the diesel and motor oil ranges (Method NWTPH-Dx); and
- Chlorinated VOCs (EPA Method 8260).

For the final three rounds (February, May, and August 2013), selected wells (MW-4 through MW-6 and MW-9 through MW-16) were sampled for the following:

- TPH in the diesel and motor oil ranges (Method NWTPH-Dx);
- Total arsenic and total lead (EPA Method 6010); and
- Chlorinated VOCs (EPA Method 8260).

Depths from well top-of-PVC-casing (TOC) to LNAPL (if present) and to groundwater were measured using an oil/water interface probe. The groundwater elevation in each well was then calculated by subtracting the depth-to-water measurement from the TOC elevation. Depth-to-water measurements and groundwater elevations are summarized in Table B-1 (Appendix B). When LNAPL was present, the groundwater elevation shown in the table has been adjusted assuming an LNAPL specific gravity of 0.89 (see Table 8). Figure 10 provides a Rose diagram depicting groundwater flow direction (to the southwest) in the north landfill area based on seven rounds of water level measurements at wells MW-2, MW-5, and MW-9.

LNAPL thickness was calculated by simply subtracting the depth-to-LNAPL measurement from the depth-to-water measurement. Resulting LNAPL thicknesses are shown in Table 7. The interface probe emits three different audible signals depending on whether the probe tip is in contact with air, water, or LNAPL. This instrument typically provides accurate measurements when LNAPL is not present. In addition, it can accurately indicate the oil/water interface when the LNAPL is a light petroleum product such as gasoline. In this case, however, the viscous, sticky nature of the LNAPL resulted in inconsistent readings. Therefore, the reported LNAPL layer thicknesses can only be regarded as estimates.

Following depth measurements, each well to be sampled was purged at a flow rate less than 0.5-liter per minute. During purging, field parameters including temperature, specific conductance, dissolved oxygen, pH, oxidation/reduction potential (ORP), and

[1] As noted in Section 3.3.1, Well MW-3 is screened in a shallower, perched groundwater zone.

turbidity were periodically monitored. Once field parameters stabilized, laboratory-supplied sample containers were filled directly from the pump discharge. Wells that contained LNAPL were not purged/sampled, with one exception: a groundwater sample was collected for laboratory analysis from beneath the LNAPL layer in MW-13 during the November 2012 monitoring round.

Stabilized field parameters and laboratory analytical results are tabulated in Appendix D (Table D-1). Table 6 provides a summary of groundwater quality data.

4.2.5 Upland Water Well Inventory

An upland water well inventory was completed to assess whether groundwater within a one mile radius of the site was being used as a domestic water supply. The survey included a review of the Ecology well log database as well as the Washington State Department of Health database.

Figure 12 provides a summary of the results. Note that the domestic well locations depicted in Figure 12 are based on the center point of the township/range/quarter/quarter location of the well. The actual address location of the well is not available in the Ecology well log database; however, the well would be within an approximate quarter mile radius of the location shown. Four domestic wells were found within the one-mile search radius. Based on initial review of the well locations relative to the Site hydrogeologic setting, it is unlikely that contaminants found in the aquifer beneath the Site would impact these wells.

A review of Washington State Department of Health database indicates that the area within a one-mile radius of the Site is serviced by two Group A water systems; City of Bremerton and Rocky Point Water District 12. City of Bremerton water supply wells and surface water sources are located outside the one-mile radius. Rocky Point Water District contracts with the City of Bremerton for water services. Rocky Point does not have a water source asset.

4.2.6 Data Usability

Quality assurance review of analytical data was conducted in accordance with the RI Work Plan. All collected data are reported in this RI; however, the use of the data depends on its particular quality. Data usability is discussed below as follows:

- **Analytical Data Validation** describes the data review process, and identifies any data flagged or rejected due to quality concerns.
- **Usability of Field Parameter Data** describes the use of field parameter data collected during groundwater monitoring.

Analytical Data Validation

EcoChem, Inc., a qualified data validator, performed third-party validation of soil and groundwater analytical results collected during the RI[2]. The data validation was conducted in accordance with the SAP (Aspect, 2011b). The validation process was

[2] Analytical results for the three groundwater monitoring rounds conducted in 2013 were reviewed for data usability by Aspect, but were not submitted for third-party validation.

performed to provide a determination of whether the data meets the project-specific criteria for data quality and data use.

Laboratory data reports prepared by Friedman and Bruya, Inc., were reviewed by EcoChem using guidance and quality control criteria documented in the analytical method; the Quality Assurance Project Plan (RI Work Plan, Aspect, 2008); National Functional Guidelines for Inorganic Data Review (EPA, 1994 & 2004); and National Functional Guidelines for Organic Data Review (EPA, 1999). Data Validation Reports are provided in Appendix C, tabulated soil and groundwater results are presented in Appendix D, and laboratory reports are provided in Appendix I.

All data were deemed acceptable by the data validator, incorporating data qualifiers as appropriate. If values are estimated (assigned a "J"), data may be used for site evaluation purposes; but reasons for data qualification should be taken into consideration when interpreting sample concentrations.

Usability of Field Parameter Data

Field instruments for measuring temperature, pH, specific conductance, dissolved oxygen, and oxidation-reduction potential (ORP) were calibrated prior to groundwater monitoring events. These data are typically monitored to confirm that the groundwater sample is representative of groundwater conditions, but can also be used to characterize groundwater quality. Overall field parameters were relatively consistent, event to event.

When discussing redox conditions, it is typical to use Eh rather than ORP, which have different reference electrodes. Eh Standard Hydrogen Electrode (SHE) was calculated by adding 200 mVolts to field measured ORP value (Nordstrom and Wilde, 2005).

5 Regulations and Proposed Screening Levels

5.1 Potential Applicable Regulatory Requirements

Multiple environmental laws may apply to investigation and cleanup actions at the Site. The following provides a summary of likely applicable state and federal laws.

5.1.1 Federal Requirements

Resource Conservation and Recovery Act. The Resource Conservation and Recovery Act (RCRA) addresses the generation and transportation of hazardous waste, and waste management activities at facilities that treat, store, or dispose of hazardous wastes. Subtitle C (Hazardous Waste Management) mandates the creation of a cradle to grave management and permitting system for hazardous wastes. RCRA regulates "solid wastes" that are hazardous because they may cause or significantly contribute to an increase in mortality or serious illness, or that pose a substantial hazard to human health or the environment when improperly managed. In Washington State, RCRA is implemented by EPA and/or Ecology under the State's Dangerous Waste Regulations, WAC 173-303.

Federal and State Clean Air Acts (42 USC 7401 *et seq.*; 40 CFR 50; RCW 70.94; WAC 173-400, 403). The federal Clean Air Act regulates emissions of hazardous pollutants to the air. Controls for emissions are implemented through federal, state and

local programs. The federal Clean Air Act is implemented in the state of Washington through the Washington Clean Air Act (RCW 70.94). The regional air pollution control authorities, activated under the Washington Clean Air Act, have jurisdiction over regulation and control of the emission of air contaminants and the requirements of state and federal Clean Air Acts in their districts.

5.1.2 State and Local Requirements

Model Toxics Control Act (MTCA) (RCW 70.105D; WAC 173-340) authorized Ecology to adopt cleanup standards for remedial actions at sites where hazardous substances are present. The processes for identifying, investigating, and cleaning up these sites are defined. Cleanup levels for soil, groundwater, surface water, and air are established, including rules for evaluating cross-media protectiveness. MTCA also requires that LNAPL be remediated "to the maximum extent practicable."

Apart from MTCA, potential state requirements are specified in several statutes, codified in the Revised Code of Washington (RCW), and regulations promulgated in the WAC.

State Environmental Policy Act (SEPA) (RCW 43.21C; WAC 197-11). The SEPA is intended to ensure that state and local government officials consider environmental values when making decisions. The SEPA process begins when an application for a permit is submitted to an agency, or an agency proposes to take some official action. Prior to taking any action on a proposal, agencies must follow specific procedures to ensure that appropriate consideration has been given to the environment.

Washington Water Pollution Control Act (RCW 90.48; WAC 173-201A). This Act provides for the protection of surface water and groundwater quality. WAC 173-201A establishes water quality standards for surface waters of the state.

Washington Hazardous Waste Management Act (RCW 70.105; WAC 173-303). This regulation implements the State Hazardous Waste Management Act of 1976 as amended, and also implements RCRA. Unlike RCRA, which defines hazardous wastes as those solid wastes designated by 40 CFR Part 261 and regulated as hazardous and/or mixed waste by EPA, WAC 173-303 distinguishes between different types of wastes, including dangerous, extremely hazardous, and mixed waste.

5.2 Proposed Screening Levels

Screening levels are media-specific reference concentrations used to assess the significance of chemical test results and identify constituents of potential concern (COPCs). Proposed screening levels for soil, groundwater, and air/soil vapor are provided in Tables 2, 3, and 4, respectively.

5.2.1 Soil and Groundwater

Soil screening levels are based on protection of the following potential exposure pathways:

- direct human exposure via ingestion, inhalation, or dermal absorption;
- leaching to groundwater; and
- terrestrial ecological exposure.

Soil screening levels for protection of the vapor intrusion pathway are not included in Table 2 because the vapor intrusion pathway was addressed empirically through sub-slab soil vapor sampling.

Groundwater screening levels are based on ingestion (i.e., drinking water criteria) as the highest beneficial use. Groundwater screening levels for protection of surface water were not considered.

Soil screening levels were developed for constituents that: a) were detected in at least one soil sample; and b) are included in Ecology's Cleanup Level and Risk Calculations (CLARC) database. Similar criteria were used in developing groundwater screening levels.

5.2.2 Air and Soil Vapor

Proposed air screening levels for COPCs are the current MTCA Method B cleanup levels listed in Table 4. MTCA Method B cleanup levels at the time of the 2010 sub-slab soil vapor assessments are also listed in Table 4, along with the screening levels that were developed based on those cleanup levels. Note that many of the cleanup levels have changed since the assessments were completed. However, as discussed in Section 7.4, the assessment conclusions remain unchanged.

6 Interim Actions

This section describes the two interim actions that were completed in Spring 2012 and Summer 2013, while the RI was underway.

6.1 Spring 2012 Interim Action

Results of the near-surface soil sampling described in Section 4.2.1 indicated elevated contaminant concentrations within 1 foot of ground surface in a portion of the South Landfill Area. A soil removal interim action was completed in Spring 2012 to reduce the potential for direct-contact exposure to this soil contamination. The interim action was completed in accordance with an Ecology-approved work plan (Aspect, 2011e), and had the following objectives:

- Maintain protective surface soil conditions for students and area stakeholders;
- Remove soils from the 0- to 1-foot-depth interval in areas where contaminant concentrations in soil exceed unrestricted land use cleanup levels under MTCA; and
- Complete an interim action that would be compatible with further action, if warranted, following completion of the RI/FS process.

As depicted on Figure 14, impacted near-surface soils were excavated from a roughly 5,800-square-foot area situated primarily on the Church property but with its northern edge extending roughly 10 feet onto the School property. The soils were excavated in two phases. An initial excavation area (blue-highlighted on Figure 14) was identified in the work plan based on results of the supplemental soil sampling completed in December

2011. After completing this initial excavation area, 12 sidewall confirmation samples (CS-1 through CS-12) were collected and submitted for laboratory analysis of antimony, arsenic, copper, and lead by EPA Method 200.8, and for TPH in the diesel and motor oil ranges by NWTPH-Dx. (No confirmation samples were collected from the excavation bottom.) Based on laboratory results, 19 additional soil samples (CS-13 through CS-31) were collected from the 0- to 1-foot-depth interval outside the perimeter of the initial excavation. Laboratory results for those samples were used to determine the final excavation limits. Upon completion of soil removal in the additional excavation area (pink-highlighted on Figure 14), all confirmation samples around the perimeter of the excavated area were below MTCA cleanup levels for unrestricted land use. Approximately 343 tons of excavated soils were profiled and disposed of in an appropriate offsite landfill. A geotextile fabric, which does not reduce water infiltration but provides a "marker" layer that reduces the potential for exposure to underlying contaminated soils, was then placed in the excavation. Finally, imported fill soil was placed on the geotextile fabric and hydroseeded to provide a finished clean soil and sod barrier layer at least one foot thick.

The Spring 2012 interim action was documented in a technical memorandum (Aspect, 2012a). Photographic records and soil disposal certificates are provided in Appendix G.

6.2 Summer 2013 Interim Action

Ecology requested that a second interim action be conducted at two locations on the School property where lead concentrations in soil at 1- to 3-foot depth were found to exceed the soil screening level of 250 milligrams per kilogram (mg/kg). (Sampling of soils in the 0- to 1-foot depth interval did not indicate any screening level exceedances.) These areas, northeast of the Spring 2012 interim action area and north of the portable classroom, are shown on Figures 14 and 15, respectively. The objective of the interim action, completed in Summer 2013, was to provide additional cover materials in these areas, to better ensure the long-term integrity of the barrier layer. The interim action was completed in accordance with an Ecology-approved work plan (Aspect, 2013).

The Summer 2013 interim action did not include any soil excavation or confirmation sampling. Instead, geotextile fabric was placed directly on the undisturbed ground surface, and imported fill soil was placed on the fabric and hydroseeded to provide an additional clean soil and sod cover layer at least one foot thick. Approximately 2,400 square feet of additional cover was provided northeast of the Spring 2012 interim action area (Figure 14), and 4,900 square feet north of the portable classroom (Figure 15). Construction included installation of a new storm drain line from the northeast corner of the portable classroom to a pre-existing catch basin located within the additional cover footprint. Photographic records are provided in Appendix G.

7 Nature and Extent of Contamination

Due to the extensive soil sampling completed under this RI, the nature and extent of contamination is best depicted using a series of summary maps and tables. The following discussions identify COPCs (Tables 5 and 6) and then map their occurrence across the

site (Figures 16 through 25). Each table and figure is referenced below with the corresponding discussion.

7.1 Constituents of Potential Concern

Known and suspected contaminants in soil and groundwater were identified based on a comparison of detected constituent concentrations to the screening levels developed in Section 5. This comparison was made using the full set of RI investigation samples for soil (Table 5) and groundwater (Table 6). The following COPCs were identified:

Soil COPCs

- TPH in the diesel and motor oil ranges, including LNAPL;
- The metals antimony, arsenic, chromium (III), copper, lead, and zinc;
- Trichloroethene (TCE); and
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs).

Groundwater COPCs

- TPH in the diesel and motor oil ranges;
- The metals arsenic and lead; and
- TCE.

7.2 Soil Quality

Soil quality data are summarized in Table 5. Soil quality observations correlate closely with the distribution of landfilled materials. Figures 16 through 19 show the results of the grid-based sampling and effectively define the lateral boundaries of the historical landfill materials. Figures 20 through 22 depict cross sections showing the vertical extent of historical landfill activities and their impact on underlying soil quality. Figure 23 provides a 3-D visualization of deep petroleum hydrocarbon impacts beneath a portion of the north landfill area. A complete tabulation of soil quality test results is presented in Appendix D.

7.2.1 Landfilled Materials

Landfilled materials are present at depth in two general areas of the site. The interpreted boundaries of these ‘north’ and ‘south’ landfill areas are shown on each map depicting exploration locations and chemical test results (e.g., Figure 11 and Figures 16 through 19). Figure 20 shows the location of two cross sections that depict the depth and lateral extent of the north (Figure 21) and south (Figure 22) landfill areas.

The north landfill area occurs exclusively on School property, whereas the south landfill area occupies both School and Church property. Historical air photos suggest the potential for landfilled materials to extend onto adjacent privately owned parcels. However, chemical testing results indicate no evidence of soil quality exceedances at these property boundary lines. On this basis, we conclude that impacts associated with landfill activities are limited to the School and Church properties.

The grid sampling program successfully defined the lateral extent of soil impacts in both the north and south landfill areas. The north landfill area materials typically extend to a

depth of about 15 feet bgs, but areas of deeper accumulation were noted in two general areas: an approximate depth of 40 feet bgs near the middle of the north landfill area (TER-B-19); and a depth of 30 feet bgs further north (TER-B-3). The south landfill area materials typically extend to a depth of less than 10 feet bgs, with an accumulation extending to 20-foot depth beneath the Church property (MW-11).

Landfilled materials are highly variable, containing a fragmented mixture of glass, wood, metal, brick, charcoal, fabric, wire, and ceramics. Petroleum-like staining and areas of ash-like deposits were observed in localized areas. Landfilled materials were not observed at ground surface during the site investigation; the soil cover layer was consistently at least one foot thick.

7.2.2 Metals in Soil

Metals exceedances in soil correlate with the occurrence of landfilled materials. Arsenic and lead were the metals that most frequently exceeded their screening levels. The locations of arsenic and lead exceedances are shown by depth interval on Figures 16 and 17, respectively. Note that the Spring 2012 interim action successfully removed soil from areas with surficial (0- to 1-foot depth) soil quality exceedances from the School and Church properties (see Section 6).

The following is noted regarding metals exceedances in soil:

- **Arsenic** – Exceedances were limited in near-surface soils (3 samples), but constituted a higher proportion of the soil samples collected at depth. The maximum detected arsenic concentration was 63 mg/kg, which exceeds the screening level of 20 mg/kg by just over a factor of three. The primary area of arsenic exceedances was clustered in the central portion of the north landfill area, at depths ranging from 3 to 15 feet (see Figure 16).
- **Lead** – While lead exceedances tend to be co-located with arsenic exceedances, the magnitudes of those exceedances were significantly higher. The maximum detected lead concentration was 26,300 mg/kg, which exceeds the screening level of 250 mg/kg by more than two orders of magnitude. It is also notable that lead-containing soils excavated during the Spring 2012 interim action failed Toxicity Characteristic Leaching Procedure (TCLP) testing and required solidification prior to landfill disposal as hazardous waste. As shown on Figure 17, the highest lead concentrations occur within the central portion of the north landfill area, at depths ranging from 3 to 15 feet bgs. The north and south landfill area cross sections (Figures 21 and 22) show that lead exceedances do not extend more than 5 feet into the underlying soil beneath the landfilled materials.
- **Other Metals (antimony, chromium (III), copper, zinc)** – Each of these metals were measured above screening levels in only 5 or fewer soil samples, and no exceedances were reported for the 0- to 3-foot depth interval. These exceedances are co-located with lead and/or arsenic exceedances.

7.2.3 LNAPL and Adsorbed Petroleum Hydrocarbons in Soil

Localized exceedances of TPH in the diesel and motor oil ranges were detected within 15 feet of ground surface, as shown on Figures 18 and 19. However, a much more extensive accumulation of LNAPL and adsorbed petroleum hydrocarbons was discovered in vadose

zone soils and floating on the water table beneath an unusually deep portion of the north landfill area. A cross section of this accumulation is depicted on Figure 21, and Figure 23 provides a 3-dimensional visualization. After LNAPL was detected in MW-8 at a layer thickness estimated at 0.2 feet, borings MW-12 through MW-16 were advanced in October 2012 to delineate the magnitude and extent of deep petroleum hydrocarbon impacts. Figure 23 shows TPH concentrations detected in soil samples collected from these borings, and Figures 24 and 25 show the estimated areal extent of water table LNAPL as measured during the Fall 2012 monitoring round. LNAPL was observed in only MW-8 and MW-13 on this occasion. However, it was also observed in MW-16 during the three subsequent monitoring rounds, and in MW-14 during the most recent monitoring round. As is evident in the Table 7 summary, LNAPL thickness measured in a given well is highly variable from one monitoring round to the next. Reasons for this high variability likely include the following:

- Measurement error (Refer to Section 4.2.4 discussion.)
- Fluctuations in water table elevation (Measured LNAPL thicknesses typically decrease with increasing water table elevation. For example, the measured LNAPL thickness reduction in MW-13 leading up to the November 21, 2012, bailing test was likely due, at least in part, to a rising water table.)
- Delayed entry of the viscous LNAPL into a newly-installed well (This may explain why LNAPL was not observed initially in MW-16.)
- LNAPL removal during the November 2012 bailing test (refer to Section 4.2.3) resulted in a large reduction in LNAPL thickness in MW-13. Subsequent thickness increases measured in that well can also likely be attributed to post-removal recovery (i.e., return to dynamic equilibrium).

A wide range of petroleum hydrocarbon liquids was likely disposed of in the north landfill area, including mixtures containing relatively volatile (low molecular weight) and water-soluble (e.g., aromatic) hydrocarbons. However, over the many decades since landfilling activities ceased, the low molecular weight compounds have volatilized and the more water-soluble compounds have largely leached to groundwater, leaving behind a “weathered” high-viscosity mixture of relatively non-volatile, low-solubility compounds. Nonetheless, leaching to groundwater continues, as evidenced by the detection of TPH in the diesel and motor oil ranges in groundwater samples collected from wells screened beneath impacted vadose zone soils and in the immediate vicinity of the water table LNAPL.

Due to the age of the release and the fact that LNAPL becomes less mobile (i.e., more viscous) over time, vadose zone LNAPL is likely “hung up” in the soil pore spaces and, for the most part, no longer moving downward through the soil column.

7.2.4 TCE and cPAHs in Soil

The 0- to 3-foot depth soil sample collected at location SG-J7 yielded the only TCE and cPAH exceedances in the testing program. This sample location is within the south landfill area on the Church property. The subsequent Spring 2012 interim action removed soils from this area to a 1-foot depth and installed a barrier consisting of a geotextile fabric covered by a clean soil and sod layer at least one foot thick.

7.3 Groundwater Quality

Fifteen monitoring wells are screened in the upper portion of the shallowest zone of regionally extensive groundwater beneath the Site, which is encountered at a depth of roughly 120 feet and has a southwesterly flow direction. Well locations are shown on Figure 9. MW-1 and MW-2 are pre-existing wells (installed in December 1994, prior to the RI). The remaining 13 were installed during the RI in three separate mobilizations: MW-4 through MW-7 in March 2011; MW-8 through MW-11 in December 2011; and MW-12 through MW-16 in October 2012. Groundwater monitoring was conducted on approximately a quarterly basis between April 2011 and August 2013. Laboratory results are summarized in Table D-1 (Appendix D). Screening level exceedences are depicted on Figure 24 (for TPH in the diesel and motor oil ranges measured during the Fall 2012 monitoring round) and Figure 25 (for other COPCs in groundwater, all monitoring rounds included); also refer to Table 6.

TPH exceedances in groundwater were detected only in the vicinity of the deep petroleum hydrocarbon impacts discussed in Section 7.2.3. As expected, the highest dissolved TPH concentrations were detected in the November 2012 sample from MW-13 (Figure 24), the only time a groundwater sample was collected from an LNAPL-containing well. The limited lateral migration of TPH dissolved in groundwater is demonstrated at MW-15, located just 40 feet downgradient of MW-8 (an LNAPL-containing well). For the 4 quarters this well was sampled, TPH in the motor oil range was consistently below the laboratory detection limit, while diesel-range TPH was detected on only the first occasion (6 days after well installation). That detection was 70 micrograms per liter (µg/L), far below the 500 µg/L screening level for diesel-range TPH. The observed rapid TPH attenuation in groundwater is likely due primarily to biological processes. Considering the age of the release, it is anticipated that the dissolved TPH plume in groundwater is no longer advancing.

TCE concentrations above the screening level were detected only in well MW-9, beneath the northern portion of the north landfill area (Figure 25). The screening level is exceeded at this well by only about a factor of two, and TCE was not detected at well MW-16, located approximately 160 feet downgradient. TCE was also detected in wells MW-5, MW-7, and MW-14, but only at concentrations below the screening level. The source of TCE is likely landfilled materials and, as with TPH concentrations in groundwater, the TCE plume is expected to be stable or retreating.

As depicted on Figure 25, arsenic and/or lead screening level exceedances have been detected in wells MW-1, MW-4, MW-6, and MW-10. Arsenic concentrations detected in MW-6 have exhibited an increasing trend over the monitoring period, while concentrations in the other three wells have decreased over time. Rather than being indicative of groundwater quality in the surrounding aquifer, the earlier detections in these wells are thought to have been influenced by the well drilling/installation process. Based on concentrations measured in the later monitoring rounds (including five or more consecutive quarterly monitoring events), the only metals exceedance appears to be arsenic in well MW-6. That well is downgradient of the water table LNAPL, and the arsenic exceedance is likely caused by the impact of petroleum hydrocarbons on geochemical conditions which, in turn, increase arsenic mobility in groundwater. Nonetheless, based on the later-round sampling results, arsenic concentrations drop

below the screening level before groundwater reaches well MW-10, which is located on School property approximately 130 feet downgradient of MW-6.

7.4 Soil Vapor and Indoor Air Quality

Two rounds of sub-slab vapor sampling were completed, in August and November 2010, at six locations inside the main school building. Sampling was conducted in accordance with a *Soil Vapor Intrusion Assessment Work Plan* (Aspect, 2010a). The November sampling event was conducted during the school day, with the building's HVAC system running continuously. (It was not running during the August sampling event.) Since it is standard practice for the school's HVAC system to be run continuously during the school day, the November event better represented conditions to which students are actually exposed. In addition, the November event was conducted during a weather pattern more conducive of vapor intrusion (VI).

In the August sampling event, screening level exceedances were measured for hydrogen sulfide (at two locations) and chloroform (at one location). Results of the November sampling event did not indicate any exceedances of the COPC screening levels, and hydrogen sulfide and chloroform were not detected in any sample. Since the November event better represented student exposure conditions under a weather pattern conducive of VI, these two compounds are not considered to be a VI concern.

The screening levels were established at 10 times the most stringent MTCA Method B air cleanup levels, which conservatively accounts for soil vapor attenuation across a floor slab in accordance with Ecology guidance (Ecology, 2009). As noted in the VI assessment report for the August sampling event (Aspect, 2010b), cross-slab attenuation factors are usually much higher than 10 [typically on the order of 1,000 according to a study of 218 U.S. homes (Sager, et.al., 1997)]. This suggests that indoor air concentrations of COPCs would not be a concern at the school even if sub-slab vapor concentrations were much higher than those detected in either the August or November 2010 sampling events.

Operation of the school's HVAC system appears to provide some positive pressurization in the building (relative to outdoor air), and this decreases VI potential. The VI assessment report for the November sampling event (Aspect, 2010c) recommended that the standard practice of running the HVAC system throughout the school day be continued. As long as this is done, indoor air PCOC concentrations due to VI are expected to remain below levels of concern.

As noted in Section 5.2.2, MTCA Method B air cleanup levels for many of the COPCs have changed since 2010. However, cleanup levels have become more stringent for only two compounds: trans-1,2-dichloroethene and 1,2-dichloroethane. These compounds were not detected in either 2010 sampling round, and the laboratory detection limits did not exceed ten times the current cleanup levels. Therefore, the change in cleanup levels has not altered the conclusions and recommendations of the 2010 VI assessments.

8 Conceptual Site Model

8.1 Source

The materials landfilled at the Site prior to school construction are the apparent source of the soil and groundwater quality issues identified by this RI. Using multiple lines of evidence (e.g., historical photographs, site assessment activity, construction observations), two generalized areas of landfill accumulation are identified. These two landfill areas cover approximately 5.5 acres and are located almost entirely beneath the School and Church properties. While typically encountered at depths of less than 15 feet bgs, landfilled materials were found as deep as 40 feet bgs.

The COPCs present at the Site are TPH in the diesel and motor oil ranges (including LNAPL), TCE, cPAHs, and the metals antimony, arsenic, chromium (III), copper, lead, and zinc. Arsenic and lead were frequently noted above screening levels within landfill material, but both soil and groundwater data indicate that limited downward migration occurs. Petroleum-based product disposal in the north landfill area has resulted in a localized petroleum hydrocarbon hot-spot that extends to the regional water table, where LNAPL has been observed in several monitoring wells. Localized and significantly less frequent exceedances were noted for the other four metals, TCE, and cPAHs.

8.2 Potential Exposure Pathways

An exposure pathway describes the mechanism by which human or ecological exposure to site contaminants can occur under baseline site conditions, assuming no remedial action or protective control is in place. The following section will relate these pathways to specific constituents detected at concentrations above screening levels in individual site areas. Completed exposure pathways must have:

- An identified source of contaminants;
- A mechanism for contaminant release and transport from the source;
- An exposure route where contact with the contaminant can occur; and
- A receptor that can be exposed to the contaminant.

8.2.1 Soil and LNAPL

Soil quality from ground surface to a depth of 15 feet poses the potential for exposure via direct contact with the historical landfill materials. The potential ways that exposures could occur consist of the following:

- Children and BSD staff contacting contaminated soils, if no controls are in place to provide a physical barrier at the Site;
- Workers contacting contaminated soils (skin contact or incidental ingestion) and/or inhaling contaminated soil particles during future invasive activities, if no worker protection controls are in place; or
- Terrestrial ecological receptors contacting contaminated soils in the future, if no controls are in place.

The RI implemented a grid-based sampling approach to identify the potential presence of contaminants exceeding screening levels in soils to a depth of 15 feet. Where screening level exceedances were identified within 1 foot of ground surface, an interim action (described in Section 6.1) was successfully implemented to remove impacted soil, install a geotextile fabric, and construct a clean soil and sod barrier at least one foot thick. A second interim action (described in Section 6.2) provided additional cover at two locations where soil concentrations in the 1- to 3-foot depth interval exceeded the soil screening level for lead. The need for additional remedial actions to protect against direct contact exposure will be evaluated in the FS.

In addition to these pathways, contaminants in soil and LNAPL can leach to groundwater, acting as a secondary source. Therefore, the soil-to-groundwater pathway must also be considered in areas where there is a potentially complete groundwater exposure pathway.

8.2.2 Groundwater

Groundwater beneath the Site is encountered at a depth of roughly 120 feet and has a southwesterly flow direction. Drinking water is the highest beneficial use for groundwater in this area. The presence of screening level exceedances in groundwater confirms that this pathway is complete. However, the School and all area consumers obtain their drinking water from municipal sources. No drinking water wells are located on the Site or in the immediate vicinity. A water well inventory identified four potential domestic wells within a one-mile radius of the property, but none were located downgradient of the Site or in areas where impacts could reasonably be expected.

The primary impact to groundwater quality at the Site is TPH in the diesel and motor oil ranges leaching from LNAPL accumulations at the water table and in vadose zone soils beneath the north landfill area. In addition, one monitoring well upgradient of the TPH impact area (MW-9) exhibits a screening level exceedance for TCE, and one downgradient well (MW-6) exhibits a total arsenic exceedance. In both cases, constituent concentrations are at roughly twice their respective screening levels. The arsenic exceedance is likely the result of geochemical conditions created by the upgradient presence of TPH.

Results from the broader monitoring well network indicate that the TPH, TCE, and arsenic impacts to groundwater are localized and do not extend beyond the School property boundary. The FS will consider remedial alternatives to restore the locally impacted groundwater quality.

8.2.3 Vapor Inhalation

Individuals inhaling indoor air contaminated by the volatilization of contaminants in soil (via vapor intrusion) are another potential exposure pathway. As discussed in Section 7.4, this pathway is not complete and has been addressed with Ecology on an expedited path ahead of this RI/FS process.

8.3 Terrestrial Receptors and Ecological Evaluation

A Terrestrial Ecological Evaluation (TEE) was conducted to determine whether the identified hazardous substances in soil at the site had the potential to harm plants and animals. The following TEE was conducted in accordance with MTCA TEE procedures

(WAC 173-340-7490) and Ecology online guidance.[3] The initial steps conducted were to determine whether the site qualifies for an exclusion from a TEE and, if not, whether the site qualifies for a simplified TEE. Supporting documentation and forms generated for the TEE are presented in Appendix H.

8.3.1 Primary Exclusion Evaluation

Currently, exposure pathways to hazardous substances in surface soil are complete for plants, soil biota, and wildlife, although on-site habitat quality is low, as discussed below. The School property is approximately 10.4 acres and the adjacent Church property is approximately 3 acres. The interpreted extent of landfill activity within these two parcels is approximately 6 acres (Figure 11). Including a 500-foot-wide buffer around the Site, there are several areas greater than 1.5 acres of contiguous undeveloped land as defined by WAC 173-340-7490[4] (Figure H-1). Since concentrations of hazardous substances at the Site are not below natural background concentrations, the Site does not qualify for a primary exclusion. Therefore, a simplified or site-specific TEE was conducted. Attachment H-1 (TEE Process Primary Exclusions Documentation Form) documents our evaluation of the site for the primary exclusion.

8.3.2 Simplified TEE Qualification Evaluation

Crownhill is bordered by properties zoned for low-density residential development. The site is not located on or directly adjacent to an area where management or land use plans will maintain or restore native or semi-native vegetation. The site has little native vegetative cover, given that turf grass playfields and landscaped plants and shrubs surround the school buildings. It is unlikely that the site will be used by threatened or endangered species nor State priority species or species of concern. Isolated stands of coniferous and deciduous trees are present along portions of the property boundaries of the site. Adjacent residential areas within 500 feet of the site provide patchy areas with stands of coniferous and deciduous trees, but do not provide large (e.g., greater than 10 acres) contiguous habitat area. Based on the above analysis, the site qualifies for a simplified TEE. This evaluation for a simplified TEE is documented in Attachment H-2 (TEE Process: Simplified or Site-Specific Evaluation Documentation Form).

8.3.3 Simplified TEE

The simplified TEE consists of exposure, pathway, and contaminant analyses. The exposure analysis is documented in Attachment H-3 (Table 749-1: Simplified Terrestrial Ecological Evaluation, Exposure Analysis Procedure). As described previously, the Site consists of playfields and perimeter landscaping, including isolated stands of coniferous and deciduous trees.

The Site, including the areas encompassing the interpreted extent of landfill, is almost completely covered by turf grass, asphalt, or structures. The overall habitat quality of turf

[3] http://www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm

[4] "Contiguous undeveloped land" means an area of undeveloped land that is not divided into smaller areas by highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife. Roads, sidewalks, and other structures that are unlikely to reduce potential use of the area by wildlife shall not be considered to divide a contiguous area into smaller areas. [WAC 173-340-7490(1)(c)(iii)]

grass is considered low. The rooting depth of turf grass is not expected to be greater than 2 feet bgs (Wu, 2005). Similarly, soil invertebrates are unlikely to be found below the root zone of the turf. The low-quality habitat at the site is unlikely to attract a significant number of birds or mammals, given that there is adjacent habitat of intermediate quality surrounding the site. Some more common passerines, like robins or starlings, may periodically forage on the turf fields.

Given the low habitat quality and the likelihood of implementing future institutional controls in conjunction with the final cleanup remedy, this TEE assumes a 3-foot-depth conditional point of compliance. The simplified TEE screening was conducted using soil sample data collected from 0 to 3 feet bgs during spring and winter 2011. For the exposure analysis, Ecology requires the evaluation of potential bioaccumulative compounds (Attachment H-3). While polychlorinated biphenyls (PCBs) were detected in 2 of 27 soil samples (7 percent), the concentrations were well below TEE screening levels for total PCB and the samples with detected PCBs were from the 6- to 9-foot interval. Metals and petroleum hydrocarbons were detected in surface samples (0- to 3-foot-depth) and are the primary hazardous substances of concern. Based on the TEE exposure and pathway analysis, there is a potential pathway for plants and animals on the site to be exposed to hazardous substances.

The maximum soil concentrations from samples collected within in the 0- to 3-foot-depth range were compared to the simplified TEE soil benchmarks from MTCA (Attachment H-4) to determine the COPCs. This analysis excludes soil sample results from locations within the perimeter of the Spring 2012 interim action (see Section 6.1). Arsenic[5], copper, lead, and diesel-range TPH exceeded their respective simplified TEE soil benchmarks and are, therefore, COPCs. The stations and ranges of concentrations exceeding the benchmarks are summarized below. Additionally, the 95 percent upper confidence limit on the mean (95% UCL) was calculated for these chemicals using Environmental Protection Agency (EPA) ProUCL (Version 4.00.05 software).

The following is a comparison of the COPC's to the TEE soil benchmarks (from Attachment H-4):

- Arsenic slightly exceeded the simplified TEE soil benchmark (20 mg/kg) at 1 of 218 (<1%) surface sample locations: SG-J10. The concentration was 21.8 mg/kg. The 95% UCL for arsenic in all surface soil samples is 2.62 mg/kg, which is below the TEE soil benchmark.
- Copper exceeded the simplified TEE soil benchmarks (100 mg/kg) at 1 of 24 (4%) surface sample locations: CS-8. The concentration was 166 mg/kg. The 95% UCL for all copper surface soil samples was 67.9 mg/kg, which is below the TEE soil benchmark.
- Lead exceeded the simplified TEE soil benchmarks (220 mg/kg) at 5 of 218 (2%) surface sample locations: NG-M4, SG-K5, NG-D4, NG-C4, and SG-L3. These concentrations range from 666 mg/kg to 229 mg/kg, respectively. The 95% UCL for all lead surface soil samples was 50.4 mg/kg, which is below the TEE soil benchmark.

[5] Arsenic III benchmarks were used to ensure the simplified TEE was conservative.

- Diesel-range TPH exceeding the simplified TEE soil benchmark (460 mg/kg) at 2 of 194 (<1%) surface sample locations: SG-F3 and NG-F1. These concentrations were 930 mg/kg to 550 mg/kg, respectively. The 95% UCL for all diesel-range TPH surface soil samples was 88.7 mg/kg, which is below the TEE soil benchmark.

8.3.4 TEE Conclusions

The School buildings, playfields, and landscaping are unlikely to attract significant wildlife due to the low-quality habitat and a relatively shallow biologically active zone. Individual surface soil sample locations with COPCs exceeding simplified TEE soil benchmarks are found in several localized areas of the site including the south-central School parcel adjacent to the Church parcel (i.e., copper at CS-8 and arsenic at SG-J10), the southwest portion of the large playfield (i.e., lead at NG-C4 and NG-D4), the northeastern parking lot (i.e., lead at NG-M4), the main parking lot area (i.e., diesel range hydrocarbons at NG-F1 and SG-F3) and southeastern playfields (i.e., lead SG-L3 and SG-K5). Based on the comparison of 95% UCL and average site-wide surface soil concentrations to the simplified TEE soil benchmarks, there are no COPCs that have the potential to pose a risk to plants and animals at the Site.

9 Conclusion

The phased RI work has gathered sufficient information to characterize the nature and extent of site conditions for use in preparing a subsequent Feasibility Study. The grid-based soil sampling program defined the lateral limits of historical landfill materials present at the Site and extensive chemical testing confirmed that contaminant screening level exceedances correlate closely with the occurrence of these materials. The RI provides the information needed to characterize the potential soil, groundwater, and vapor exposure pathways and support the development of appropriate remedial alternatives for the site.

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Limitations

Work for this project was performed and this report prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of the Bremerton School District for specific application to the referenced property. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

TABLES

Table 1 - Well Construction Summary

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Well ID	Top of Casing Elevation	Ground Surface Elevation	Date of Well Installation	Well Coordinates (WA SPN NAD83 ft)		Depth of Screen Interval in Feet		Screen Interval Elevation in Feet[2]	
				Easting	Northing	Top	Bottom	Top	Bottom
MW-1	*135.83*	*136.1*	*12/28/1994*	*1188201.1*	*214935.6*	*111*	*131*	*25.05*	*5.05*
MW-2	*138.47*	*136.6*	*12/31/1994*	*1187939.7*	*215509.1*	*98*	*118*	*38.60*	*18.60*
MW-3	*139.86*	*138.3*	*1/3/1995*	*1188460.0*	*215024.9*	*69*	*99*	*69.28*	*39.28*
MW-4	*138.35*	*138.6*	*3/30/2011*	*1188411.4*	*215125.3*	*123.5*	*143.5*	*15.13*	*-4.87*
MW-5	*136.95*	*137.2*	*3/30/2011*	*1188164.6*	*215231.9*	*108*	*133*	*29.18*	*4.18*
MW-6	*133.87*	*134.2*	*3/28/2011*	*1187912.8*	*215097.9*	*116.5*	*136.5*	*17.70*	*-2.30*
MW-7	*133.86*	*134.3*	*3/28/2011*	*1188354.5*	*214705.2*	*115*	*135*	*19.29*	*-0.71*
MW-8	*133.36*	*nm*	*12/20/2011*	*1188100.2*	*215251.6*	*100*	*120*	*33.9*	*13.9*
MW-9	*134.39*	*nm*	*12/19/2011*	*1188171.4*	*215408.6*	*107*	*127*	*27.9*	*7.9*
MW-10	*132.33*	*nm*	*12/21/2011*	*1187806.7*	*215026.0*	*125*	*145*	*7.8*	*-12.2*
MW-11	*130.28*	*nm*	*12/23/2011*	*1188356.8*	*214577.5*	*121*	*141*	*9.8*	*-10.2*
MW-12	*133.87*	*134.7*	*10/25/2012*	*1188138.8*	*215262.1*	*94*	*124*	*40.72*	*10.72*
MW-13	*133.61*	*134.2*	*10/25/2012*	*1188110.3*	*215290.2*	*94*	*124*	*40.22*	*10.22*
MW-14	*133.58*	*134.5*	*10/26/2012*	*1188150.5*	*215303.7*	*94*	*124*	*40.53*	*10.53*
MW-15	*133.37*	*134.2*	*10/26/2012*	*1188068.9*	*215226.6*	*94*	*124*	*40.18*	*10.18*
MW-16	*133.27*	*134.1*	*10/26/2012*	*1188061.6*	*215299.7*	*94*	*124*	*40.07*	*10.07*

nm not measured

Notes:

1) Vertical datum is NAVD88.

2) For wells MW-8 through MW-11 (where ground surface elevations were not measured), screen interval elevations are estimated assuming a Top of Casing elevation 0.5 feet below ground surface.

Table 2 - Soil Screening Levels

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Constituent (by Group)[1]	Concentration in Milligrams per Kilogram (mg/kg)			
	MTCA Method A, Unrestricted Land Use, Table Value	MTCA Method B, Table Value, Direct Contact[2]	MTCA Method B, Groundwater Protection[3]	**Soil Screening Level[4]**
Total Petroleum Hydrocarbon (TPH)				
Diesel Range	2000			**2000**
Motor Oil Range	2000			**2000**
Metals				
Antimony		32	5.4	**5.4**
Arsenic	20[5]	0.67		**20[5]**
Chromium III[6]	2000	120000	1000	**1000**
Copper		3000	260	**260**
Lead	250		3000	**250**
Vanadium		560	2200	**560**
Zinc		24000	6000	**6000**
Volatile Organic Compounds (VOCs)				
Toluene	7	6400	7.3	**7**
Trichloroethene (TCE)	0.03	11	0.0032	**0.0032**
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthene		4800	98	**98**
Anthracene		24000	2200	**2200**
Fluoranthene		3200	630	**630**
Fluorene		3200	101	**101**
Pyrene		2400	655	**655**
cPAHs TEF		0.14[7]		**0.14[7]**
Polychlorinated Biphenyls (PCBs)				
Aroclor 1254		0.5		**0.5**
Aroclor 1260		0.5		**0.5**
Other Semi-Volatile Organics				
Benzyl butyl phthalate		16000	910	**910**
Di-n-butyl phthalate		8000	58	**58**
Hexachlorobenzene		0.63	0.088	**0.088**
2-Methylnaphthalene		320		**320**
Naphthalene	5	1600	4.5	**4.5**

cPAH carcinogenic PAH
MTCA Model Toxics Control Act
TEF toxicity equivalency factor

Notes

1) This table includes only those constituents that: a) were detected in at least one soil sample; and b) are included in Ecology's CLARC database.
2) The MTCA Method B Direct Contact values shown are the more restrictive of the carcinogenic and non-carcinogenic values presented in Ecology's CLARC database.
3) Unless otherwise noted, values were calculated as per WAC 173-340-747 using default input parameters.
4) Unless otherwise noted, the most restrictive cleanup level is selected as the screening level.
5) Concentration based on direct contact using Equation 740-2 and protection of groundwater for drinking water use, using the procedures in WAC 173-340-747(4), adjusted for natural background for soil.
6) Since hexavalent chromium was not detected in any sample, total chromium results are attributed to the trivalent state.
7) The cPAHs TEF is calculated from the concentrations of seven carcinogenic PAHs, using the method described in WAC 173-340-708.

Table 3 - Groundwater Screening Levels

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Constituent (by Group)[1]	Concentration in Micrograms per Liter (µg/L)			
	State and Federal Primary Maximum Contaminant Level (MCL)	MTCA Method A, Table Value	MTCA Method B, Table Value, Direct Contact[2]	**Groundwater Screening Level[3]**
Total Petroleum Hydrocarbon (TPH)				
Diesel Range		500		**500**
Motor Oil Range		500		**500**
Metals				
Arsenic	10	5 [4]	0.058	**5 [4]**
Copper	1300		590	**590**
Lead	15	15		**15**
Volatile Organic Compounds (VOCs)				
Chlorobenzene	100		160	**100**
cis-1,2-Dichloroethene	70		80	**70**
Trichloroethene (TCE)	5	5	0.49	**5 [5]**
Polycyclic Aromatic Hydrocarbons (PAHs)				
Naphthalene		160	160	**160**

MTCA Model Toxics Control Act

Notes:

1) This table includes only those constituents that: a) were detected in at least one groundwater sample; and b) are included in Ecology's CLARC database.

2) The MTCA Method B Direct Contact values shown are the more restrictive of the carcinogenic and non-carcinogenic values presented in Ecology's CLARC database.

3) Unless otherwise noted, the most restrictive cleanup level is selected as the screening level.

4) Arsenic concentration based on background concentrations for state of Washington.

5) Screening level based on MCL, which is protective at 10^{-5} risk.

Table 4 - Air and Soil Vapor Screening Levels

PUBLIC REVIEW DRAFT

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Constituent	MTCA Method B Air Cleanup Level, Most Restrictive		Screening Levels Used in 2010 Sub-Slab Soil Vapor Assessments (2)
	Current CLARC Database Search Results	CLARC Database Search Results in Summer 2010	
Freon 12 (Dichlorodifluoromethane)	91	80	800
Vinyl chloride	SAI	0.28	2.8
1,1-Dichloroethene	91	91	910
trans-1,2-Dichloroethene	27	32	320
1,1-Dichloroethane	NR/RND	320	3,200
cis-1,2-Dichloroethene	NR/RND	16	160
Chloroform	0.11	0.11	1.1
Benzene	0.32	0.32	3.2
1,2-Dichloroethane	0.096	2.2	22
Trichloroethene	0.37	0.1	1.0
Tetrachloroethene	9.6	0.42	4.2
Ethylbenzene	460	460	4,600
Xylenes (total)	46	46	460
1,2,4-Trimethylbenzene	3.2	2.7	27
Naphthalene	1.4	1.4	14
Hydrogen sulfide	0.91	0.46	4.6

CLARC Cleanup Levels and Risk Calculations
MTCA Model Toxics Control Act
NR Not researched
RND Researched - no data
SAI See additional information

Notes:

1) All concentrations are in units of micrograms per cubic meter ($\mu g/m^3$).

2) Values in this column were obtained by multiplying the most stringent MTCA Method B air cleanup level by 10, to conservatively account for soil vapor attenuation across the floor slab in accordance with Ecology's Guidance for Evaluating Soil Vapor Intrusion in Washington State.

Table 5 - Soil Quality Data Summary

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Constituent (by Group)[2]	Number of Sample Locations	Number of Samples	Number of Detected Results	Maximum Detected Value (mg/kg)	Soil Screening Level[3] (mg/kg)	Exceedances of Soil Screening Level	
						Number of Samples	% of Samples
Total Petroleum Hydrocarbon (TPH)							
Diesel Range	*210*	*597*	*53*	*27000*	*2000*	*16*	*3*
Motor Oil Range	*210*	*597*	*80*	*72000*	*2000*	*19*	*3*
Metals							
Antimony	*40*	*54*	*25*	*544*	*5.4*	*24*	*44*
Arsenic	*237*	*611*	*500*	*63.1*	*20*	*39*	*6*
Chromium III	*5*	*17*	*17*	*1710*	*1000*	*5*	*29*
Copper	*40*	*54*	*37*	*6820*	*260*	*17*	*31*
Lead	*236*	*608*	*580*	*26300*	*250*	*73*	*12*
Vanadium	5	17	17	382	560	0	0
Zinc	*5*	*17*	*17*	*14600*	*6000*	*4*	*24*
Volatile Organic Compounds							
Toluene	9	29	1	0.06	7	0	0
Trichloroethene (TCE)	*9*	*29*	*1*	*0.1*	*0.0032*	*1*	*3*
Polycyclic Aromatic Hydrocarbons (PAHs)							
Acenaphthene	13	33	1	0.056	98	0	0
Anthracene	13	33	2	2.7	2200	0	0
Fluoranthene	13	33	8	46	630	0	0
Fluorene	13	33	1	0.42	101	0	0
Pyrene	13	33	9	54	655	0	0
cPAHs TEF[4]	*13*	*33*	*9*	*26*	*0.14*	*1*	*3*
Polychlorinated Biphenyls (PCBs)							
Aroclor 1254	9	29	2	0.5	0.5	0	0
Aroclor 1260	9	29	1	0.4	0.5	0	0
Other Semi-Volatile Organics							
Benzyl butyl phthalate	9	28	1	0.06	910	0	0
Di-n-butyl phthalate	9	28	1	0.22	58	0	0
Hexachlorobenzene	9	28	1	0.034	0.088	0	0
2-Methylnaphthalene	9	28	1	2.3	320	0	0
Naphthalene	13	33	2	0.96	4.5	0	0

cPAH carcinogenic PAH TEF toxicity equivalency factor

Notes

1) Samples from soils removed as part of the Interim Action are not counted in the number of detects, maximums, and exceedances.

2) Constituents in italics have been detected at concentrations exceeding the corresponding screening level, and are therefore identified as constituents of potential concern (COPCs).

3) Soil screening levels are developed in Table 2.

4) The cPAHs TEF is calculated from the concentrations of seven carcinogenic PAHs, using the method described in WAC 173-340-708.

Table 6 - Groundwater Quality Data Summary

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Constituent (by Group)[1]	Number of Sample Locations	Number of Samples	Number of Detected Results	Maximum Detected Value (ug/L)	Groundwater Screening Level[2] (ug/L)	Exceedances of Groundwater Screening Level	
						Number of Samples	% of Samples
Total Petroleum Hydrocarbon (TPH)							
Diesel Range	*14*	*89*	*23*	*43000*	*500*	*19*	*21*
Motor Oil Range	*14*	*89*	*19*	*39000*	*500*	*17*	*19*
Total Metals [3]							
Arsenic	*12*	*84*	*40*	*24.9*	*5*	*12*	*14*
Copper	9	61	31	464	590	0	0
Lead	*12*	*84*	*12*	*53.1*	*15*	*2*	*2*
Volatile Organic Compounds							
Chlorobenzene	9	61	7	2.3	100	0	0
cis-1,2-Dichloroethene (DCE)	14	89	7	2	70	0	0
Trichloroethene (TCE)	*14*	*89*	*24*	*11*	*5*	*7*	*8*
Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	9	61	13	0.3	160	0	0

J Analyte was positively identified; the reported result is an estimate.

Notes

1) Constituents in italics have been detected at concentrations exceeding the corresponding screening level, and are therefore identified as constituents of potential concern (COPCs).

2) Groundwater screening levels are developed in Table 3.

3) Samples were analyzed for both dissolved and total metals. Only the total metals results, which were typically higher than the dissolved metals results, are evaluated in this table.

Table 7 - LNAPL Thickness Measurements and Removal Log

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Well ID	Date	LNAPL Thickness in ft	LNAPL Removal Volumes/Notes
MW-8	10/26/12	0.2	(Well installed on 12/20/11.)
	11/21/12		Less than 5 ml LNAPL removed; unable to measure thickness.
	01/31/13	0.1	
	05/03/13	0.03	
	08/07/13	0.23	
MW-13	11/01/12	1.46	(Well installed on 10/25/12.)
	11/21/12	0.99	After this thickness was measured, approx. 900 ml LNAPL was bailed over a 2-hour test period. Unable to measure thickness at conclusion of test, but bailing produced only water.
	01/31/13	0.1	
	05/03/13	0.31	
	08/07/13	0.49	
MW-14	11/01/12	nd	(Well installed on 10/26/12.)
	01/31/13	nd	
	05/03/13	nd	
	08/07/13	0.12	
MW-16	11/01/12	nd	(Well installed on 10/26/12.)
	01/31/13	0.5	
	05/03/13	0.48	
	08/07/13	2.61	

LNAPL light non-aqueous-phase liquid

nd no detectable separate-phase liquid thickness

Table 8 - Physical and Chemical Characteristics of LNAPL

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Monitoring Well ID:	MW-13
Sampling Date:	11/21/2012
TPH in mg/kg by Method NWTPH-Dx	
Diesel-range	370,000
Motor oil-range	350,000
Chlorinated VOCs in mg/kg by EPA Method 8260C	
Vinyl chloride	<100
Chloroethane	<100
1,1-Dichloroethene	<100
Methylene chloride	<500
trans-1,2-Dichloroethene	<100
1,1-Dichloroethane	<100
cis-1,2-Dichloroethene	<100
1,2-Dichloroethane(EDC)	<100
1,1,1-Trichloroethane	<100
Trichloroethene	<100
Tetrachloroethene	<100
Specific Gravity (@ 15.6°C)	0.89
Kinematic Viscosity in cSt (@ 20°C) by ASTM D-445	1,737
Flash Point in deg F (PMCC) by ASTM D-93	>210

cSt centistokes
PMCC Pensky-Marten closed cup (flash point test method)
TPH Total petroleum hydrocarbon
VOC Volatile organic compound

Notes:
1) The LNAPL sample was obtained during the bailing test at Well MW-13.

FIGURES

Vicinity Map

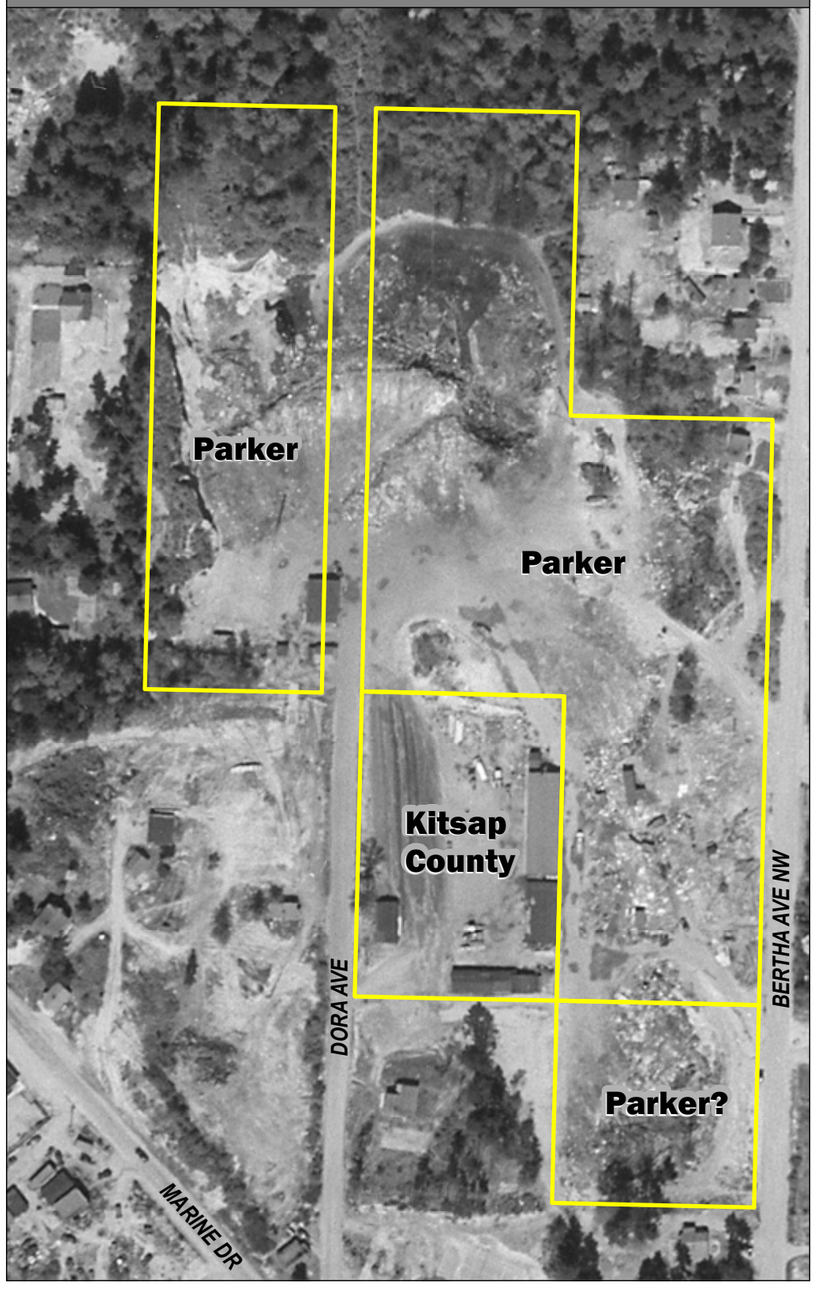
Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	NOV-2012	BY: PPW	FIGURE NO. 1
	PROJECT NO. 100094	REV BY: SCC	

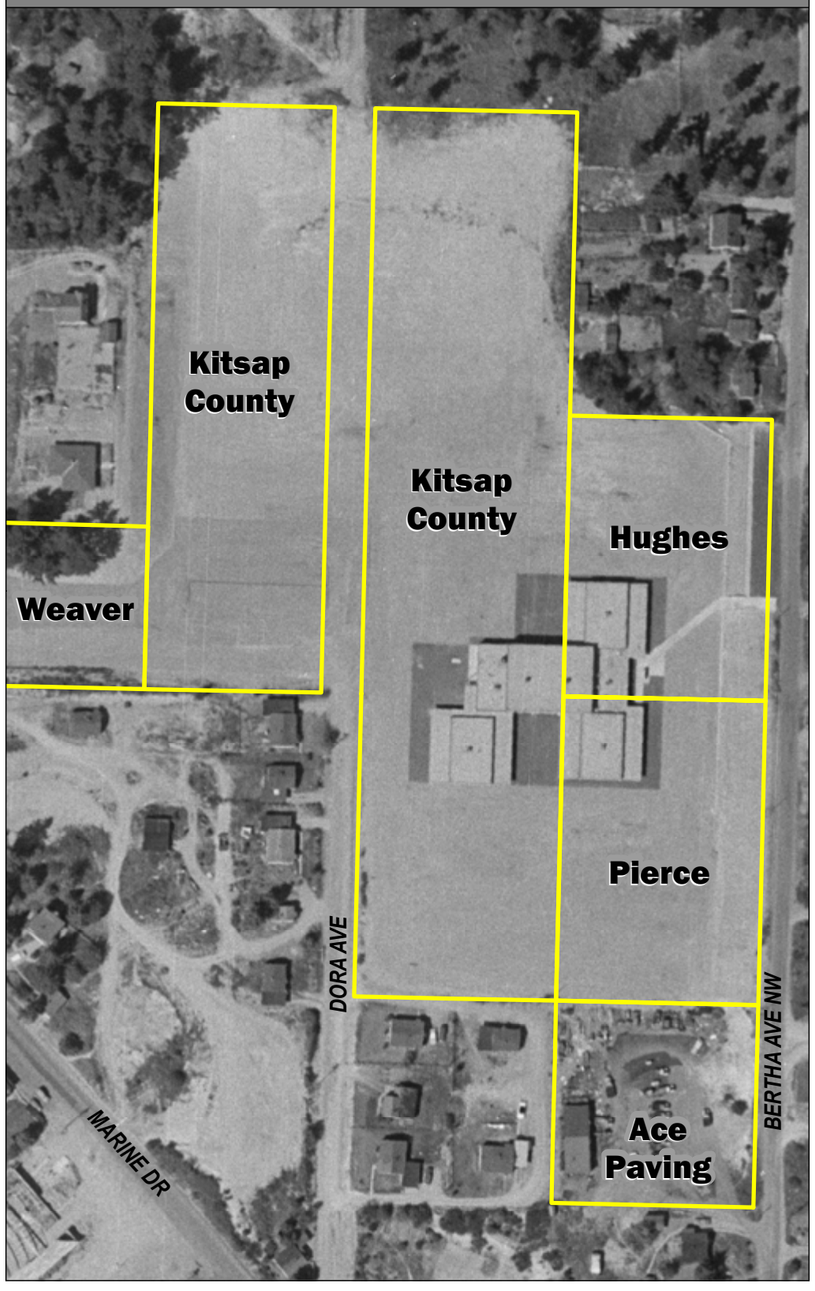
Basemap Credits: National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC

GIS Path: T:\projects_8\CrownHillElementary\Delivered\DRAFT_RI_REVISED\01_VicinityMap.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 11/16/2012 || User: soudd || Print Date: 11/16/2012

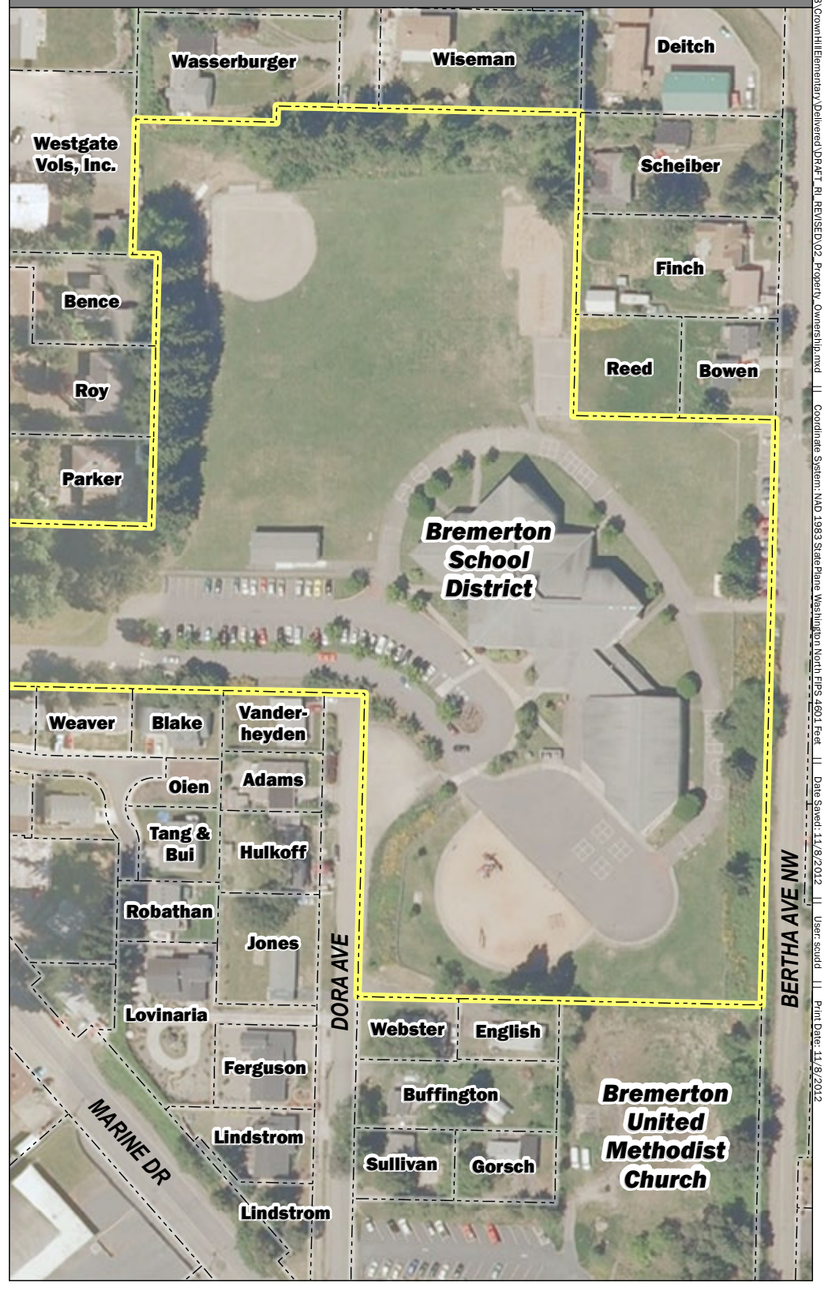
1946 Aerial Photo with Parcel Ownership in Mid-1940s



1956 Aerial Photo with Parcel Ownership in 1954 Prior to Bremerton School District Acquisition



2009 Aerial Photo with Current Parcel Ownership



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N

0 75 150 300

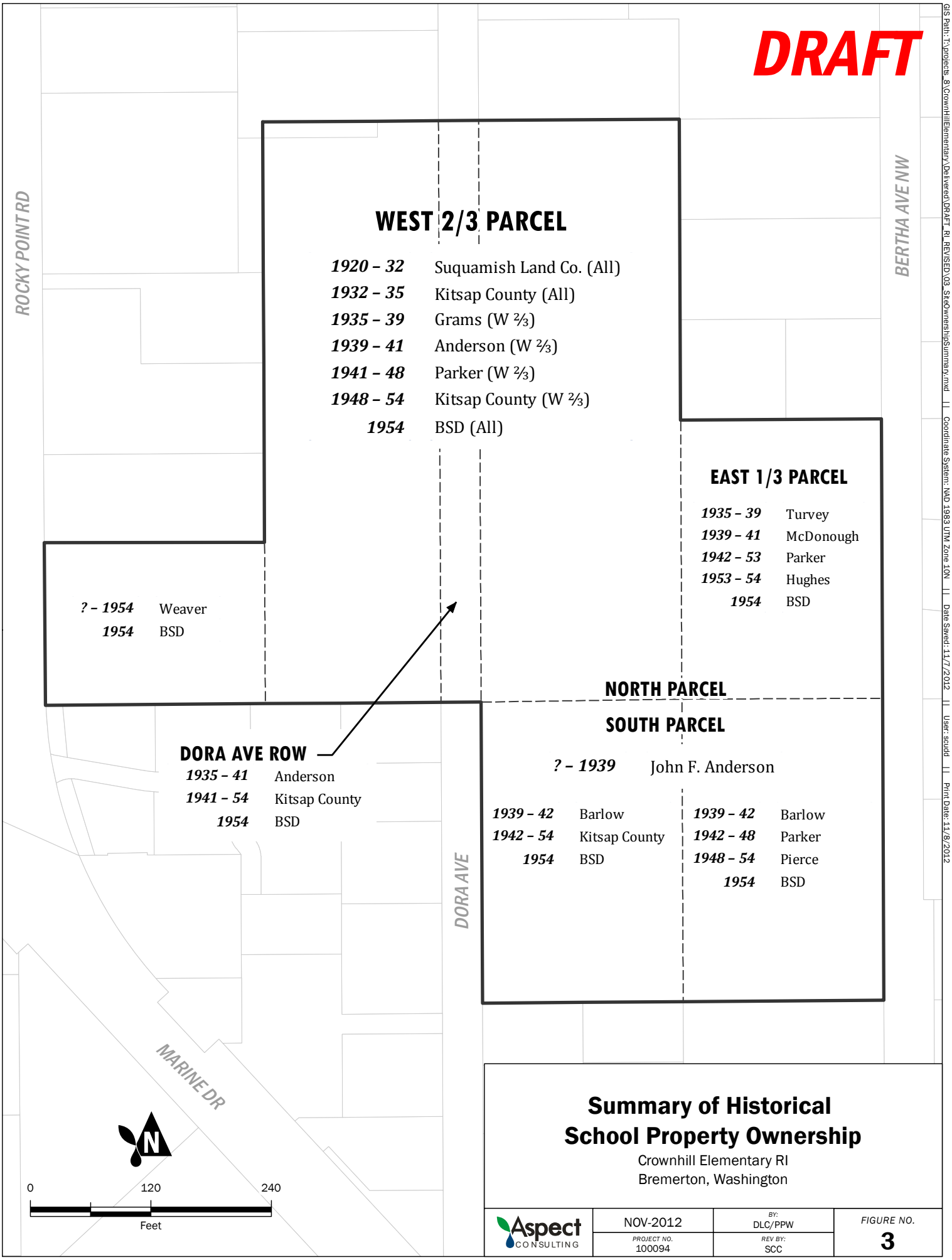
Feet

DRAFT

Parcel Ownership (1946, 1954, and Current)

Crownhill Elementary RI
Bremerton, Washington

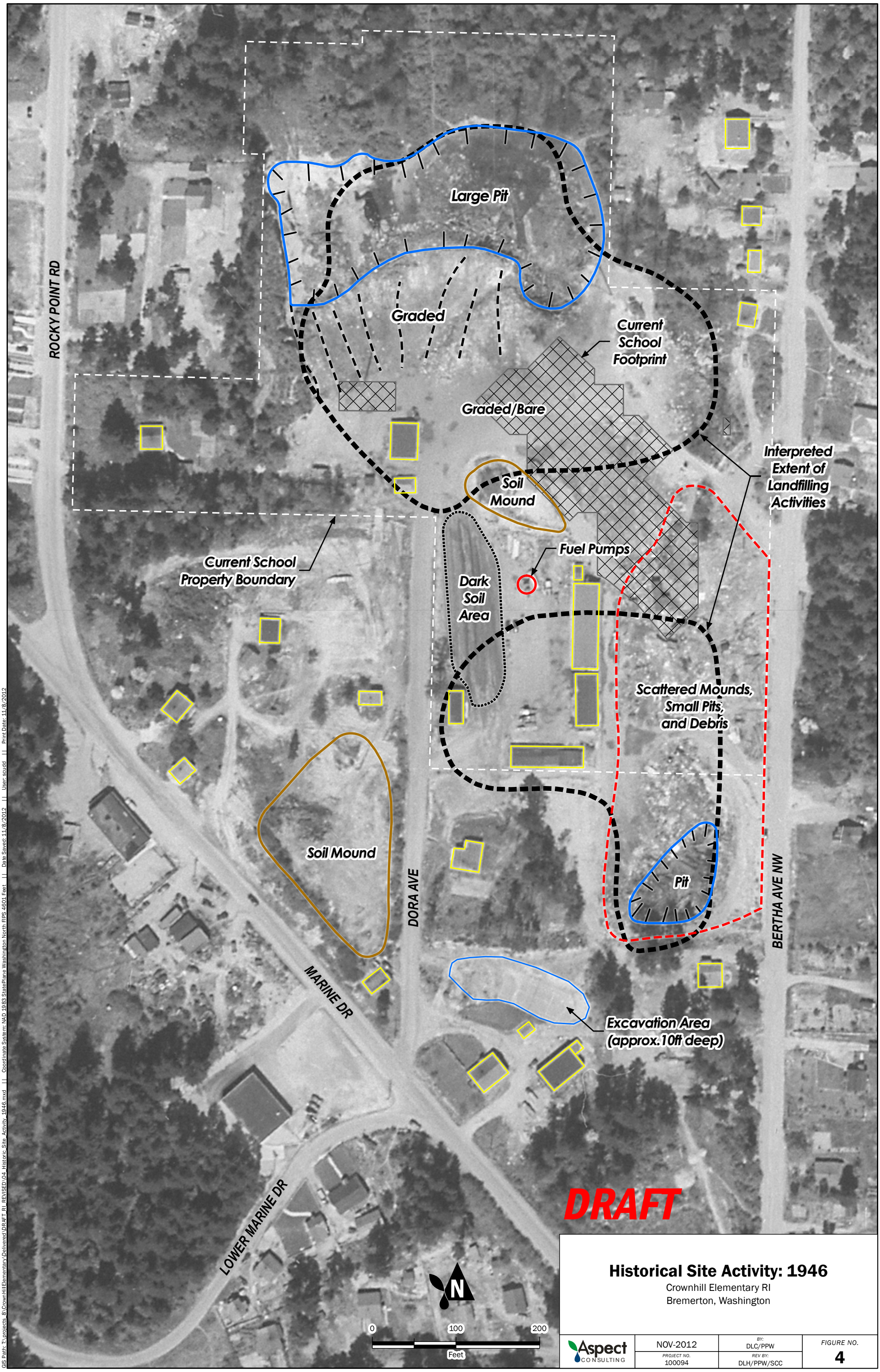
Aspect CONSULTING	NOV-2012	BY: DLC / PPW	FIGURE NO. 2
	PROJECT NO. 100094	REV BY: SCC	



Summary of Historical School Property Ownership

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	NOV-2012	BY: DLC/PPW	FIGURE NO. 3
	PROJECT NO. 100094	REV BY: SCC	

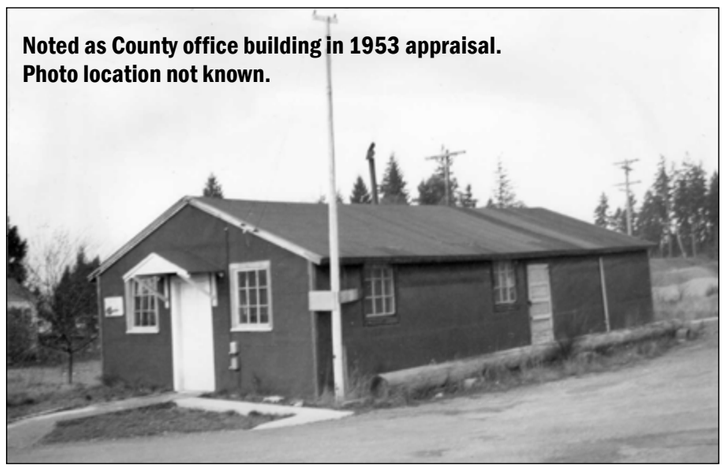


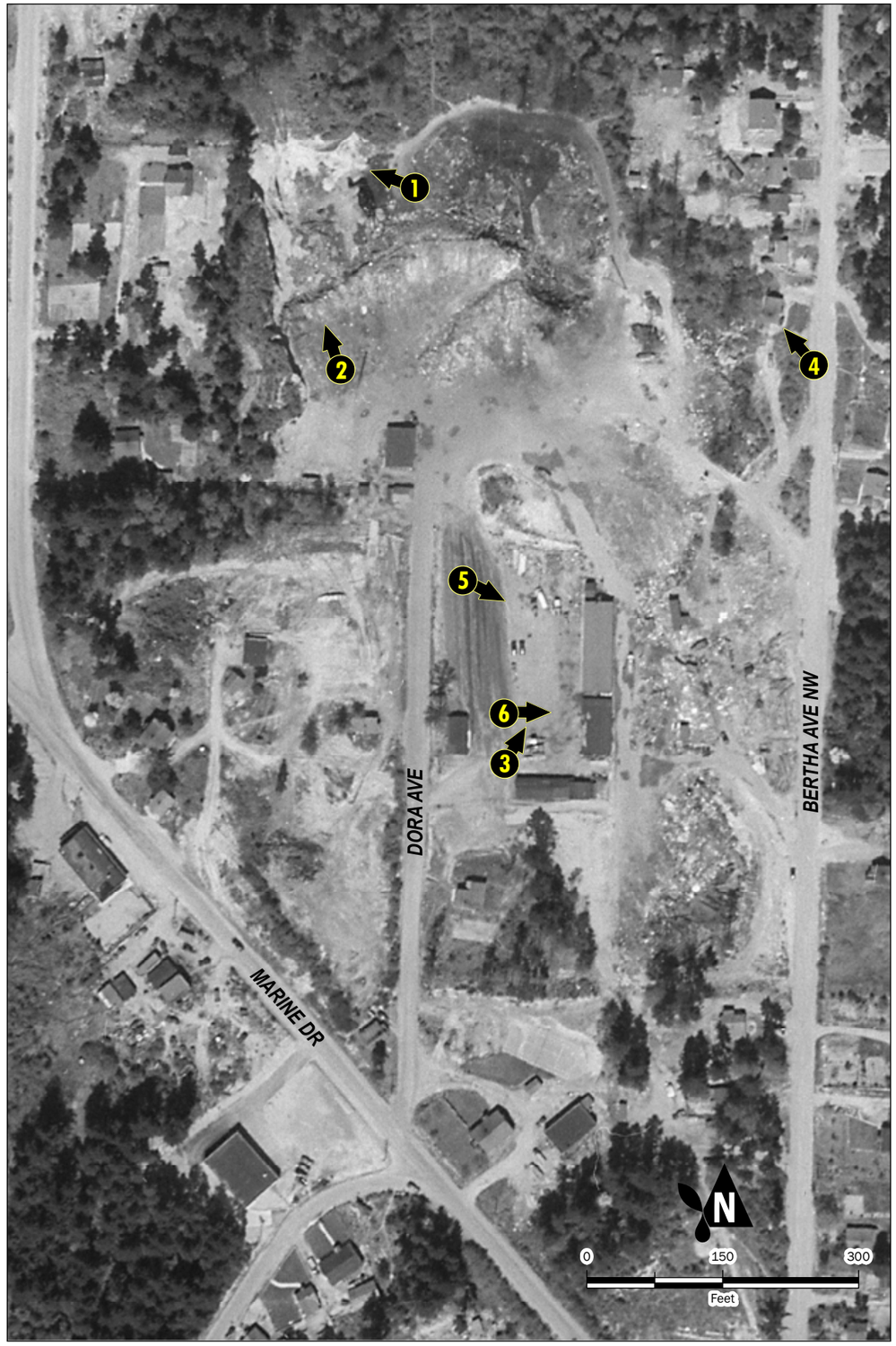
Historical Site Activity: 1946

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	NOV-2012	BY: DLC/PPW	FIGURE NO. 4
	PROJECT NO. 100094	REV BY: DLH/PPW/SCC	

GIS Path: T:\projects_8\CrownHillElementary\Delivered\DRAFT_RI_REVISED\04_Historic_Site_Activity_1946.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 11/8/2012 || User: scudd || Print Date: 11/8/2012





Above: 1946 Aerial Photo and 1953 Photo Locations

4 Estimated location and direction of photograph

Historical Site Photos

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	NOV-2012	BY: DLH/DLC/PPW	FIGURE NO. 5
	PROJECT NO. 100094	REV BY: SCC	

CUT

FILL

ROCKY POINT RD

Current School Footprint

Cut/Fill Line

CUT FILL

Current School Property Boundary

Interpreted Extent of Landfilling Activities

FILL CUT

DORA AVE

BERTHA AVE NW

MARINE DR

LOWER MARINE DR

N

0 100 200

Feet

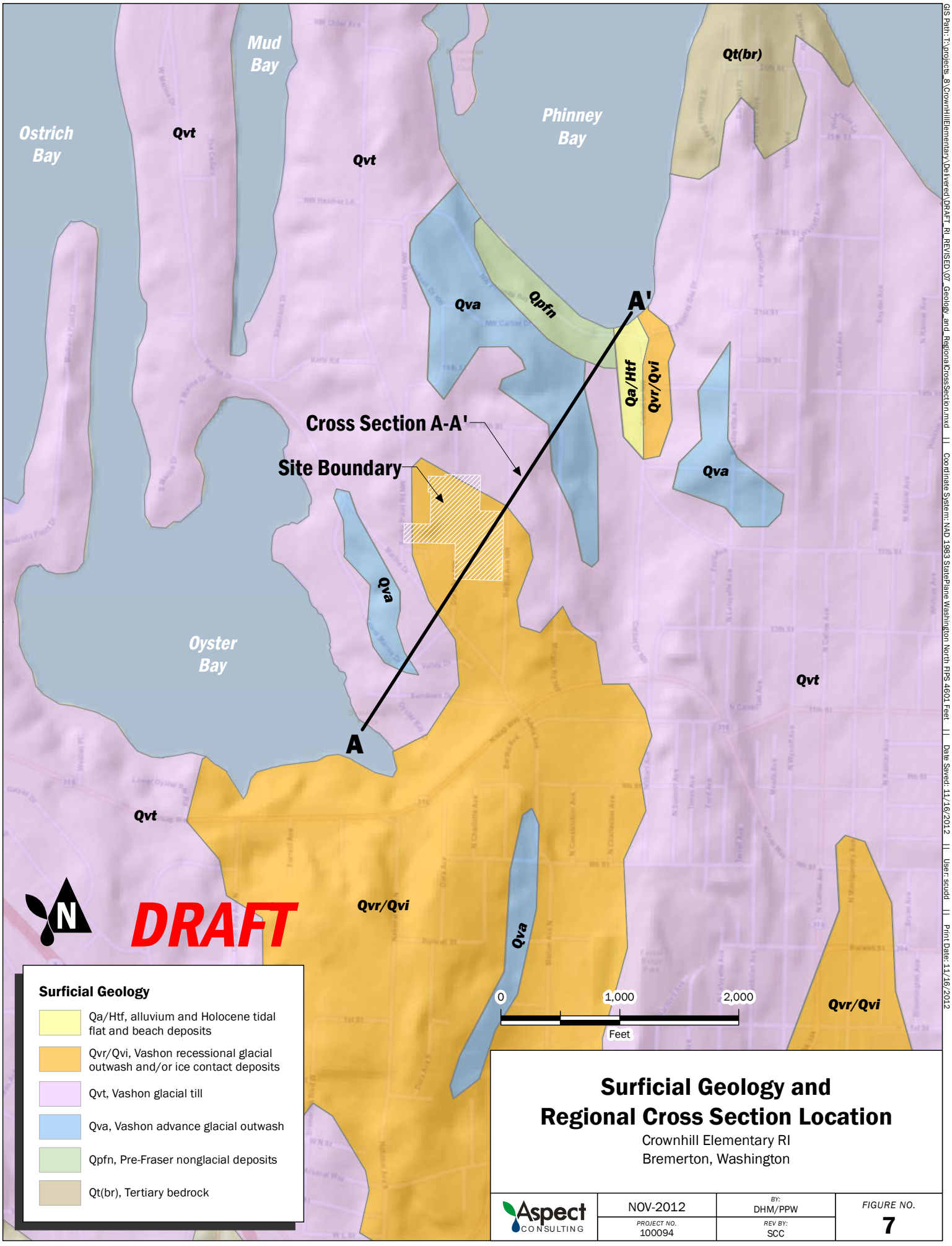
DRAFT

Historical Site Activity: 1956

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	NOV-2012	BY: DLC/PPW	FIGURE NO. 6
	PROJECT NO. 100094	REV BY: DLH/PPW/SCC	

GIS Path: T:\projects_8\CrownHillElementary\Delivered\DRAFT_RI_REVISED\06_Historic_1956.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 11/8/2012 || User: scudd || Print Date: 11/8/2012



Surficial Geology and Regional Cross Section Location

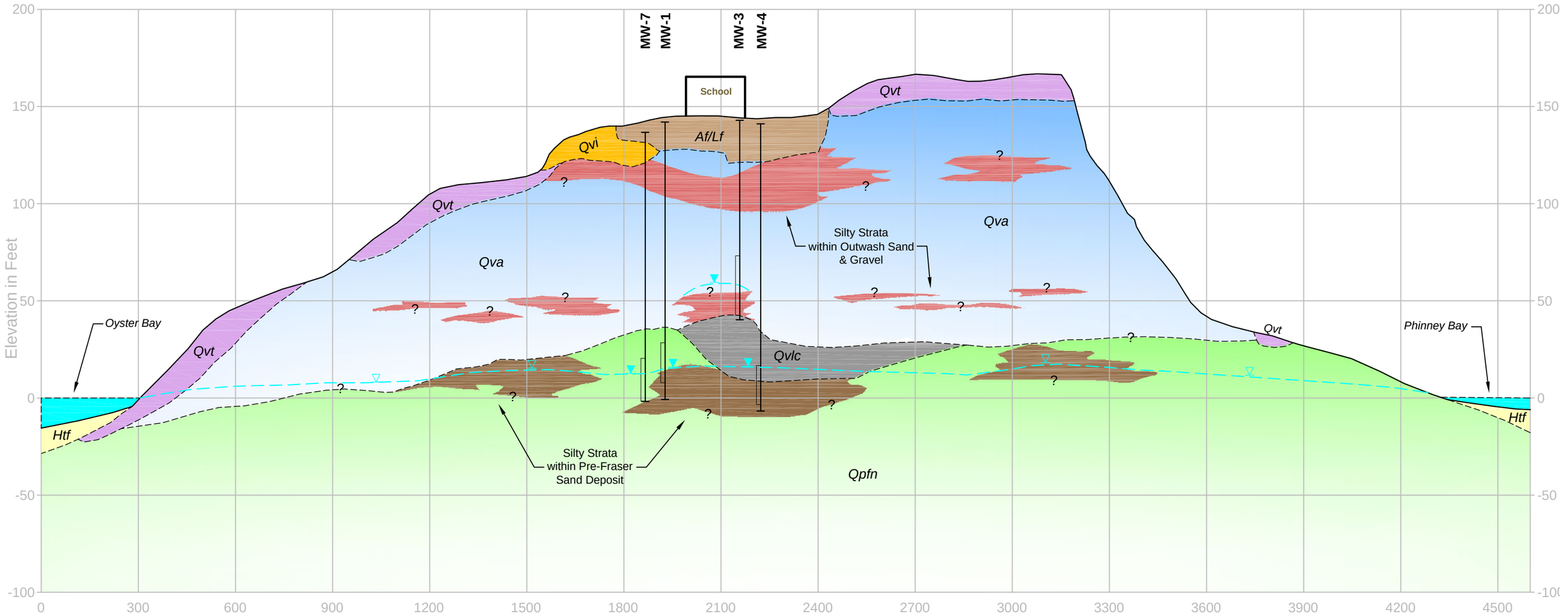
Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	NOV-2012	BY: DHM/PPW	FIGURE NO. 7
	PROJECT NO. 100094	REV BY: SCC	

GIS Path: T:\projects_8\CrownHillElementary\Delivered\DRAFT_RI_REV\SED\07_Geology_and_RegionalCrossSection.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 11/16/2012 || User: scudd || Print Date: 11/16/2012

A Southwest

A' Northeast



LEGEND

- Water Level-Inferred
- Water Level-Measured
- Generalized Water Table Surface
- Approximate Geologic Contact (Queried where inferred)
- Monitoring Well Location and Depth

Af - Fill: Loose to medium dense or soft to stiff silty sand, sand silt, and sand and gravel. Generally 4 to 5 feet thick, but up to 15 feet in places. Lf - Landfill: Loose silty sand and sandy silt with debris, up to 40 feet thick in places.

Qvr/Qvi - Vashon recessional glacial outwash and/or ice contact deposits: Loose to dense, or stiff to very stiff, slightly gravelly silty fine sand and sandy silt. Contains some lenses or layers of hard silty clay.

Qvt - Vashon glacial till: Very dense or hard, poorly sorted to non-sorted deposits of silty sand with variable amounts of gravel with cobbles. Known to contain scattered boulders. Generally an aquitard.

Qva - Vashon advance glacial outwash: Dense to very dense, slightly silty to clean sand and gravelly sand. Generally an aquifer where saturated, but contains scattered lenses or strata of silty sand that may locally perch groundwater.

Qvlc - Vashon advance glaciolacustrine deposits: Hard silt and clay with sand lenses. An aquitard where laterally extensive.

Qpfn - Pre-Fraser nonglacial deposits: Undifferentiated sediments from one or more nonglacial climatic interval before the most recent glaciation. Typically hard or very dense and composed of sand with lenses or strata of silt and silty sand with some organics and peat layers. Generally an aquitard although sandy beds may be moderately transmissive.

Holocene Tidal Flat and Beach Deposits

6x Vertical Exaggeration

1" = 50' Vertical Scale in Feet

0 300 600

Horizontal Scale in Feet

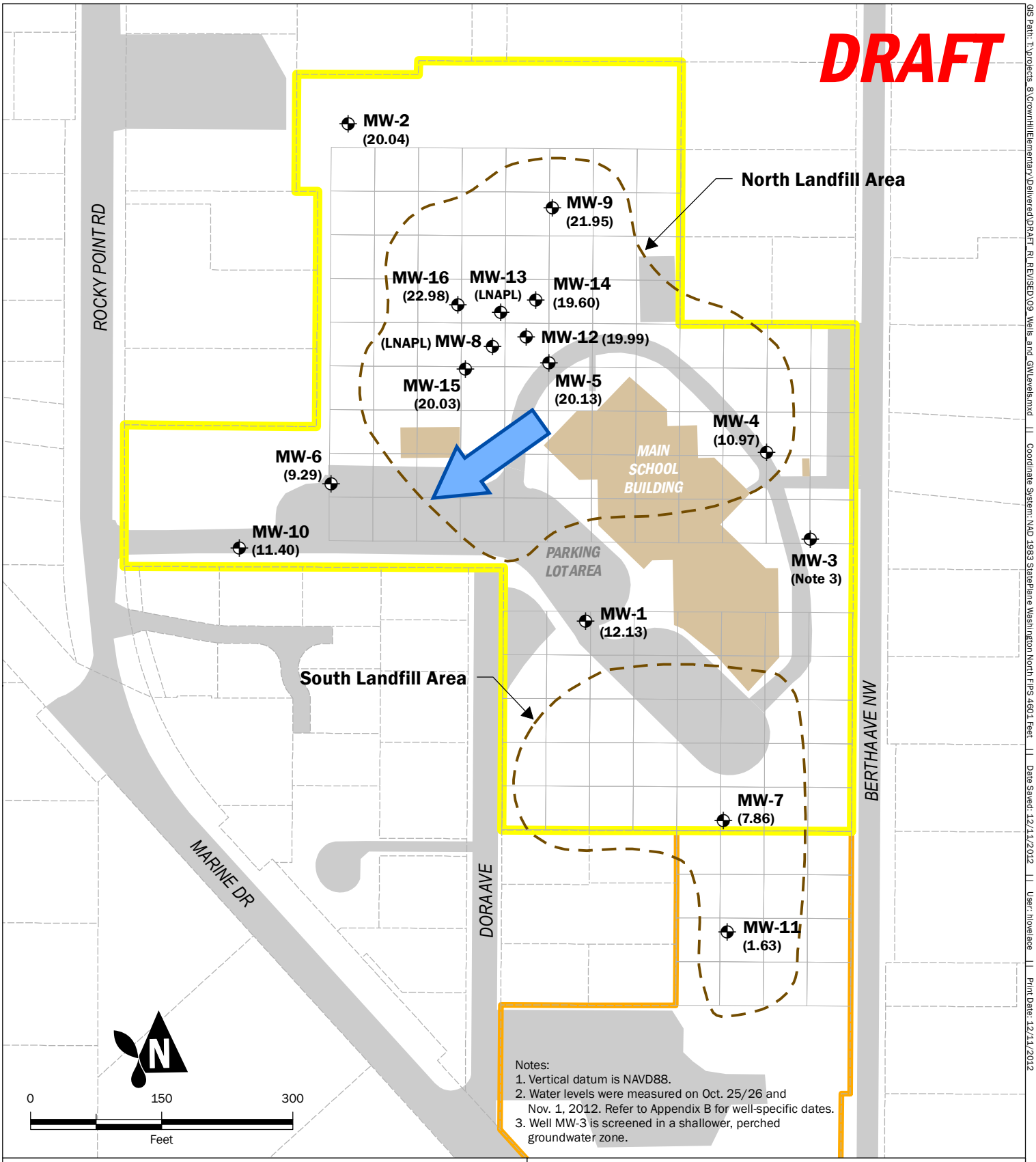
Regional Hydrogeologic Cross Section A-A'

Crownhill Elementary RI

Bremerton, Washington

Aspect Consulting	NOV-2012	BY: DLH/SCC	FIGURE NO. 8
	PROJECT NO. 100094	REV BY: SCC	

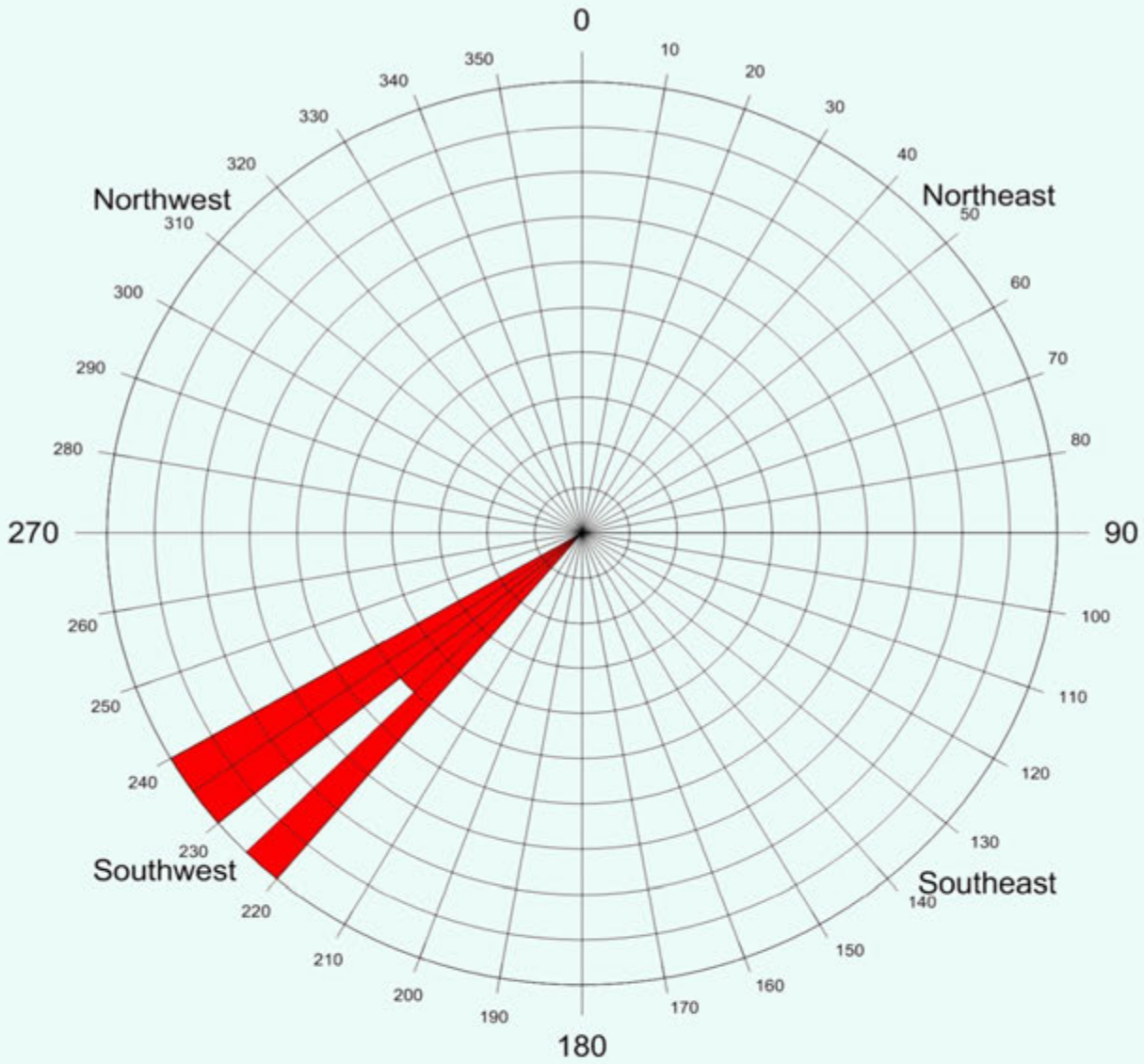
CAD Path: Q:\Crown Hill Elementary\100067 Crown Hill Elementary School\2012-11 Draft RI Revised\100094-A.dwg Cross Section A-A' || Coordinate System: NAD 1983 State Plane Washington North FIPS 4601 Feet || Date Saved: Nov 16, 2012 12:21pm || User: scudd



Monitoring Well Locations and Water Level Elevations

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	DEC-2012	BY: DLC / PPW	FIGURE NO. 9
	PROJECT NO. 100094	REV BY: SCC / HRL	

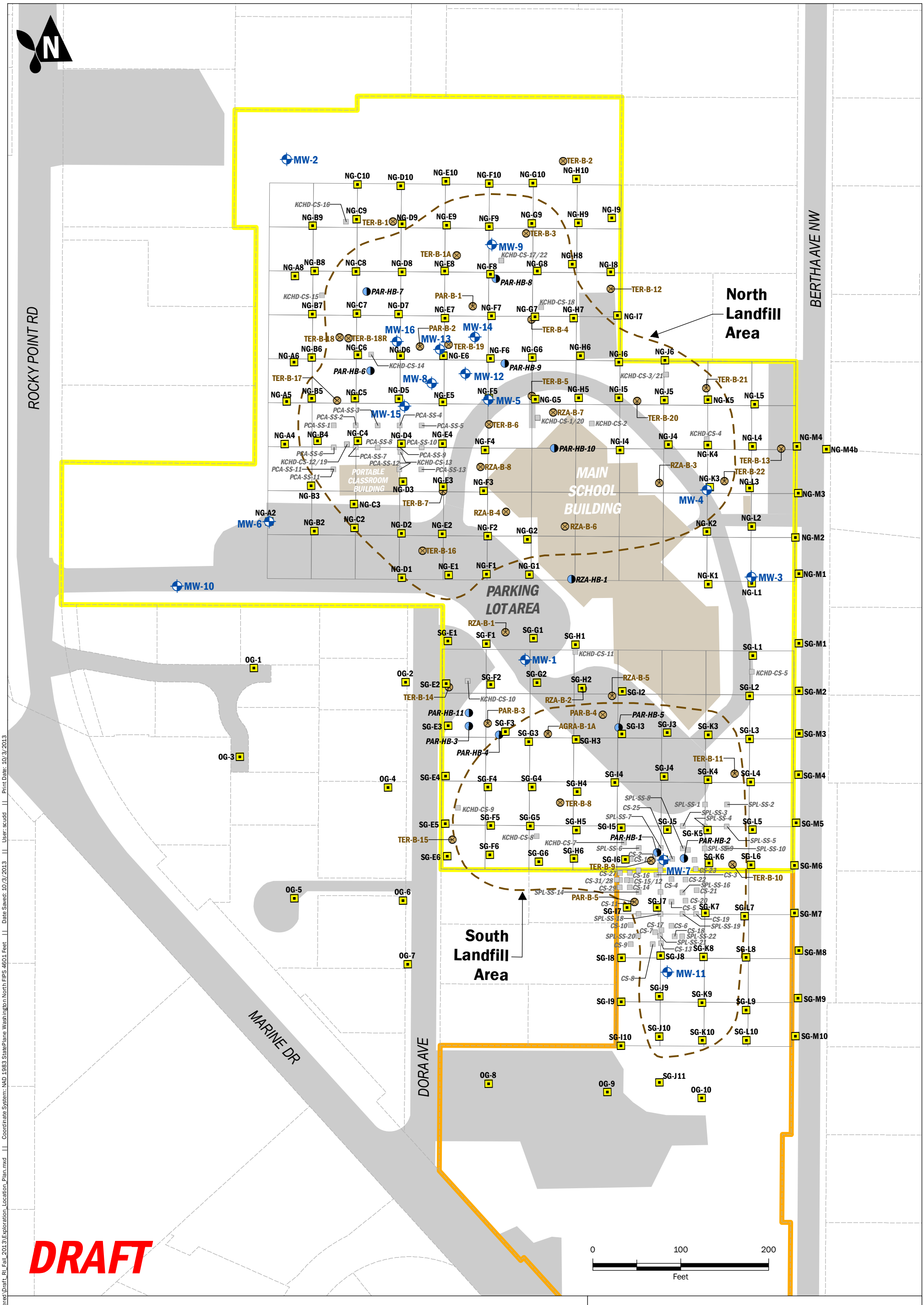


The Rose diagram represents groundwater flow direction and percent occurrence, normalized to one. Data used in the flow direction calculations is provided below.

	Water Level Elevation In Feet				
Date	MW-2	MW-9	MW-5	Hydraulic Gradient (ft/ft)	Azimuth Groundwater Flow Direction (degrees)
01/16 -01/17/12	21.08	21.31	20.98	0.0025	224.6
04/12 - 04/13/12	21.67	21.95	21.61	0.0027	227.4
07/10-07/11/12	21.55	21.87	21.58	0.0026	232.8
10/25-10/26/12	20.04	20.40	20.13	0.0026	236.5
1/31/13	22.29	22.47	22.20	0.0020	223.9
5/3/13	22.33	22.71	22.41	0.0028	235.5
8/7/13	21.45	21.81	21.49	0.0029	233.2

Groundwater Flow Direction
North Landfill Area
Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	SEP-2013	BY: DFR/SCC	FIGURE NO. 10
	PROJECT NO. 100094	REV BY: -	



Exploration Locations:

- MW-10 — Monitoring Well
- NG-A3 — Direct Push Probe
- PAR-HB-11 — Hand Auger Soil Boring
- TER-B-16 — Soil Boring
- SPL-SS-12 — Surface Soil Sample

- Bremerton School District (BSD) Property Boundary
- Bremerton United Methodist Church (BUMC) Property Boundary
- Interpreted Extent of Landfill Activity

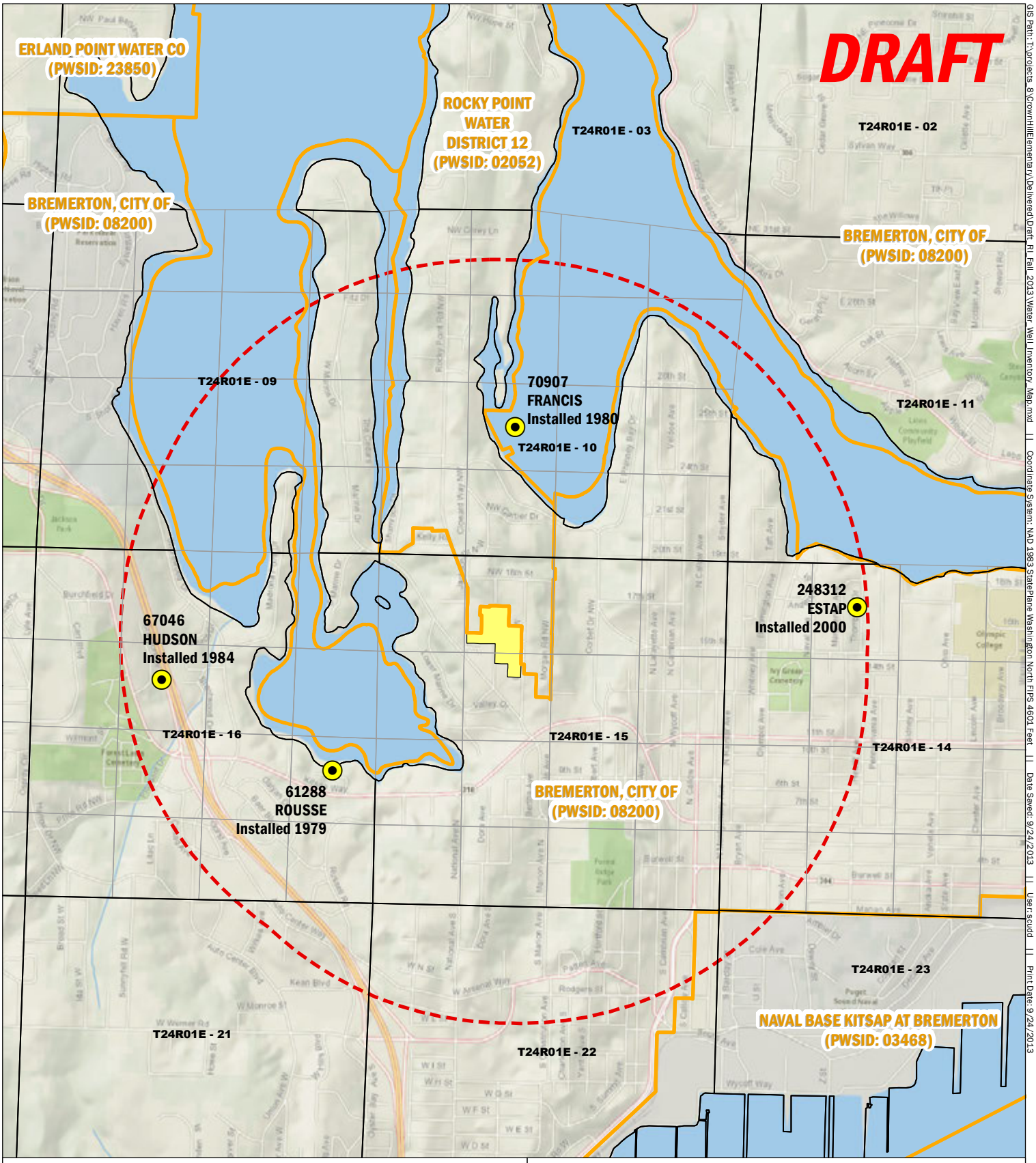
- Sample Grid
- Parcel Lines
- School Building Footprint
- Pavement

Exploration Location Plan

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	OCT-2013	BY: DLH / DLC / PPW	FIGURE NO. 11
	PROJECT NO. 100094	REV BY: HRL /SCC	

GIS Path: T:\projects_8\CrownHillElementary\Delivered\Draft_RI_Fall_2013\Exploration_Location_Plan.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 10/3/2013 || User: scudd || Print Date: 10/3/2013



Domestic Well from Ecology Well Log Database

Sections

Approximate Quarter-Quarter Sections

Group A Water System Service Area

Historic Landfill Parcel Area

One-mile Buffer Around Historic Landfill Parcel Area

N

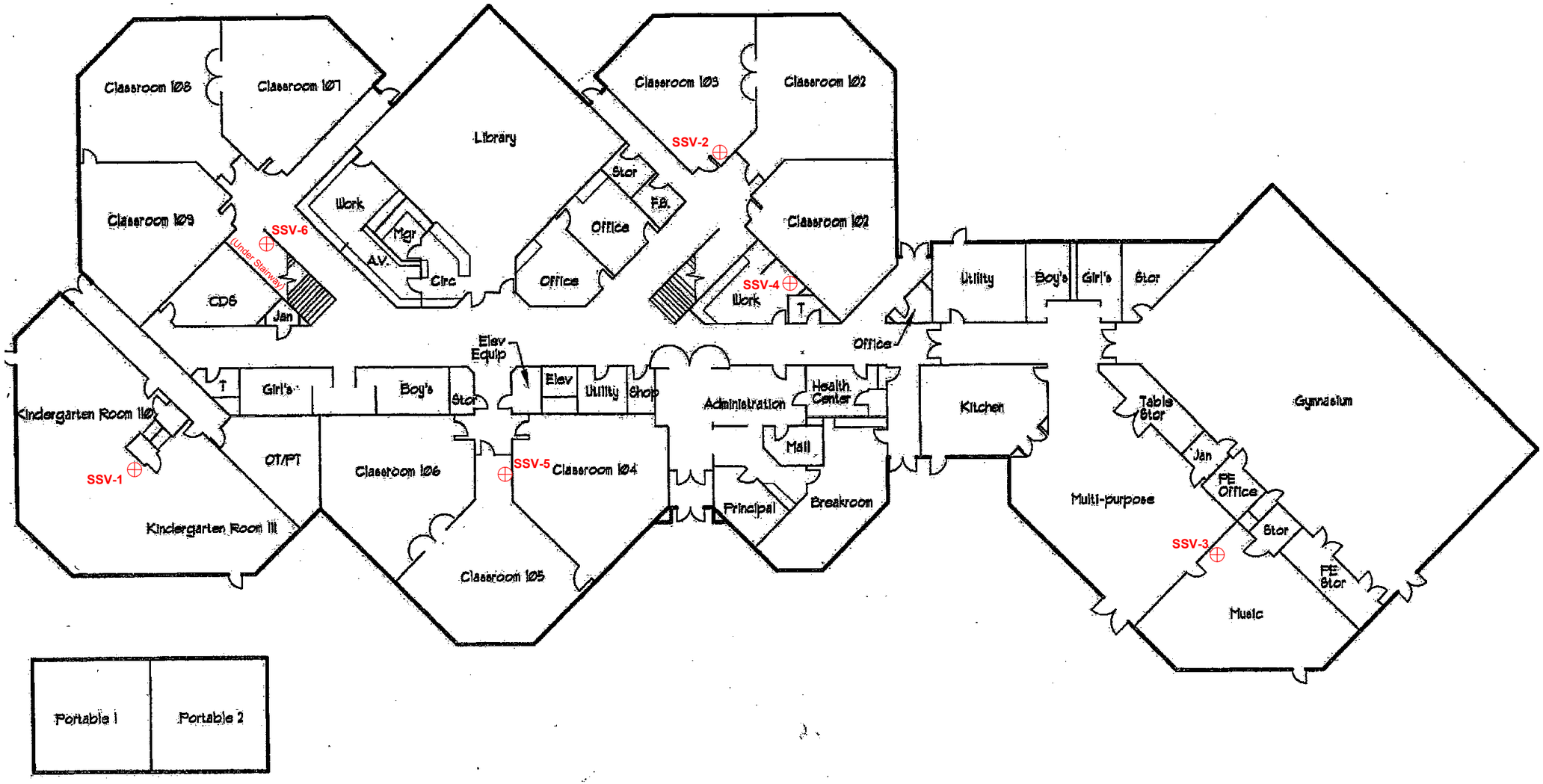
0 1,000 2,000 Feet

0 0.25 0.5 Miles

Water Well Inventory Map

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	SEP-2013	BY: PPW	FIGURE NO. 12
	PROJECT NO. 100094	REV BY: SCC	



⊕ Sub-Slab Vapor Sampling Location

N

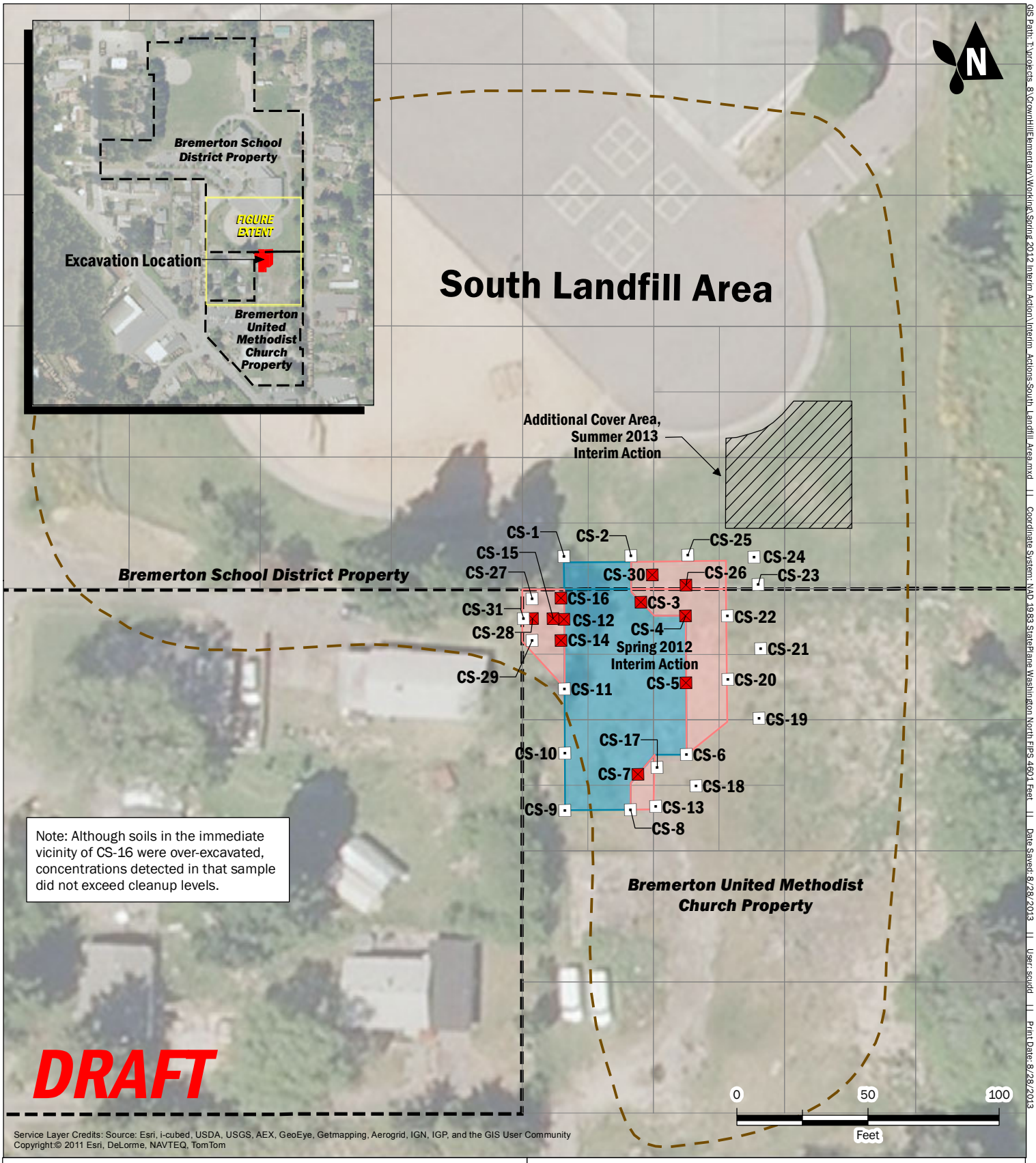
0 25 50

Approximate Scale in Feet

Sub-Slab Vapor Sampling Locations

Crownhill Elementary RI
Bremerton, Washington

Aspect Consulting	SEP-2013	BY: DLH/SCC	FIGURE NO. 13
	PROJECT NO. 100094	REV BY: SCC	



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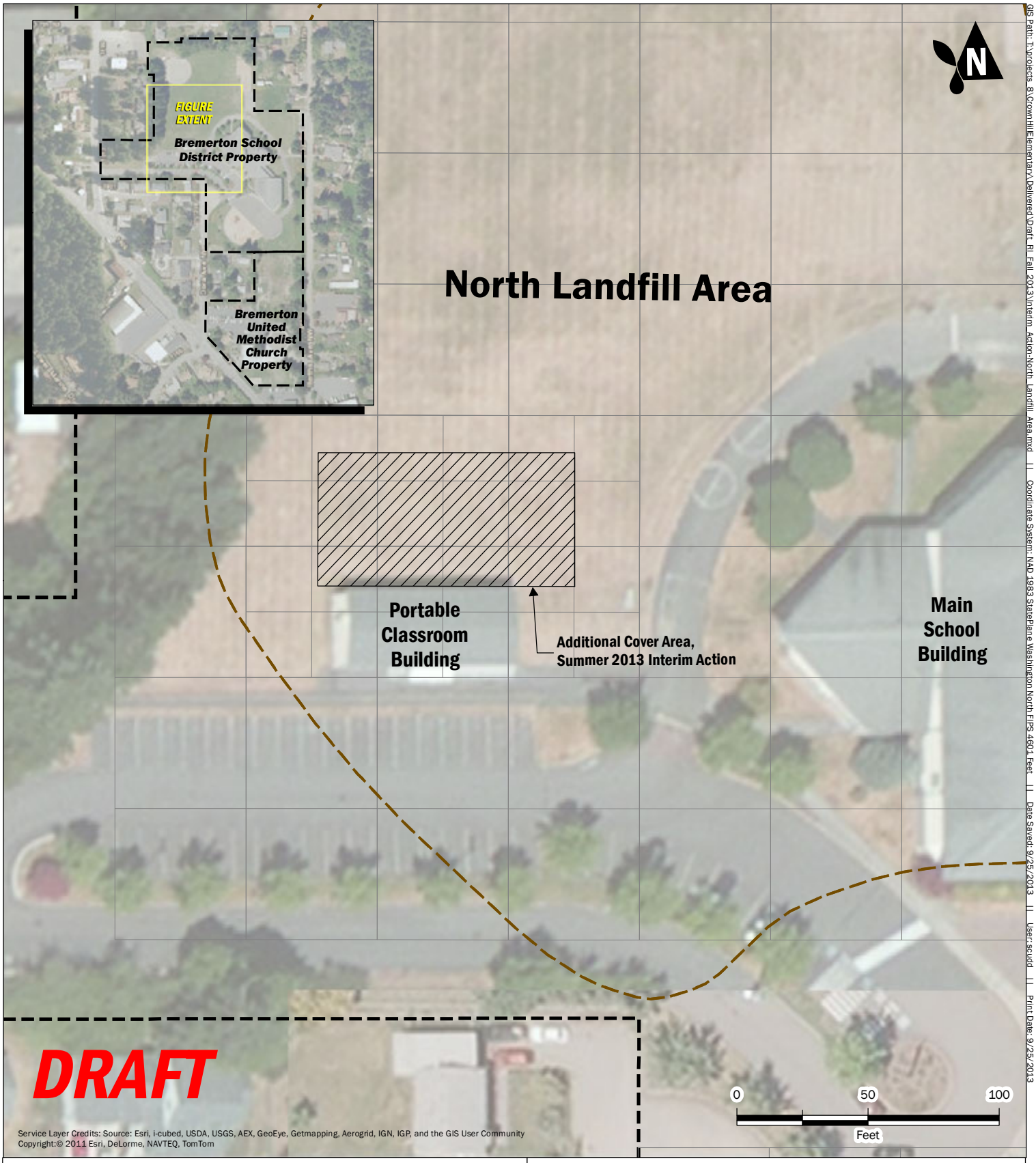
Spring 2012 Interim Action

- In-place Confirmation Sample Location
- Over-Excavated Sample Location
- Initial Excavation Area
- Additional Excavation Area
- Interpreted Extent of Landfill Activity
- Sample Grid
- Property Boundary

Interim Actions-South Landfill Area

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	AUG-2013	BY: PPW	FIGURE NO. 14
	PROJECT NO. 100094	REV BY: SCC	



GIS Path: T:\projects_8\Crown Hill Elementary\Delivered\Draft RI Fall 2013\Interim Action-North Landfill Area.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 9/25/2013 || User: scudd || Print Date: 9/25/2013

Interpreted Extent of Landfill Activity

Sample Grid

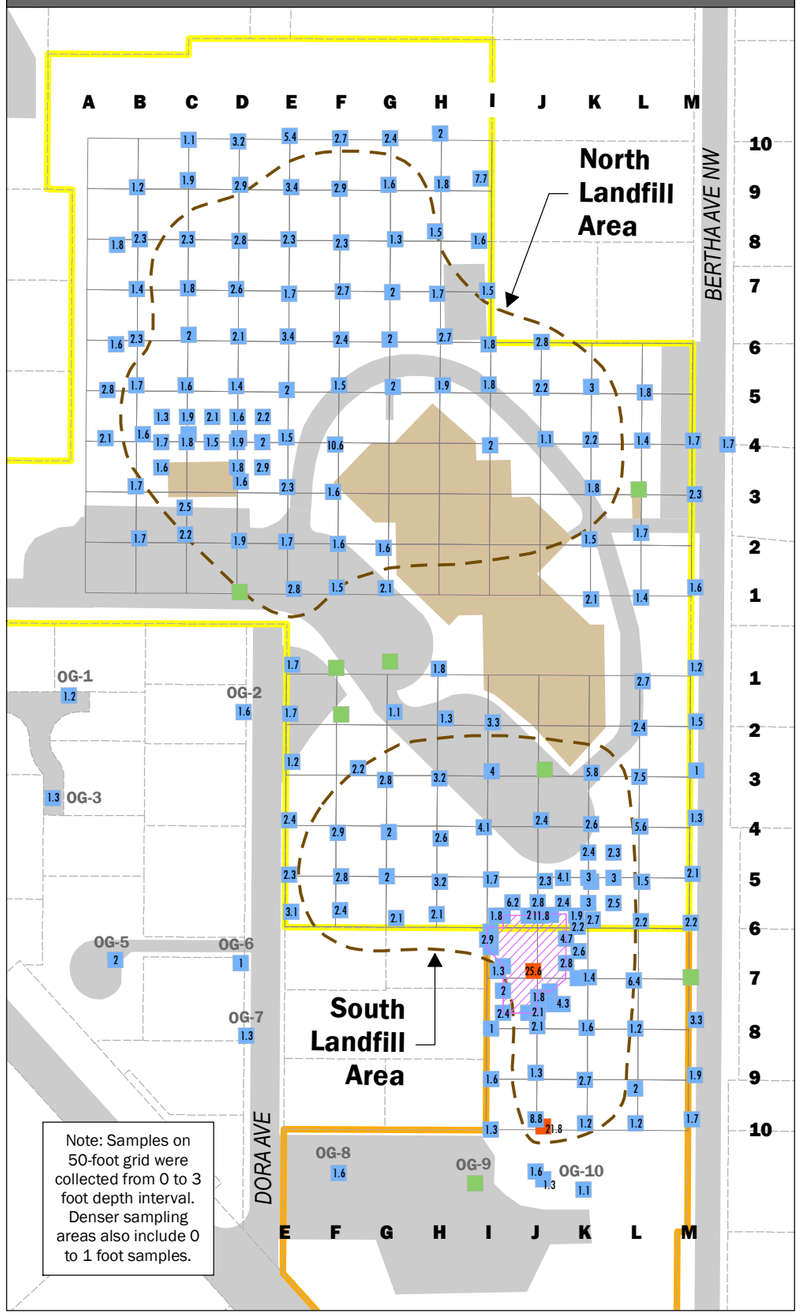
Property Boundary

Interim Action-North Landfill Area

Crownhill Elementary RI
Bremerton, Washington

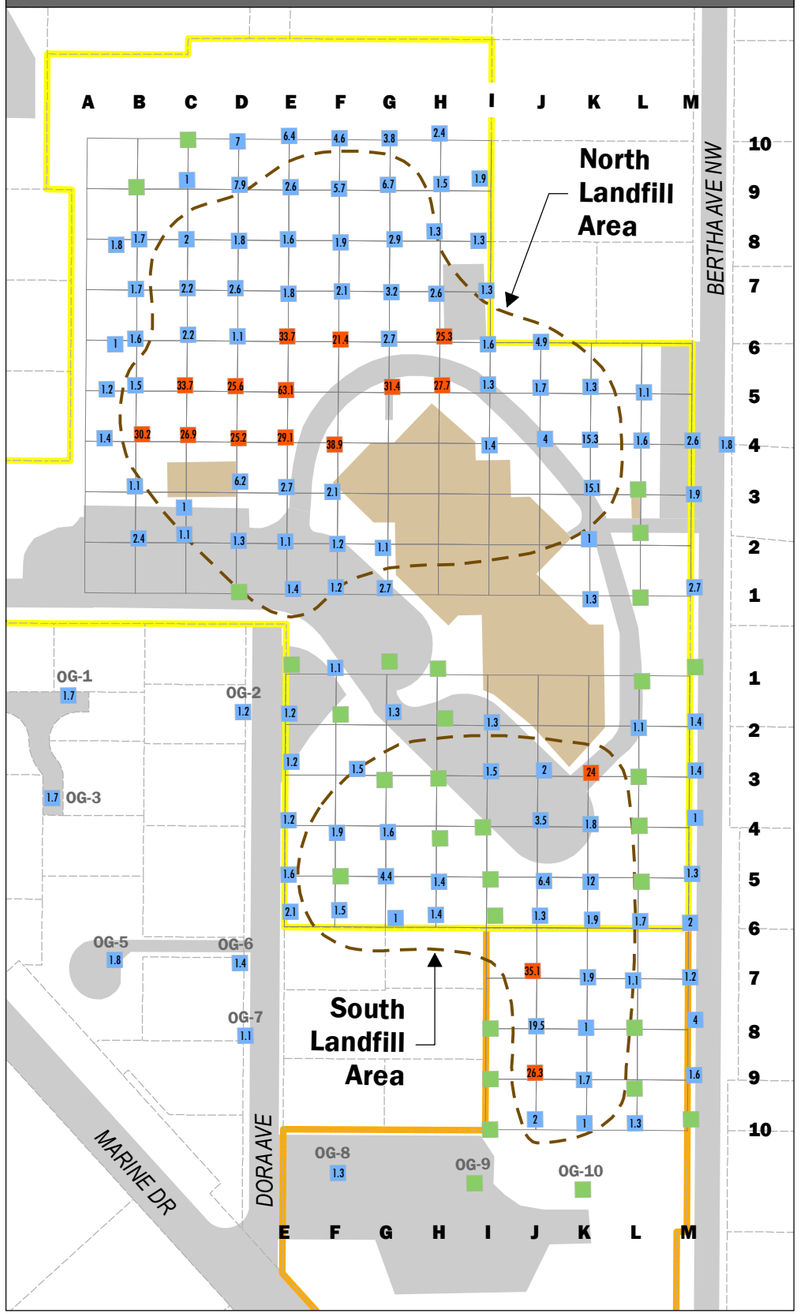
Aspect CONSULTING	SEP-2013	BY: PPW	FIGURE NO. 15
	PROJECT NO. 100094	REV BY: SCC	

SAMPLE DEPTH < 3 FEET BGS

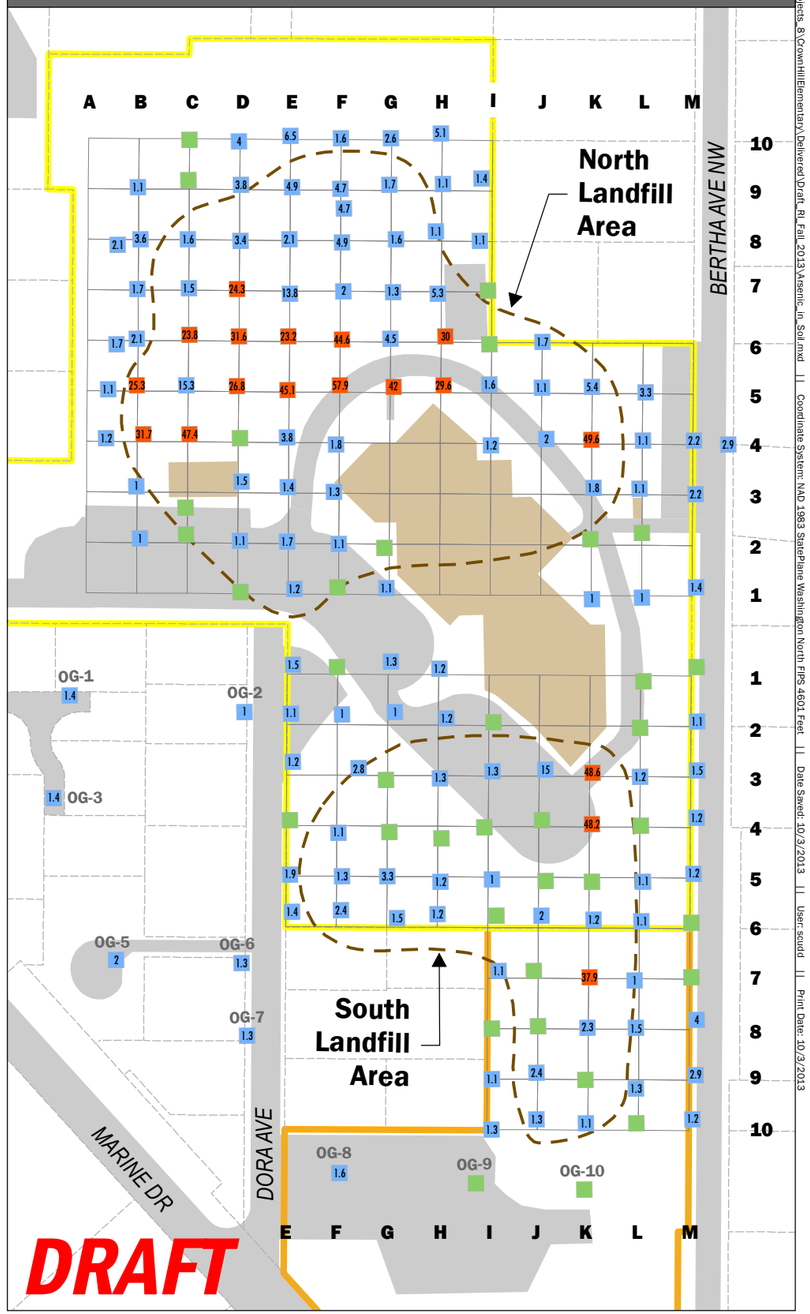


Note: Samples on 50-foot grid were collected from 0 to 3 foot depth interval. Denser sampling areas also include 0 to 1 foot samples.

SAMPLE DEPTH 3 TO 9 FEET BGS



SAMPLE DEPTH 9 TO 15 FEET BGS



Arsenic Soil Sampling Locations (exluding over-excavated samples)

- Non-Detect
- 5 — Detected - No Exceedance
- 22 — Exceedance of Soil Screening Level (> 20 mg/kg)

Sample location labeled with detected concentration (in mg/kg)

- Sample Grid
- Bremerton School District Property Boundary
- Bremerton United Methodist Church Property Boundary
- Parcel Lines
- School Building Footprint
- Pavement
- Interim Action Soil Removal Area (0 to 1 foot BGS)
- Interpreted Extent of Landfill Activity

"BGS" = below ground surface

N

0 75 150

Feet

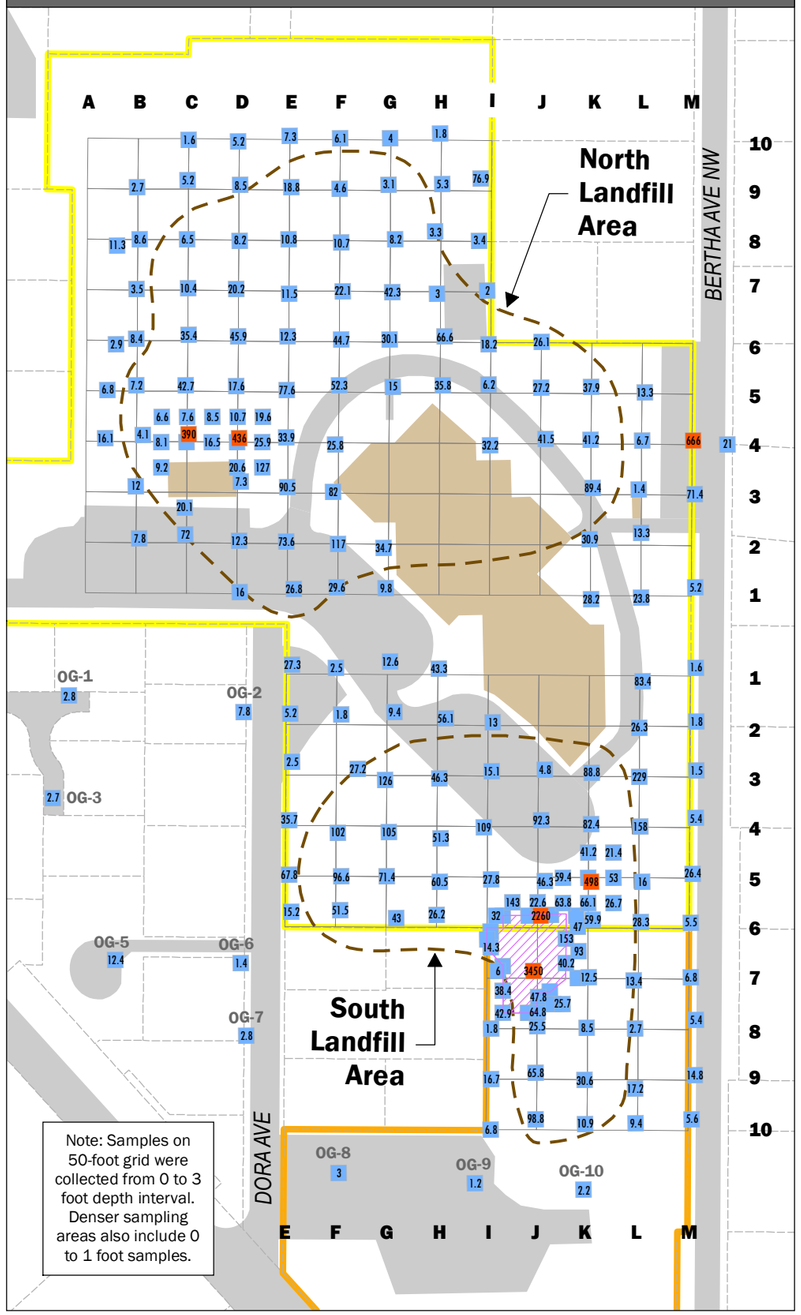
Arsenic Distribution in Soil to 15-Foot Depth

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	OCT-2013	BY: DLC / PPW	FIGURE NO. 16
	PROJECT NO. 100094	REV BY: DLH / PPW / SCC	

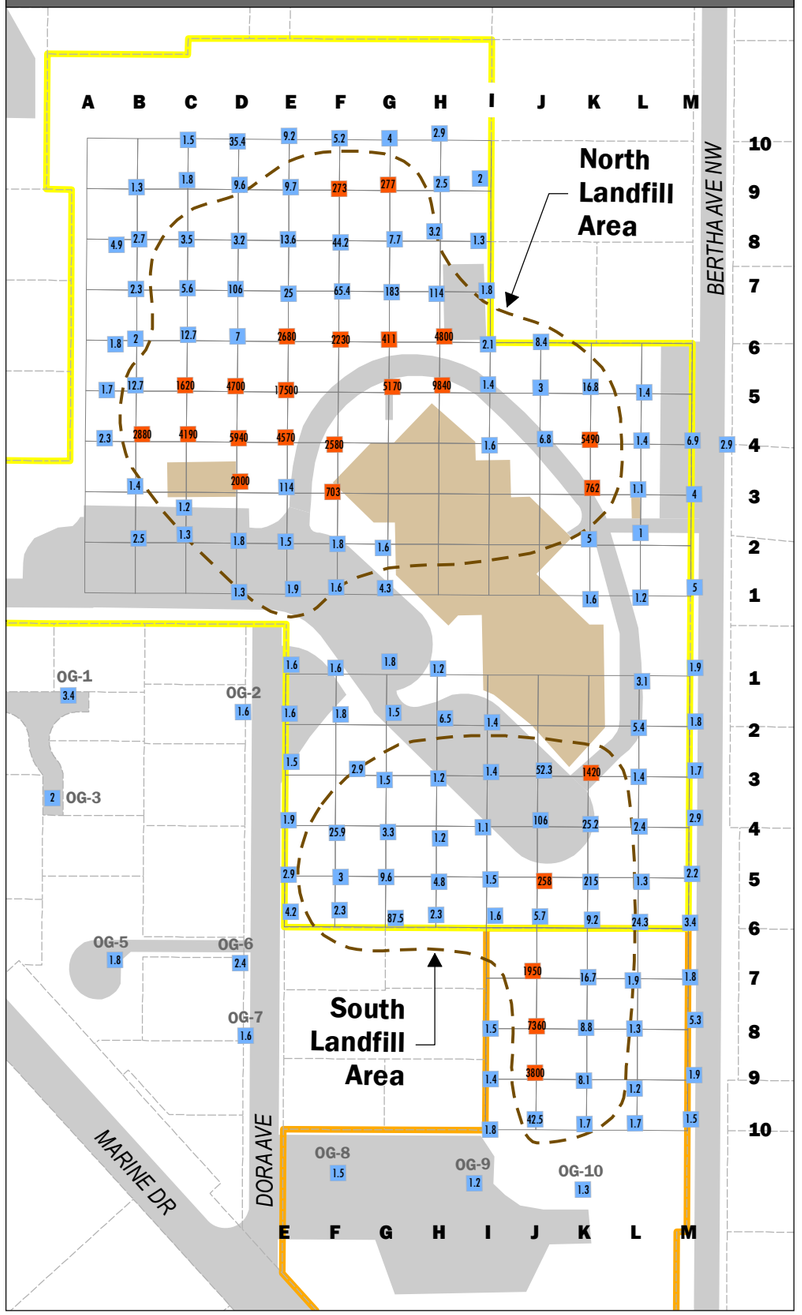
GIS Path: T:\projects_8\CrownHillElementary\Delivered\Draft_RI_Feb_2013\Arsenic_in_Soil.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 10/3/2013 || User: soudd || Print Date: 10/3/2013

SAMPLE DEPTH < 3 FEET BGS

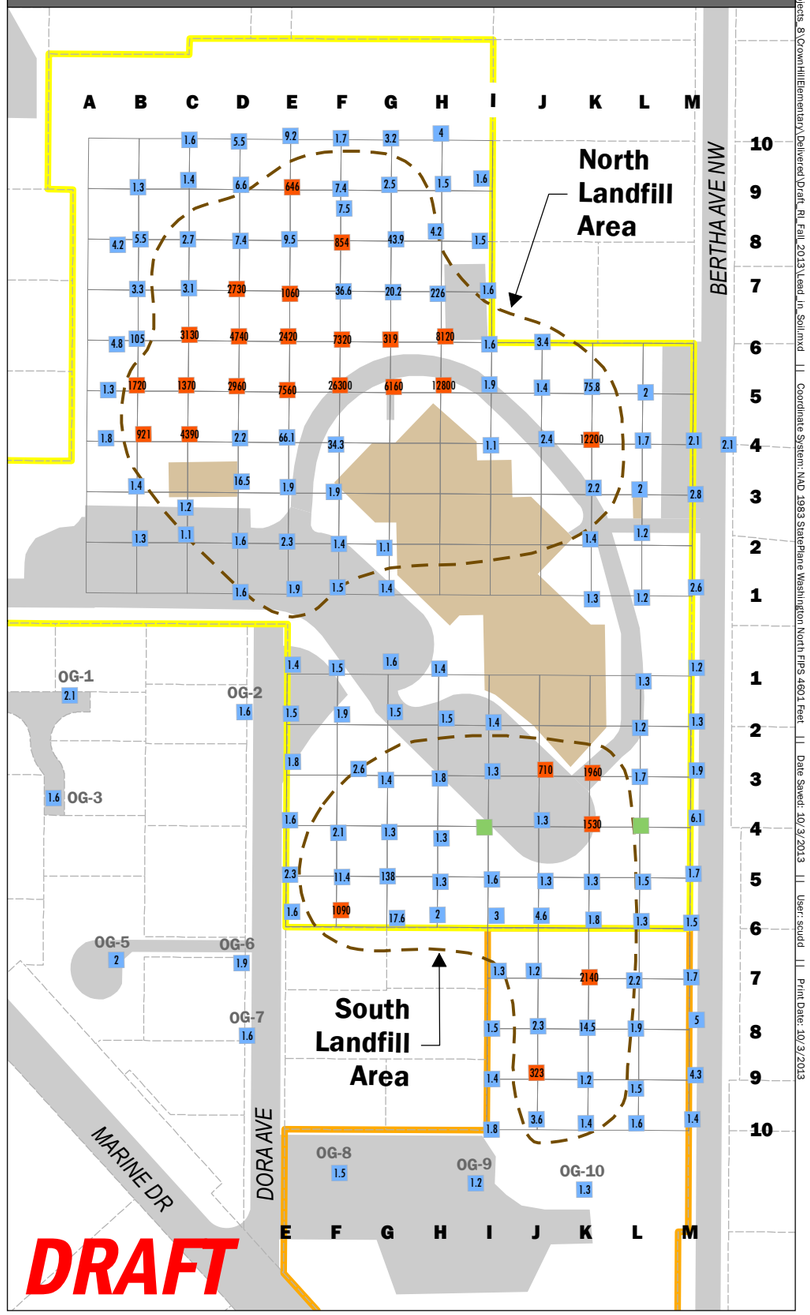


Note: Samples on 50-foot grid were collected from 0 to 3 foot depth interval. Denser sampling areas also include 0 to 1 foot samples.

SAMPLE DEPTH 3 TO 9 FEET BGS



SAMPLE DEPTH 9 TO 15 FEET BGS



Lead Soil Sampling Locations (exluding over-excavated samples)

- Non-Detect
- 5 — Detected - No Exceedance
- 22 — Exceedance of Soil Screening Level (> 250 mg/kg)

Sample location labeled with detected concentration (in mg/kg)

- Sample Grid
- Bremerton School District Property Boundary
- Bremerton United Methodist Church Property Boundary
- Parcel Lines
- School Building Footprint
- Pavement
- Interim Action Soil Removal Area (0 to 1 foot BGS)
- Interpreted Extent of Landfill Activity

"BGS" = below ground surface

N

0 75 150

Feet

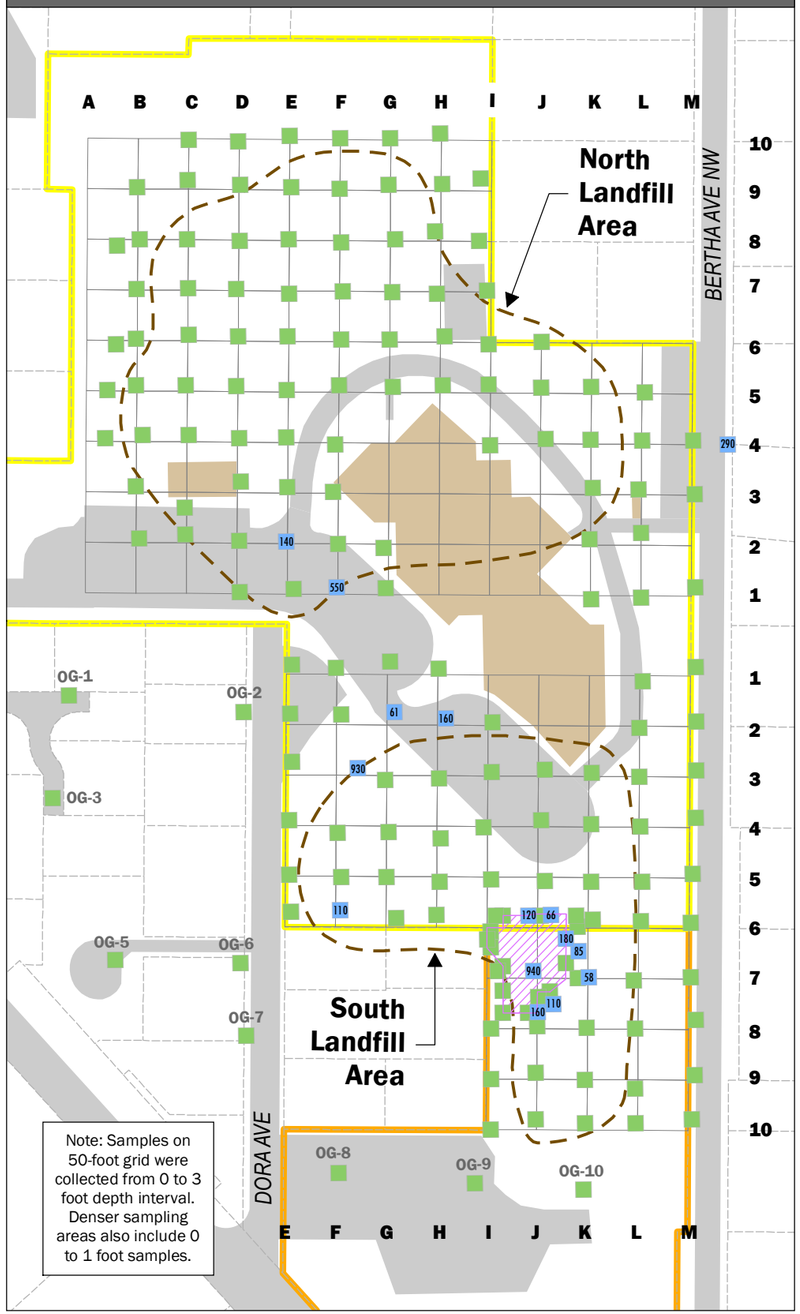
Lead Distribution in Soil to 15-Foot Depth

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	OCT-2013	BY: DLC / PPW	FIGURE NO. 17
	PROJECT NO. 100094	REV BY: DLH / PPW / SCC	

GIS Path: T:\projects_8\CrownHillElementary\Delivered\Draft_RI_Fall_2013\Lead_in_Soil.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 10/3/2013 || User: sruidl || Print Date: 10/3/2013

SAMPLE DEPTH < 3 FEET BGS

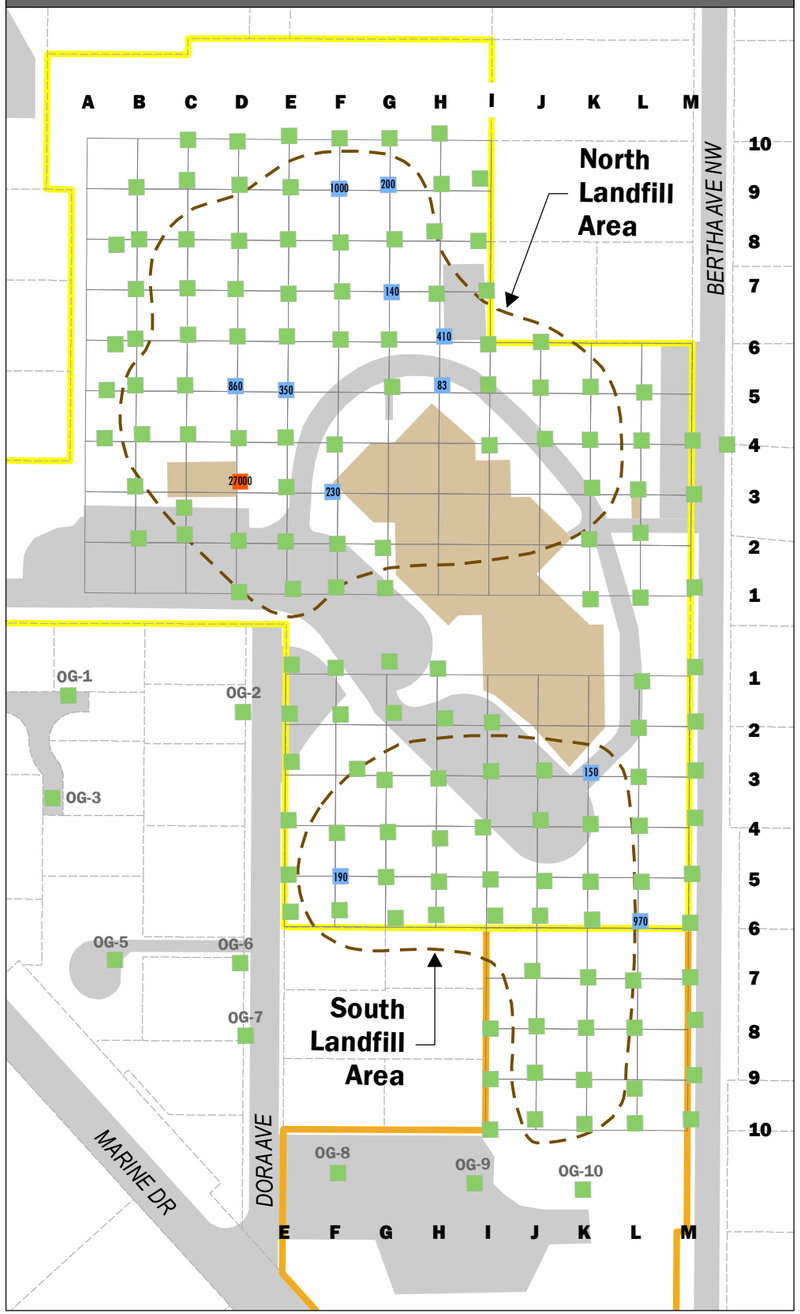


Note: Samples on 50-foot grid were collected from 0 to 3 foot depth interval. Denser sampling areas also include 0 to 1 foot samples.

NORTH SAMPLE GRID (NG-**)

SOUTH SAMPLE GRID (SG-**)

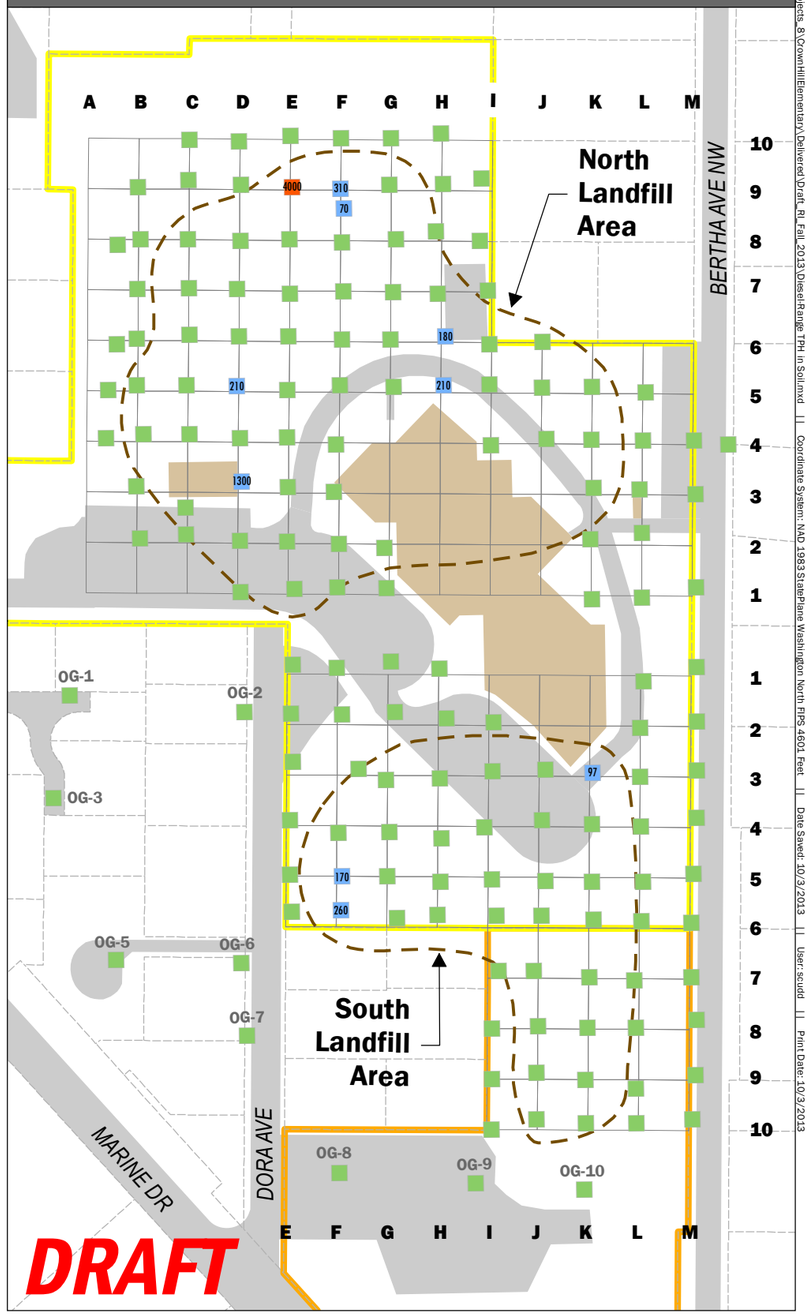
SAMPLE DEPTH 3 TO 9 FEET BGS



NORTH SAMPLE GRID (NG-**)

SOUTH SAMPLE GRID (SG-**)

SAMPLE DEPTH 9 TO 15 FEET BGS



DRAFT

Diesel-Range TPH Soil Sampling Locations (exluding over-excavated samples)

- Non-Detect
- 5 — Detected - No Exceedance
- 22 — Exceedance of Soil Screening Level (> 2000 mg/kg)

Sample location labeled with detected concentration (in mg/kg)

- Sample Grid
- Bremerton School District Property Boundary
- Bremerton United Methodist Church Property Boundary
- Parcel Lines
- School Building Footprint
- Pavement
- Interim Action Soil Removal Area (0 to 1 foot BGS)
- Interpreted Extent of Landfill Activity

"BGS" = below ground surface
"TPH" = total petroleum hydrocarbon

N

0 75 150
Feet

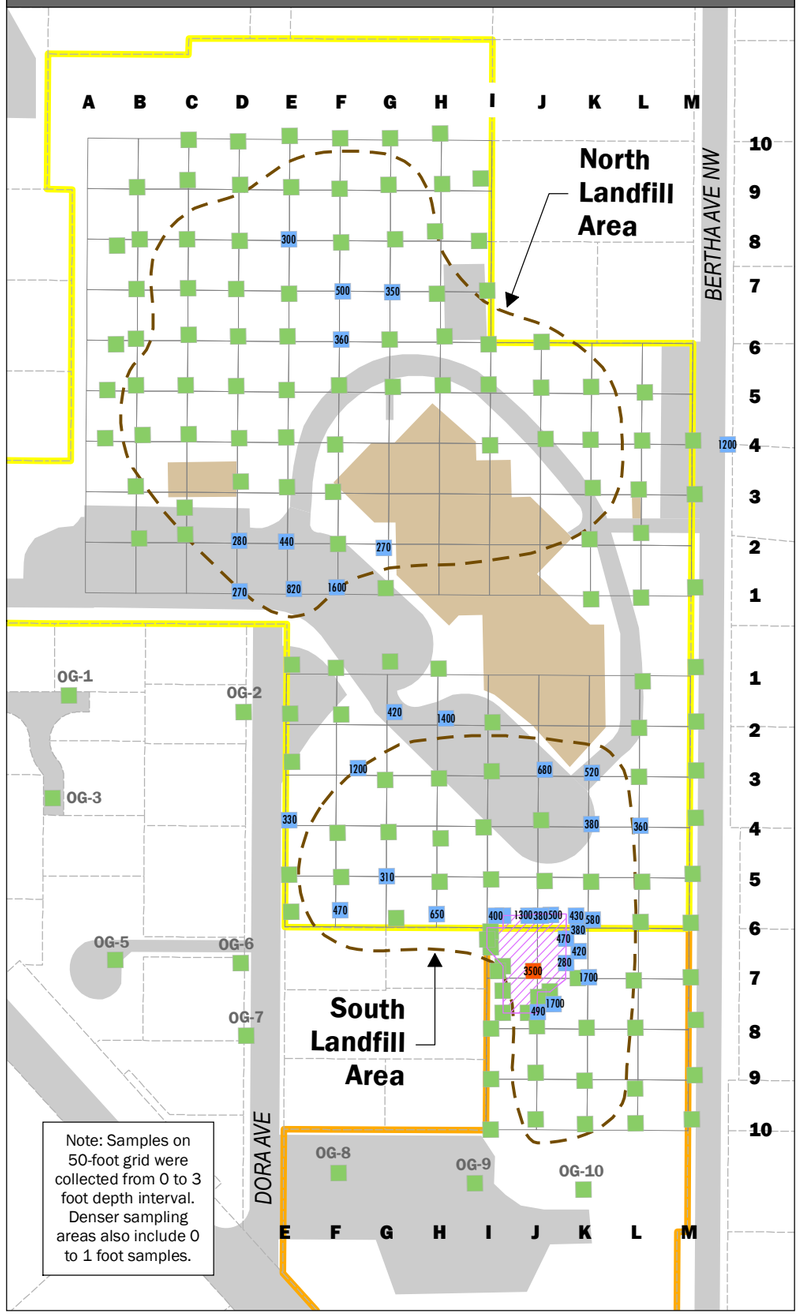
Diesel-Range TPH in Soil to 15-Foot Depth

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	OCT-2013	BY: DLC / PPW	FIGURE NO. 18
	PROJECT NO. 100094	REV BY: DLH / PPW / SCC	

GIS Path: T:\projects_8\CrownHillElementary\Delivered\Draft_RI_Fall_2013\DieselRange_TPH_in_Soil.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 10/3/2013 || User: scudd || Print Date: 10/3/2013

SAMPLE DEPTH < 3 FEET BGS

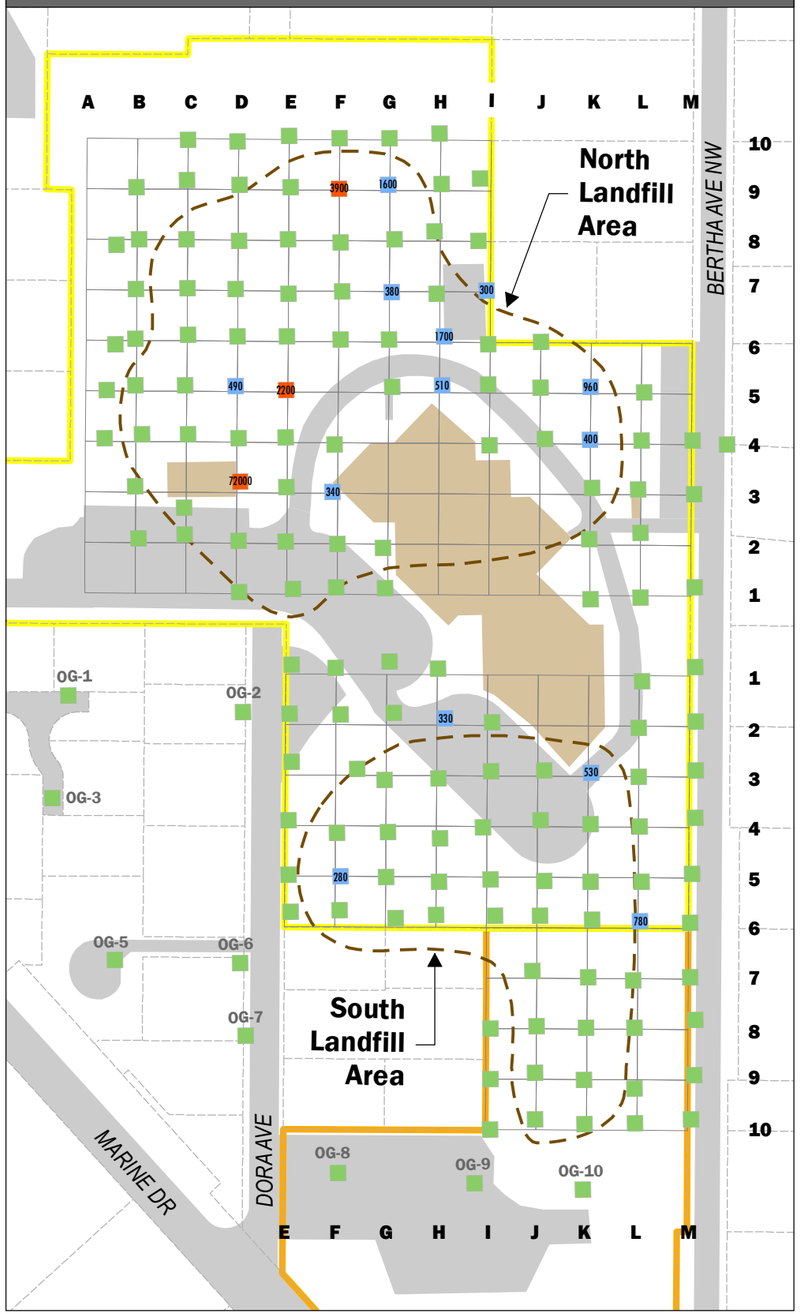


Note: Samples on 50-foot grid were collected from 0 to 3 foot depth interval. Denser sampling areas also include 0 to 1 foot samples.

NORTH SAMPLE GRID (NG-**)

SOUTH SAMPLE GRID (SG-**)

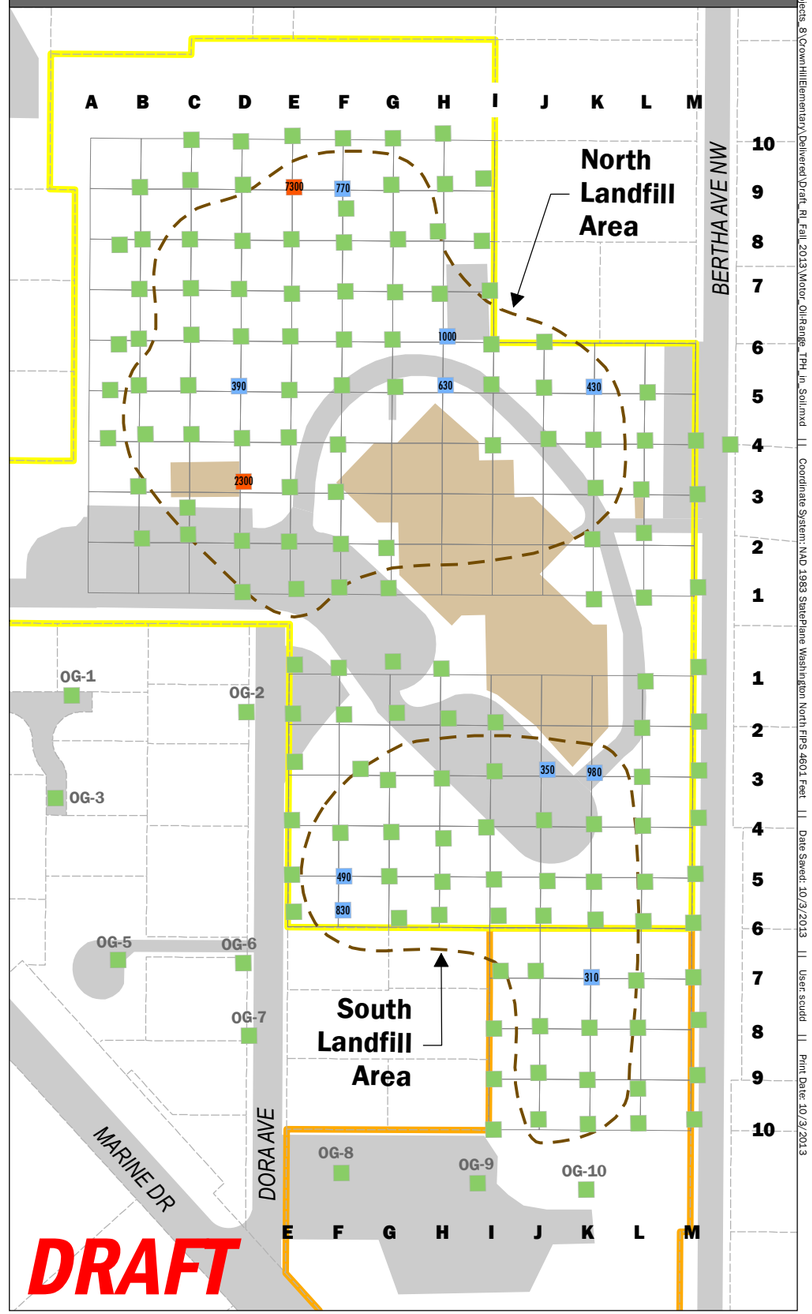
SAMPLE DEPTH 3 TO 9 FEET BGS



NORTH SAMPLE GRID (NG-**)

SOUTH SAMPLE GRID (SG-**)

SAMPLE DEPTH 9 TO 15 FEET BGS



DRAFT

Motor Oil-Range TPH Soil Sampling Locations (exluding over-excavated samples)

- Non-Detect
- 5 — Detected - No Exceedance
- 22 — Exceedance of Soil Screening Level (> 2000 mg/kg)

Sample location labeled with detected concentration (in mg/kg)

- Sample Grid
- Bremerton School District Property Boundary
- Bremerton United Methodist Church Property Boundary
- Parcel Lines
- School Building Footprint
- Pavement
- Interim Action Soil Removal Area (0 to 1 foot BGS)
- Interpreted Extent of Landfill Activity

"BGS" = below ground surface
"TPH" = total petroleum hydrocarbon

N

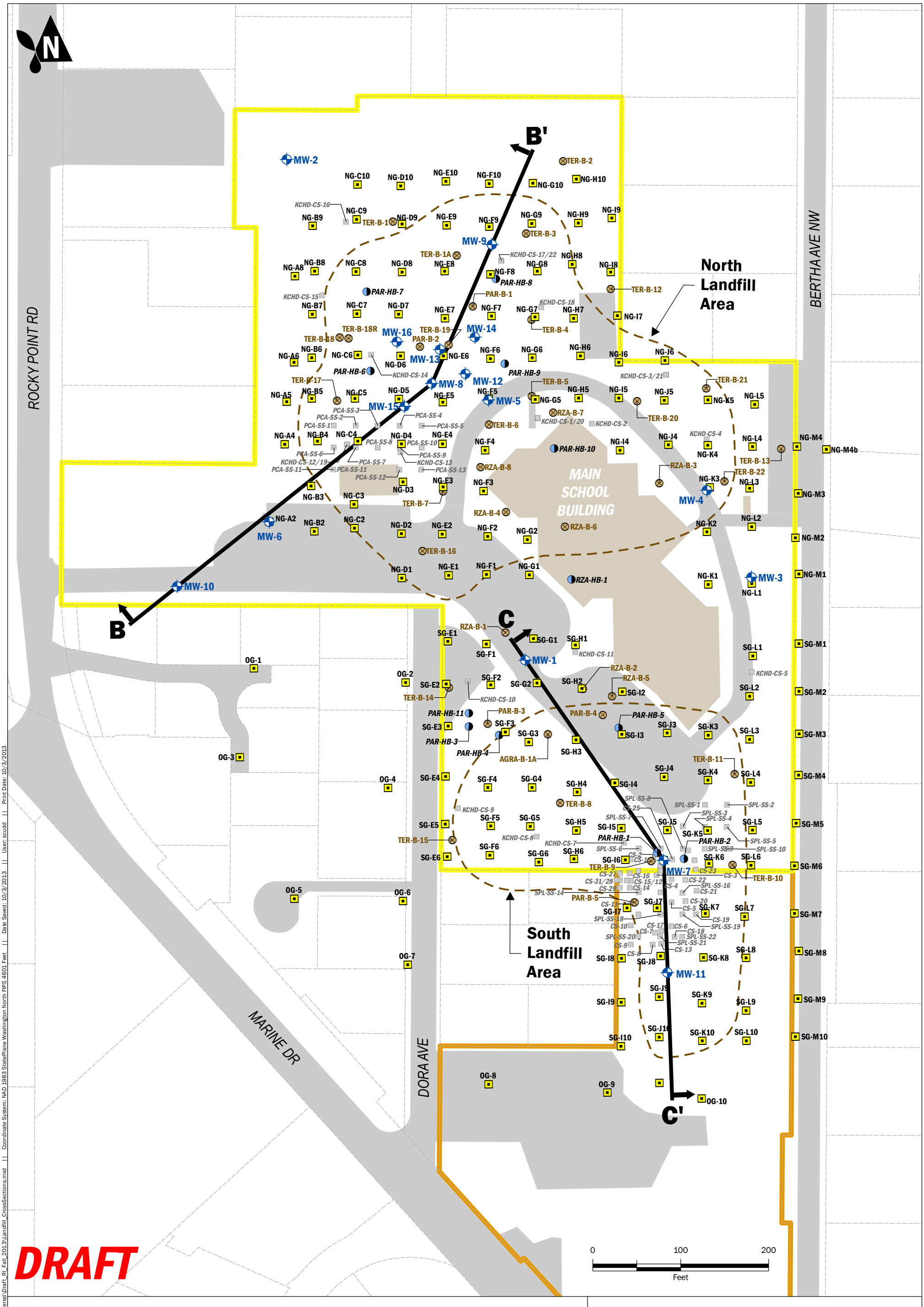
0 75 150
Feet

Motor Oil-Range TPH in Soil to 15-Foot Depth

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	OCT-2013	BY: DLC / PPW	FIGURE NO. 19
	PROJECT NO. 100094	REV BY: DLH / PPW / SCC	

GIS Path: T:\projects_8\CrownHillElementary\Delivered\Draft_RI_Fall_2013\Motor_Oil-Range_TPH_in_Soil.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 10/3/2013 || User: ssuddi || Print Date: 10/3/2013



Exploration Locations:

- MW-10 — Monitoring Well
- NG-A3 — Direct Push Probe
- PAR-HB-11 — Hand Auger Soil Boring
- TER-B-16 — Soil Boring
- SPL-SS-12 — Surface Soil Sample

- B–B' — Cross Section Location
- Bremerton School District (BSD) Property Boundary
- Bremerton United Methodist Church (BUMC) Property Boundary

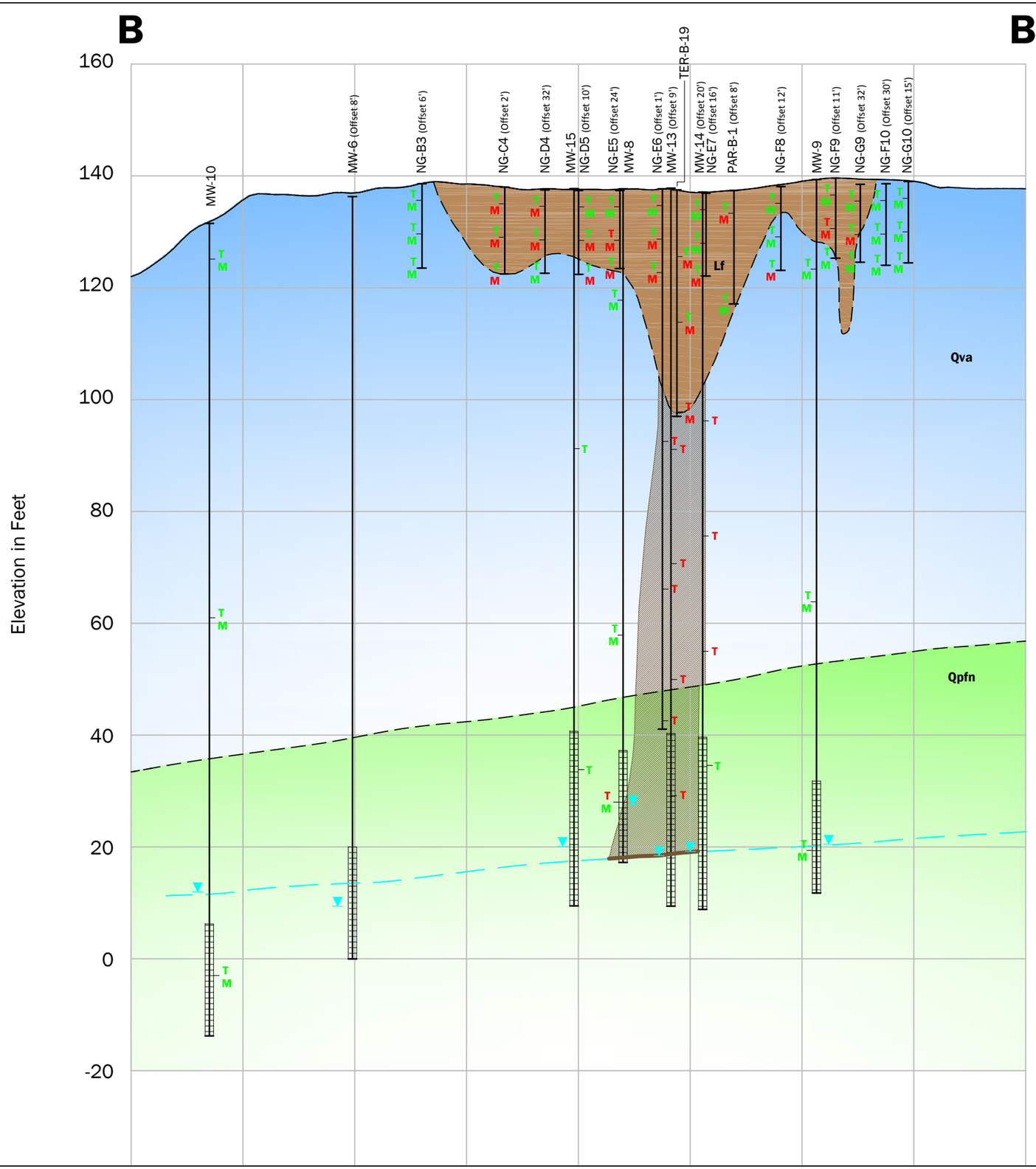
- Interpreted Extent of Landfill Activity
- Parcel Lines
- School Building Footprint
- Pavement

Landfill Cross Section Location Map

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	OCT-2013	BY: DLH / DLC / PPW	FIGURE NO. 20
	PROJECT NO. 100094	REV BY: HRL / SCC	

GIS Path: T:\projects_8\CrownHillElementary\Delivered\Draft_RI_Fall_2013\Landfill_CrossSections.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 10/3/2013 || User: scudd || Print Date: 10/3/2013



Horizontal Scale: 1" = 100'
Vertical Scale: 1" = 20'
Vertical Exaggeration 5x

LEGEND

- Water Level Measured October 25, 26 and November 1, 2012
- Generalized Water Table Surface
- Approximate Geologic Contact
- Monitoring Well Location and Depth

Lf - Landfill: Loose silty sand and sandy silt with debris, up to 40 feet thick in places.

Qva - Vashon advance glacial outwash: Dense to very dense, slightly silty to clean sand and gravelly sand. Generally an aquifer where saturated, but contains scattered lenses or strata of silty sand that may locally perch groundwater.

Qpfn - Pre-Fraser nonglacial deposits: Undifferentiated sediments from one or more nonglacial climatic interval before the most recent glaciation. Typically hard or very dense and composed of sand with lenses or strata of silt and silty sand with some organics and peat layers. Generally an aquitard although sandy beds may be moderately transmissive.

SOIL QUALITY OBSERVATIONS AND DATA

- Generalized Extent of TPH-Impacted Vadose Zone Soils
- Generalized Extent of Water Table LNAPL, Fall 2012

RED Exceeds MTCA Screening Levels

GREEN Meets MTCA Screening Levels

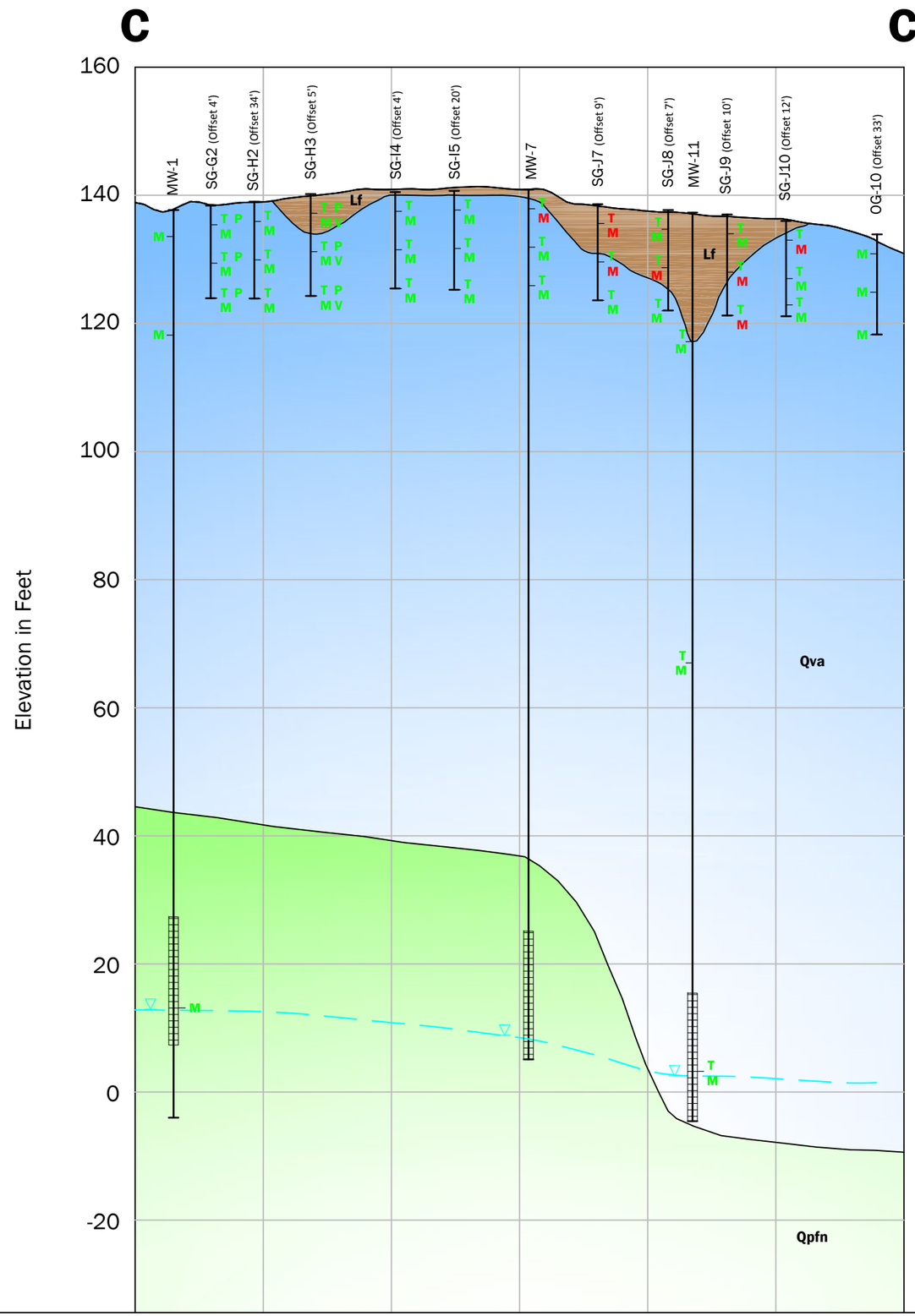
Compounds Tested at Indicated Depth Intervals:

T	TPH	Total Petroleum Hydrocarbons
M	Metals	Metals
P	PAHs	Polycyclic Aromatic Hydrocarbons
V	VOCs	Volatile Organic Compounds

DRAFT

North Landfill Area
Cross Section B-B'
Crownhill Elementary RI
Bremerton, Washington

Aspect Consulting	SEP-2013	BY: DLH/PPW/SCC	FIGURE NO. 21
	PROJECT NO. 100094	REV BY: SCC	



Horizontal Scale: 1" = 100'
Vertical Scale: 1" = 20'
Vertical Exaggeration 5x

LEGEND

- Water Level-Inferred
- Generalized Water Table Surface
- Approximate Geologic Contact
- Monitoring Well Location and Depth

Lf - Landfill: Loose silty sand and sandy silt with debris, up to 40 feet thick in places.

Qva - Vashon advance glacial outwash: Dense to very dense, slightly silty to clean sand and gravelly sand. Generally an aquifer where saturated, but contains scattered lenses or strata of silty sand that may locally perch groundwater.

Qpfn - Pre-Fraser nonglacial deposits: Undifferentiated sediments from one or more nonglacial climatic interval before the most recent glaciation. Typically hard or very dense and composed of sand with lenses or strata of silt and silty sand with some organics and peat layers. Generally an aquitard although sandy beds may be moderately transmissive.

SOIL QUALITY OBSERVATIONS AND DATA

RED Exceeds MTCA Screening Levels

GREEN Meets MTCA Screening Levels

Compounds Tested at Indicated Depth Intervals:

T	TPH	Total Petroleum Hydrocarbons
M	Metals	Metals
P	PAHs	Polycyclic Aromatic Hydrocarbons
V	VOCs	Volatile Organic Compounds

DRAFT

South Landfill Area
Cross Section C-C'
Crownhill Elementary RI
Bremerton, Washington

Aspect Consulting	SEP-2013	BY: DLH/PPW/SCC	FIGURE NO. 22
	PROJECT NO. 100094	REV BY: SCC	

CAD Path: Q:\Crown Hill Elementary\100067 Crown Hill Elementary School\2013-09 Draft RI Fall 2013\100094-C.dwg Cross Section B || Coordinate System: NAD 1983 State Plane Washington North FIPS 4601 Feet || Date Saved: Sep 25, 2013 10:52am || User: scudd

School Playground

Pavement

MW-16
<50/<250
<50/<250
15,000/14,000
2,100/420x
<50/<250
70x/<280

MW-15

MW-8
<50/<250
<50/<250
2-Inches
5,900/4,900

MW-13
14,000/15,000
3,700/4,400
9,300/7,500
3,000/3,500
<50/<250
6,400/6,200
18-Inches
43,000/39,000

MW-12
<50/<250
<50/<250
<50/<250
<50/<250
2,500/750x

MW-14
21,000/40,000
7,300/6,900
10,000/12,000
330/350
1,600/680

MW-5
2,300/700x

LEGEND

MW-15 *Monitoring Well Location*

Landfilled Materials

Vadose Zone Soil

3,700/4,400 *TPH in Soil, in mg/kg* (Diesel Range/Motor Oil Range)

<50/<250

Well Screen

2-Inches *Estimated LNAPL Thickness in Well* (1)

Soil Below Groundwater Table

2,300/990 *TPH Dissolved in Groundwater* (1) *in µg/L* (Diesel Range/Motor Oil Range)

Notes:

(1) TPH in groundwater and LNAPL thickness measured on 11/1/12, with the exception of LNAPL thickness in MW-8, which was measured on 10/26/12.
(2) Qualifier "x" = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Drawing not to scale.
Relative positions are correct.

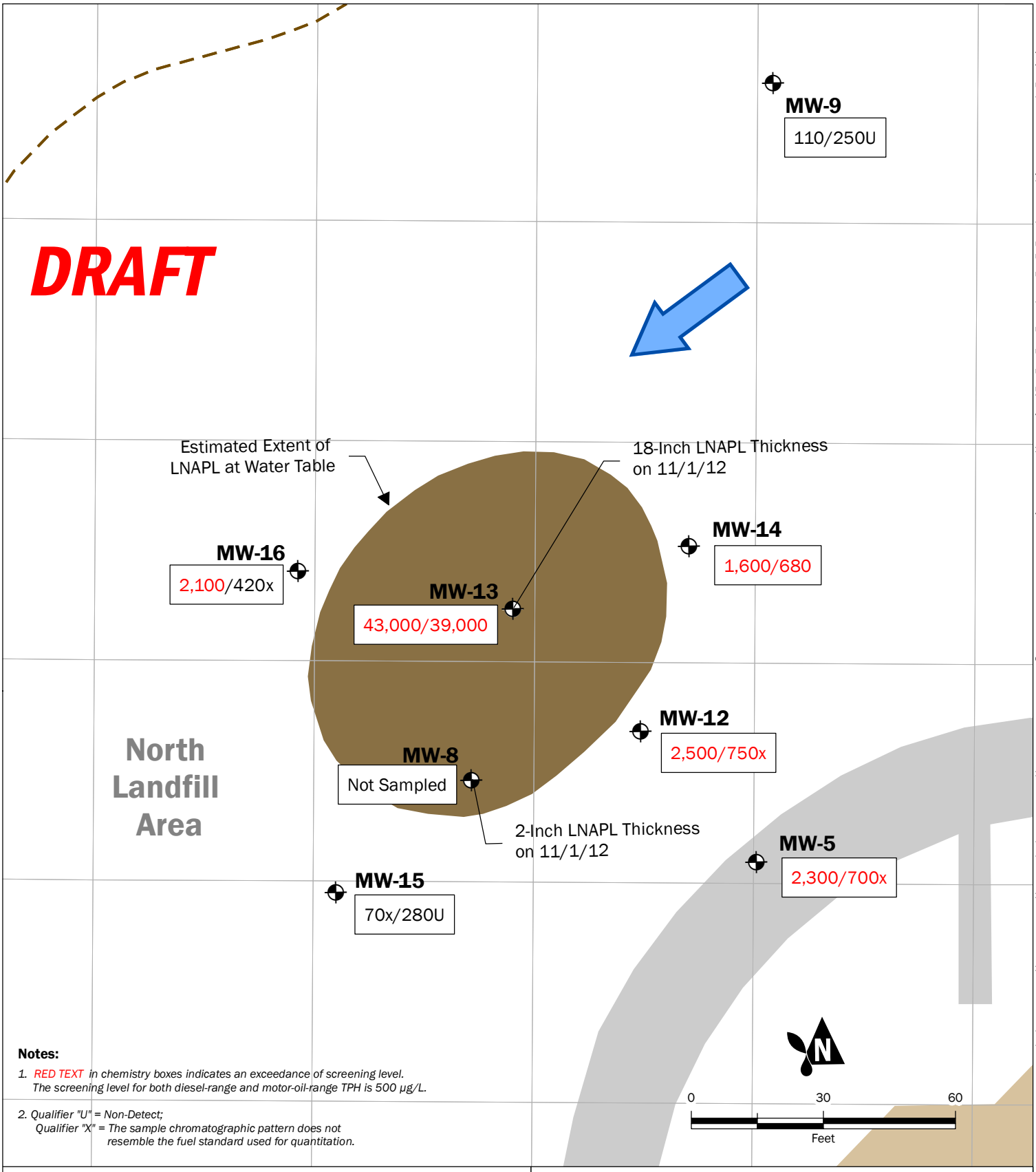
DRAFT

3-D Visualization of Deep Petroleum Hydrocarbon Impacts

Crownhill Elementary RI
Bremerton, Washington

Aspect Consulting	OCT-2013	BY: DAH/PPW/SCC	FIGURE NO. 23
	PROJECT NO. 100094	REV BY: SCC	

CAD Path: Q:\Crown Hill Elementary\100067 Crown Hill Elementary School\2013-09 Draft RI Fall 2013\100094-21.dwg Cross Section B || Coordinate System: NAD 1983 State Plane Washington North FIPS 4601 Feet || Date Saved: Oct 01, 2013 10:16am || User: scudd



Notes:

1. *RED TEXT in chemistry boxes indicates an exceedance of screening level. The screening level for both diesel-range and motor-oil-range TPH is 500 µg/L.*
2. *Qualifier "U" = Non-Detect; Qualifier "X" = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.*

MW-7 Monitoring Well

Inferred Direction of Groundwater Flow

Pavement

Interpreted Extent of Landfill Activity

Fall 2012 Groundwater Monitoring Data:

Diesel-Range TPH — Motor-Oil-Range TPH

70x/280U

Concentrations in µg/L

LNAPL Area and Associated Groundwater Quality, Fall 2012

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	SEP-2013	BY: DLC / PPW	FIGURE NO. 24
	PROJECT NO. 100094	REV BY: HRL / SCC	

MW-9	
Trichloroethene (TCE) in ug/L	
Screening Level: 5 ug/L	
16-Jan-12	**11**
12-Apr-12	**11**
10-Jul-12	**8.5**
25-Oct-12	**11**
01-Feb-13	**9.7**
03-May-13	**9.6**
09-Aug-13	**11**

MW-2
NO EXCEEDANCES
IN 7 MONITORING ROUNDS

MW-6	
Total Arsenic in ug/L	
Screening Level: 5 ug/L	
09-Apr-11	4.93 J
07-Jul-11	2.45
26-Oct-11	**5.8**
17-Jan-12	**7.67**
13-Apr-12	**9.93**
10-Jul-12	**10.2**
25-Oct-12	**12.2**
01-Feb-13	**10.7**
03-May-13	**11.9**
09-Aug-13	**13.5**

MW-4	
Total Arsenic in ug/L	
Screening Level: 5 ug/L	
09-Apr-11	4.74
07-Jul-11	**24.9**
26-Oct-11	**7.82**
17-Jan-12	3.47
12-Apr-12	2.76
10-Jul-12	2.76
25-Oct-12	3.38
01-Feb-13	3.40
03-May-13	4.05
09-Aug-13	2.83
Total Lead in ug/L	
Screening Level: 15 ug/L	
09-Apr-11	2.24
07-Jul-11	**53.1**
26-Oct-11	5.58
17-Jan-12	1 U
12-Apr-12	1 U
10-Jul-12	1 U
25-Oct-12	1 U
01-Feb-13	1 U
03-May-13	1 U
09-Aug-13	1 U

MW-10	
Total Arsenic in ug/L	
Screening Level: 5 ug/L	
17-Jan-12	**6.12**
13-Apr-12	**5.1**
11-Jul-12	3.71
25-Oct-12	3.63
01-Feb-13	3.59
03-May-13	3.83
09-Aug-13	3.00

MW-1	
Total Lead in ug/L	
Screening Level: 15 ug/L	
09-Apr-11	3.47
07-Jul-11	**20.6 J**
26-Oct-11	1 U
17-Jan-12	1 U
13-Apr-12	1 U
11-Jul-12	1 U
26-Oct-12	1 U

MW-7
NO EXCEEDANCES IN
7 MONITORING ROUNDS

MW-11
NO EXCEEDANCES IN
4 MONITORING ROUNDS

North Landfill Area

LNAPL Area *(See Figure 22)*

South Landfill Area

MAIN SCHOOL BUILDING

ROCKY POINT RD

BERTHA AVE NW

MARINE DR

DORA AVE

MW-2 MW-9 MW-16 MW-14 MW-13 MW-12 MW-8 MW-5 MW-15 MW-4 MW-6 MW-3 MW-10 MW-1 MW-7 MW-11

0 100 200
Feet

DRAFT

Well Locations:

- Monitoring Well
- Perched Zone Monitoring Well (Not Sampled)
- Estimated Extent of LNAPL at Water Table, Fall 2012

Groundwater Results:

Groundwater monitoring data (2011-2012) are displayed for wells with one or more exceedance of screening critera for a given analyte.

MW-10	← *WELL ID*
Total Arsenic in ug/L	← *EXCEEDING ANALYTE*
Screening Level: 5 ug/L	← *SCREENING LEVEL FOR THAT ANALYTE*
17-Jan-12 **6.12**	← *ANALYTICAL RESULTS BY SAMPLE DATE*
13-Apr-12 **5.1**	

Other Site Features and Interpretation:

- School Building Footprint
- Parcel boundary
- Pavement
- Interpreted Extent of Landfill Activity
- Bremerton School District Property Boundary
- Bremerton United Methodist Church Property Boundary
- Inferred Direction of Groundwater Flow

Notes:

(1) ***RED TEXT*** *in chemistry boxes indicates an exceedance of screening level.*

(2) *Qualifier "U" = Non-Detect;*
Qualifier "J" = The reported result is an estimate;

Groundwater Quality Outside LNAPL Area

Crownhill Elementary RI
Bremerton, Washington

Aspect CONSULTING	JUL-2014	BY: DLH / PPW	FIGURE NO. 25
	PROJECT NO. 100094	REV BY: HRL / SCC	

GIS Path: T:\projects_8\CrownHillElementary\Delivered\Draft_RI_Fall_2013\GW_Quality_Outside_LNAPL_Area-Fixed.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 7/18/2014 || User: scudd || Print Date: 7/18/2014

APPENDIX A

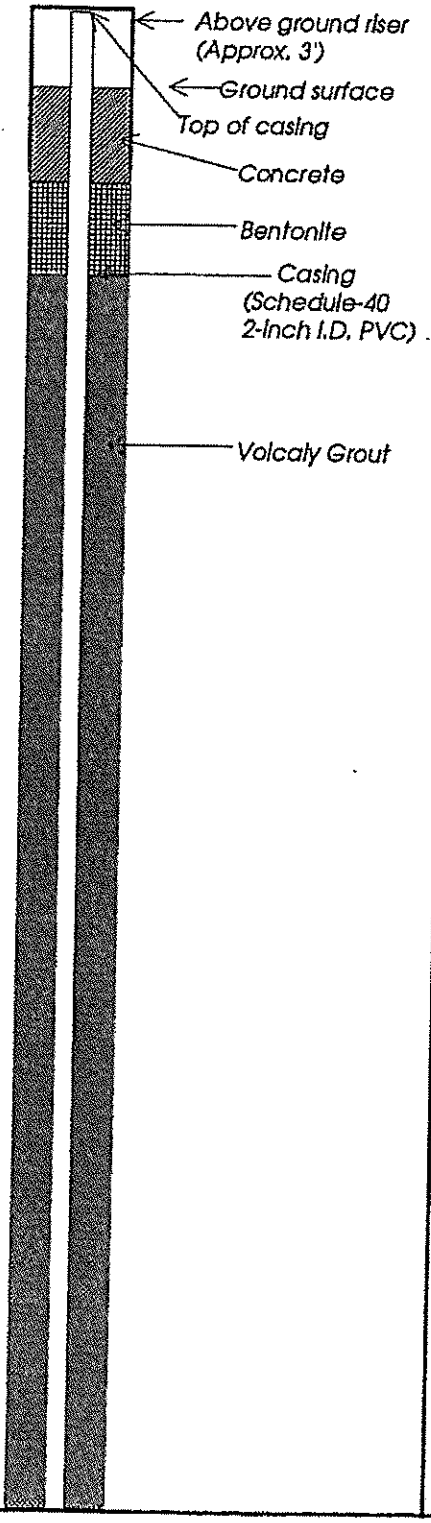
Boring Logs and Well Construction Diagrams

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-1*

Elevation reference: *Not Applicable* Well completed: *28 December 1994*
Ground surface elevation: *135.96 feet* Casing elevation: *138.79 feet*

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	*Grass, sand and gravel Fill*					
	Loose to medium dense, moist, brown, medium SAND with some silt					
5	*Becomes dense and brownish-red*		MW1-5	32	0	
10	*Becomes very dense*		MW1-10	56	0	
15	*Gravelly SAND (inferred)*			50/5"		
	Decrease in gravel content (inferred)					
20	*Very dense, moist, brown, medium SAND with gravel and some silt (gravel is approx. 1\8-inch to 1-inch and sub-rounded)*		MW1-20	50/4"	0	
25			MW1-25	50/4"	0	
30	*(continued)*					

AS-BUILT DESIGN



TESTING

LEGEND

- 2-inch O.D. split-spoon sample
- ATD: Observed groundwater level, ATD = at time of drilling
- X: Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals: Analytical testing
- Ecology ID# ABN 150
- 0/00/00: Observed groundwater level, 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

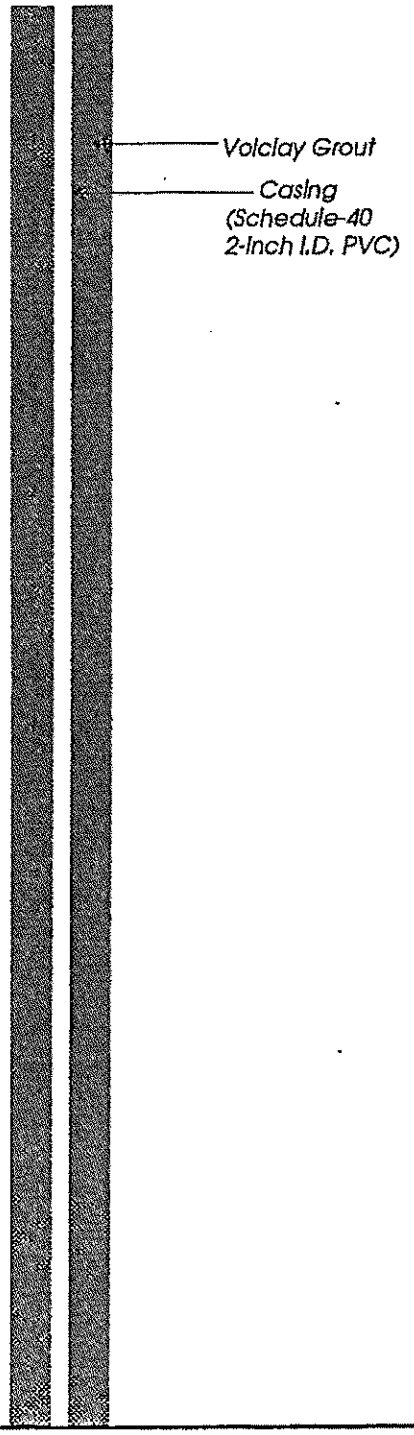
Drilling started: *27 December 1994* Drilling completed: *28 December 1994* Logged by: *JK*

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-1*

Elevation reference: *Not Applicable* Well completed: *28 December 1994*
Ground surface elevation: *135.96 feet* Casing elevation: *138.79 feet*

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
30	*Dense, damp to moist, brown, medium SAND with some gravel and trace to some silt*		*MW1-30*	*40*	*0*	
35	*Gravel content decreases to trace amounts*		*MW1-35*	*40*	*0*	
	Becomes gravelly (inferred)					
40	*Gravelly SAND (inferred;)(rock wedged in auger)*			*50/.5"*		
45				*50/.5"*		
50	*Very dense, damp, brown, medium SAND with gravel and trace to some silt*		*MW1-50*	*120/6"*	*0*	
55			*MW1-55*	*77*	*0*	
60	*(continued)*					

AS-BUILT DESIGN



TESTING

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level (ATD) — ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals — Analytical testing
- Ecology ID# ABN 150
- Observed groundwater level (0/00/00) — 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: *27 December 1994* Drilling completed: *28 December 1994* Logged by: *JK*

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-1*

Elevation reference: *Not Applicable* Well completed: *28 December 1994*
Ground surface elevation: *135.96 feet* Casing elevation: *138.79 feet*

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
60						
65	*Very dense, damp to moist, brown, medium SAND with trace to some gravel and some silt (gravel less than 1/4-inch, sub-rounded)*		*MW1-65*	*71*	*0*	
70						
75	*Silt content decreases to trace*		*MW1-75*	*50/4"*	*0*	
80						
85			*MW1-85*	*50/5"*	*0*	
90	*(continued)*					

AS-BUILT DESIGN

Volclay Grout
Casing (Schedule-40 2-inch I.D. PVC)

TESTING

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals — Analytical testing
- Ecology ID# ABN 150
- Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: *27 December 1994* Drilling completed: *28 December 1994* Logged by: *JK*

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-1*

Elevation reference: *Not Applicable* Well completed: *28 December 1994*
Ground surface elevation: *135.96 feet* Casing elevation: *138.79 feet*

AS-BUILT DESIGN

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING
90							
	Gravel content increases (inferred)						
95	*Very dense, damp to moist, brown, medium SAND with gravel and trace to some silt (gravel size 1/2-inch to 3/4-inch)*		*MW1-95*	*50/5"*	*0*		
100							
105	*Very dense, damp to moist, brown, medium SAND with trace gravel and trace silt*		*MW1-105*	*73*	*0*		
	Gravel content increases (inferred)						
110	*Gravel content decreases (inferred)*						
115			*MW1-115*	*50/5"*	*0*		
	(continued)						
120							

Volclay Grout
Casing (Schedule-40 2-Inch I.D. PVC)
10-20 sand filter pack
Screen (2-Inch I.D. PVC with 0.01-inch slots)

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level; ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals — Analytical testing
- Ecology ID# ABN 150
- Observed groundwater level; 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: *27 December 1994* Drilling completed: *28 December 1994* Logged by: *JK*

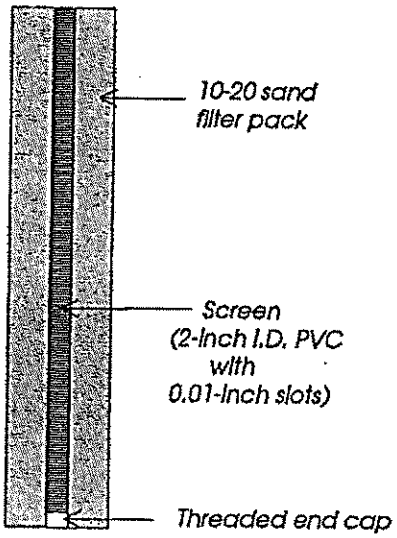
AGRA Earth and Environmental, Inc.

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-1*

Elevation reference: *Not Applicable* Well completed: *28 December 1994*
Ground surface elevation: *135.96 feet* Casing elevation: *138.79 feet*

AS-BUILT DESIGN

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING
120	*Very dense, damp to moist, brown, medium SAND with trace gravel and trace silt*						
125	*Very dense, wet, brown, medium SAND with trace gravel and some silt*		MW1-125	50/5"	0	1/12/95 ▼ ATD	
130							
135	*Very dense, wet, gray, fine to medium SAND with some silt and trace gravel*		MW1-135	50/5"	0		
140			MW1-140	50/5.5"	0		
	Bottom of boring at 141.5 feet. No unusual odors or staining observed.						
145							
150							



LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level; ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals — Analytical testing
- Ecology ID# ABN 150
- Observed groundwater level; 0/00/00 = 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

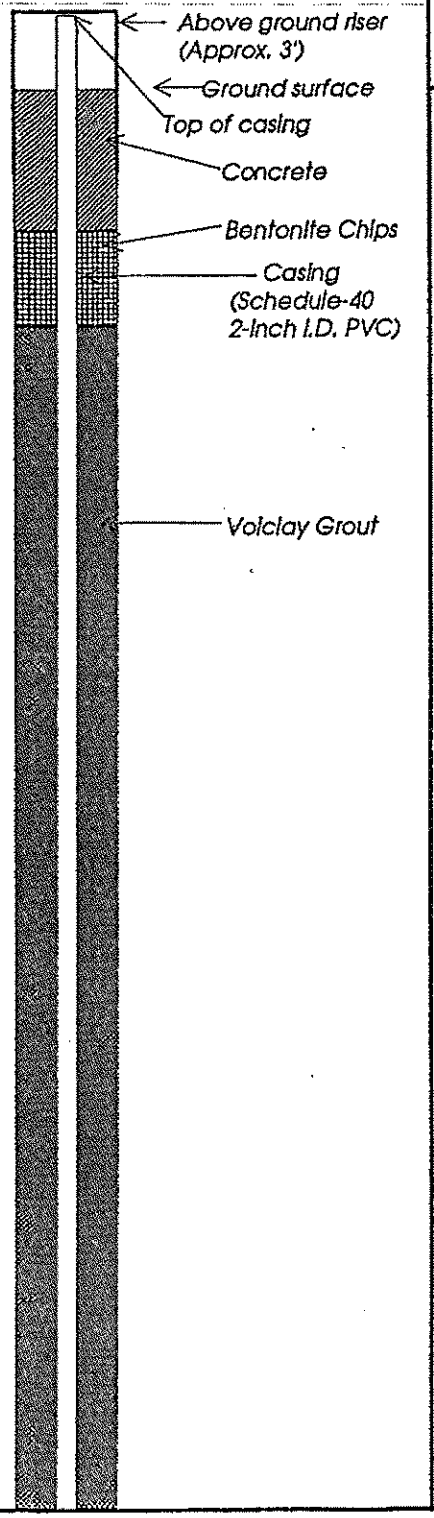
Drilling started: *27 December 1994* Drilling completed: *28 December 1994* Logged by: *JK*

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-2*

Elevation reference: *Not Applicable* Well completed: *28 December 1994*
Ground surface elevation: *135.86 feet* Casing elevation: *138.47 feet*

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	*Loose to medium dense, moist, brown, medium SAND with trace to some gravel and trace to some silt*					
5			*MW2-5*	*10*	*0*	
10	*Becomes dense*		*MW2-10*	*40*	*0*	
15			*MW2-15*	*35*	*0*	
20	*Becomes damp to moist (OVM malfunctioned)*		*MW2-20*	*36*		
25			*MW2-25*	*39*		
30	*(continued)*					

AS-BUILT DESIGN



TESTING

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level, ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals — Analytical testing
- Ecology ID# ABN 151
- Observed groundwater level, 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

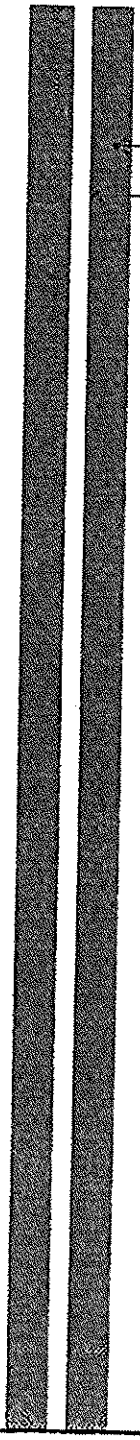
Drilling started: *28 December 1994* Drilling completed: *31 December 1994* Logged by: *JK*

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-2*

Elevation reference: *Not Applicable* Well completed: *31 December 1994*
Ground surface elevation: *135.86 feet* Casing elevation: *138.47 feet*

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
30	*Dense, damp to moist, brown, medium SAND with trace gravel and trace to some silt*		MW2-30	36		
35			MW2-35	39		
40	*Becomes medium dense*		MW2-40	26		
45			MW2-45	25		
50	*Becomes dense*		MW2-60	40		
55						
60	*(continued)*					

AS-BUILT DESIGN



TESTING

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level, ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals — Analytical testing
- Ecology ID# ABN 151
- Observed groundwater level, 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: *28 December 1994* Drilling completed: *31 December 1994* Logged by: *JK*

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-2*

Elevation reference: *Not Applicable* Well completed: *31 December 1994*
Ground surface elevation: *135.86 feet* Casing elevation: *138.47 feet*

AS-BUILT DESIGN

TESTING

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
60			MW2-60	35		
	Becomes gravelly (inferred)					
65	*Very dense, moist, brown, gravelly, medium SAND with trace to some silt (gravel size 1/2-inch to 2-inch and sub-rounded to rounded)*					
70			MW2-70	50/6"	0	
	Gravel content decreases (inferred)					
75	*Dense, damp to moist, brown, medium SAND with some gravel and some silt (gravel size small and pea-sized)*					
80			MW2-80	36		
	Becomes gravelly (inferred)					
85	*Gravel content decreases (inferred)*					
	(continued)					
90						

Volclay Grout
Casing (Schedule-40 2-inch I.D. PVC)
10-20 sand filter pack

LEGEND

- 2-inch O.D. split-spoon sample
- ATD: Observed groundwater level, ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals: Analytical testing
- Ecology ID# ABN 151
- 0/00/00: Observed groundwater level, 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: *28 December 1994* Drilling completed: *31 December 1994* Logged by: *JK*

AGRA Earth and Environmental, Inc.

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-2*

Elevation reference: *Not Applicable* Well completed: *28 December 1994*
Ground surface elevation: *135.86 feet* Casing elevation: *138.47 feet*

AS-BUILT DESIGN

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
90	*Rock lodged in auger*			50/ 1"		
	Dense, moist, brown, gravelly SAND with trace to some silt					
95						
100			MW1-100	100/ 12"		
	Becomes very dense (inferred)					
105						
110				50/ 1"		
115						ATD 1/12/95
120	*(continued)*					

TESTING

Casing (Schedule-40 2-inch I.D. PVC)

10-20 sand filter pack

Screen (2-inch I.D. PVC with 0.01-inch slots)

Threaded end cap

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level; ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, -RCRA Metals — Analytical testing
- Ecology ID# ABN 151
- Observed groundwater level; 0/00/00 = date observed

AGRA Earth & Environmental
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Kirkland, Washington 98034-6918

Drilling started: *28 December 1994* Drilling completed: *31 December 1994* Logged by: *JK*

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-2*

Elevation reference: *Not Applicable* Well completed: *28 December 1994*
Ground surface elevation: *136.86 feet* Casing elevation: *138.47 feet*

AS-BUILT DESIGN

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING
120	*Very dense, wet, brown, gravelly, medium to coarse SAND with trace to some silt*		*MW2-120*	*55*			
125							
130			*MW2-130*	*100/6"*			
135							
	Bottom of boring at 136 feet. *No unusual odors or staining observed.*						
140							
145							
150							

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level, ATD = at time of drilling
- Sample not recovered

EPA 8260
EPA 8270
RCRA Metals
Analytical testing

Ecology ID# ABN 161

- Observed groundwater level, 0/00/00 = date observed

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Kirkland, Washington 98034-6918

Drilling started: *28 December 1994* Drilling completed: *31 December 1994* Logged by: *JK*

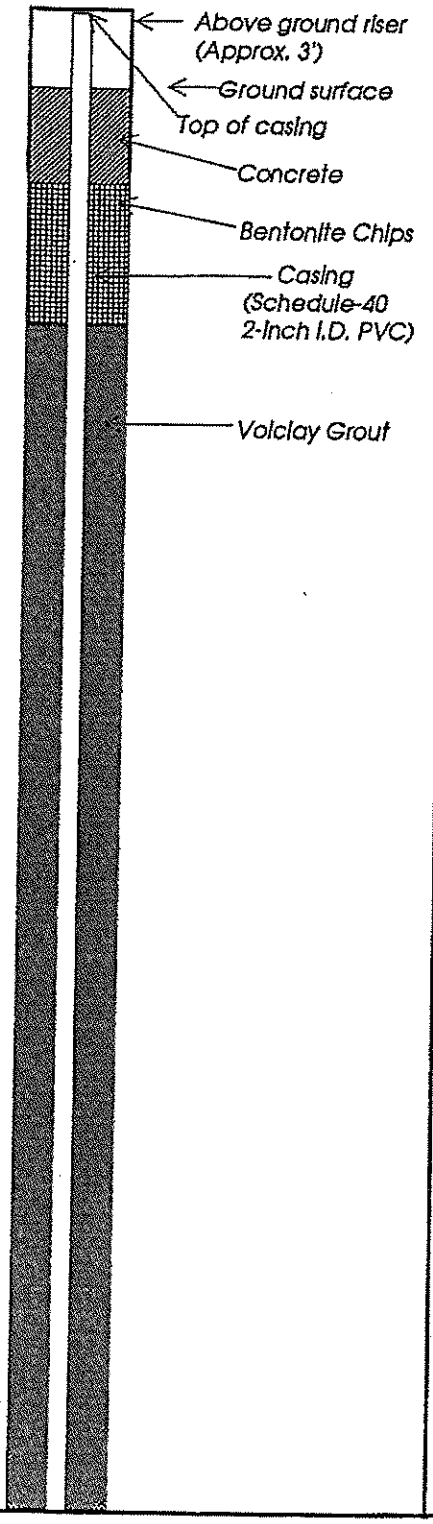
AGRA Earth and Environmental, Inc.

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-3*

Elevation reference: *Not Applicable* Well completed: *03 January 1995*
Ground surface elevation: *137.07 feet* Casing elevation: *139.83 feet*

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
0	*Loose to medium dense, moist, brown, medium SAND and GRAVEL with some silt (gravel is 1/8-inch to 2-inch and rounded)*					
5	*Becomes dense*		MW3-5	36	0	
10	*Becomes very dense*		MW3-10	65	0	
15			MW3-15	55	0	
20	*Sand becomes medium to coarse*		MW3-20	50/5"	0	
25			MW3-25	50/5"	0	
30	*(continued)*					

AS-BUILT DESIGN



TESTING

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level; ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals — Analytical testing
- Ecology ID# ABN 152
- Observed groundwater level; 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

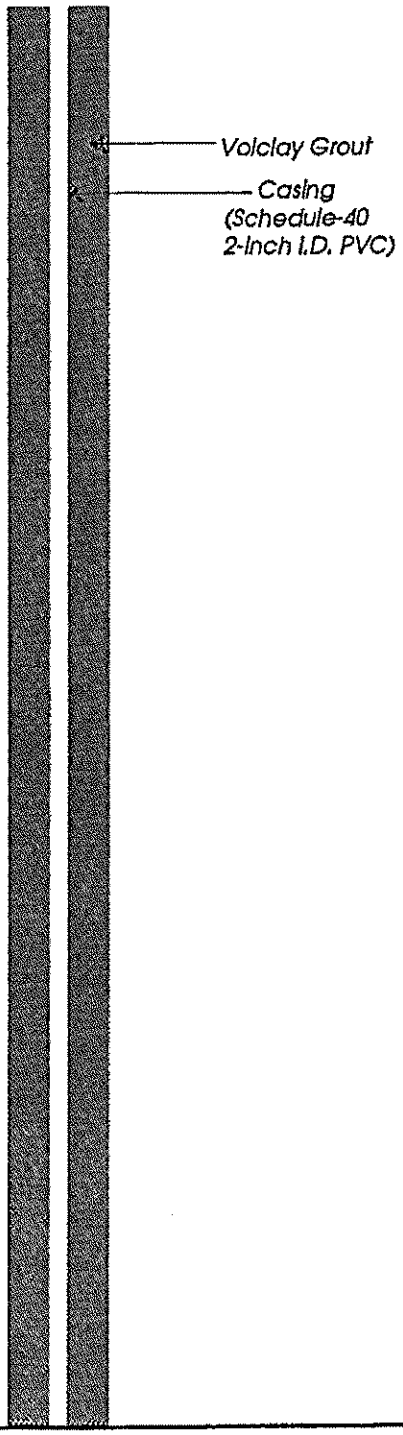
Drilling started: *02 January 1995* Drilling completed: *03 January 1995* Logged by: *JK*

PROJECT: Crown Hill Elementary W.O. 11-08362-11 WELL NO. MW-3

Elevation reference: Not Applicable
Ground surface elevation: 137.07 feet
Well completed: 03 January 1995
Casing elevation: 139.83 feet

AS-BUILT DESIGN

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING
30	Very dense, moist, brown, medium to coarse SAND and GRAVEL with some silt		MW3-30	50/5"	0		
35			MW3-35	50/5"	0		
40	Becomes damp to moist		MW3-40	50/4"	0		
45			MW3-45	50/3"	0		
50			MW3-50	50/3"	0		
55	Gravel content decreases slightly (Inferred)						
60	(continued)						



LEGEND

- 2-Inch O.D. split-spoon sample
- Observed groundwater level; ATD = at time of drilling
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals — Analytical testing
- Ecology ID# ABN 152
- Observed groundwater level; 0/00/00 = date observed

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

Drilling started: 02 January 1995
Drilling completed: 03 January 1995
Logged by: JK

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-3*

Elevation reference: *Not Applicable* Well completed: *03 January 1995*
Ground surface elevation: *137.07 feet* Casing elevation: *139.83 feet*

AS-BUILT DESIGN

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER
60	*Very dense, moist, brown, medium SAND with GRAVEL and some silt*		MW3-60	100/6"	0	
	Gravel content continues to decrease (inferred)					
70	*Very dense, moist, brown, fine to medium SAND with trace gravel and trace to some silt*		MW3-70	75	0	
	Increase in soil density (possible increase in silt content)					
80	*Very dense, damp to moist, gray, silty, fine SAND with trace gravel*		MW3-80	50/3"	0	
	Very dense, damp to moist, brown, fine to medium SAND with trace to some silt and trace gravel					1/12/95
90	*Very dense, wet, brown, silty, fine to medium SAND with trace gravel*					AID
	(continued)					

Casing (Schedule-40 2-inch I.D. PVC)

10-20 sand filter pack

Screen (2-inch I.D. PVC with 0.01-inch slots)

TESTING

LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level (AID = ATD = at time of drilling)
- Sample not recovered
- EPA 8260, EPA 8270, RCRA Metals — Analytical testing
- Ecology ID# ABN 152
- Observed groundwater level (0/00/00 = date observed)

AGRA Earth & Environmental
11335 NE 122nd Way, Suite 100
Kirkland, Washington 98034-6918

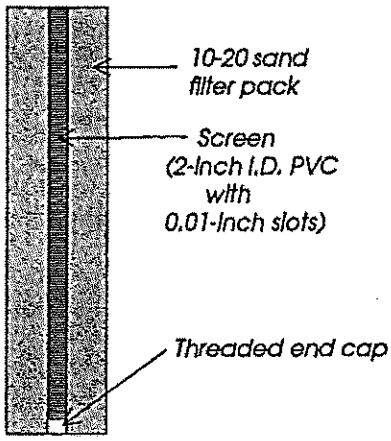
Drilling started: *02 January 1995* Drilling completed: *03 January 1995* Logged by: *JK*

PROJECT: *Crown Hill Elementary* W.O. *11-08362-11* WELL NO. *MW-3*

Elevation reference: *Not Applicable* Well completed: *03 January 1995*
Ground surface elevation: *137.07 feet* Casing elevation: *139.83 feet*

AS-BUILT DESIGN

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING
90	*Very dense, wet, silty, fine to medium SAND with trace gravel*		*MW3-90*	*50/5"*	*0*		
100	*Grades into hard, moist to wet, gray, sandy SILT with trace gravel*		*MW3-100*	*50/3"*	*0*		
	Bottom of boring at 101.5 feet. No unusual odors or staining observed.						



LEGEND

- 2-inch O.D. split-spoon sample
- Observed groundwater level ATD = at time of drilling
- Sample not recovered
- EPA 8260 / EPA 8270 / RCRA Metals — Analytical testing
- Ecology ID# ABN 162
- Observed groundwater level 0/00/00 = date observed

AGRA Earth & Environmental
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Kirkland, Washington 98034-6918

Drilling started: *02 January 1995* Drilling completed: *03 January 1995* Logged by: *JK*

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-4 (NG-K3)	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS): 123.86 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/29/2011-3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	8" Flush mount monument set in concrete						Asphalt.	0
							Loose, slighty moist, dark yellow-brown, slightly silty, gravelly SAND (SW-SM); fine to coarse sand; landfill debris including glass, metal.	
5		NG-K3-5-6.5	TOC		2 5 5		Medium dense, slightly moist, yellow-brown to dark brown, silty, very gravelly SAND (SM); fine to coarse sand; scattered organics; wood.	5
	2" Sch. 40 PVC riser							
10					7 9 10			10
	3/8" Bentonite chips							
15					6 7 7		Slightly gravelly, fine to medium sand.	15
20		G-K3-20-21.5	TOC		20 25 27		Very dense, moist, gray to brown, silty, very sandy GRAVEL (GM); fine to medium gravel; fine to coarse sand.	20
25					24 30 35			25
30					21 25 30		Very dense, slightly moist, brown, slightly gravelly, silty SAND (SM); fine to coarse sand.	30
35	Baroid QuikGrout seal				12 15 18		Dense, very gravelly.	35
40		G-K3-40-41.5	TOC		8 11 13		Medium dense, very moist.	40
45					23 28 30		Very dense, slightly moist, gray SAND (SP); fine to medium sand.	45

Sampler Type:
- ○ No Recovery
- ◧ 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-4 (NG-K3)	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:

Location: 1500 Rocky Point Road, Bremerton WA 98312

Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS): 123.86 ATD

Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/29/2011-3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
					36 50		Trace gravel.	
55					38 50		Slightly moist to moist, trace silt.	55
60					31 50			60
65	Baroid QuikGrout seal				33 50		Gray-brown, gravelly.	65
70					38 50		Very dense, slightly moist, brown, slightly silty, very sandy GRAVEL (GW-GM); fine to coarse gravel.	70
75					38 50		Very dense, slightly moist, gray brown, slightly gravelly SAND (SP); fine to medium sand.	75
80					39 50		Very dense, slightly moist, gray brown, very gravelly SAND (SW); fine to coarse sand.	80
85					41 50		Very dense, slightly moist, gray brown, slightly silty SAND (SP-SM); fine sand.	85
90					39 50		Very dense, slightly moist, gray brown SAND (SP); fine to medium sand.	90
95					47 50		Moist, trace to slightly silty, fine sand.	95

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)

- Static Water Level
- Water Level (ATD)

Logged by: JSL

Approved by: RRH

Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-4 (NG-K3)	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS): 123.86 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/29/2011-3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
105					46 50		Fine to medium sand.	105
					43 50		Hard, slightly moist, gray SILT (ML).	
110					41 50		Hard, moist, gray, SILT laminated with CLAY (ML/CL); nonplastic silt; medium plasticity clay.	110
115					31 50			115
120	10-20 Silica sand				28 31 50			120
125					31 35 50			125
130	2" Sch. 40 prepacked screen 0.020" slot				28 35 40			130
135					41 50		Very dense, wet, blue-gray SAND (SP); trace silt, fine to medium sand.	135
							Very dense, wet, dark gray brown, very sandy GRAVEL (GW); fine to coarse gravel.	
140					50		Very dense, wet, gray, silty SAND (SM); fine sand.	140
							Very dense, wet, gray brown, silty, very sandy GRAVEL (GM); fine gravel.	
145	Threaded cap Slough				50		Bottom of boring at 146' BGS	145

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-5 (NG-F5)	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling- Scott / Hollow Stem Auger
Depth to Water (ft BGS): 115 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	8" Flush mount monument set in concrete						Asphalt.	0
							Dense, slightly moist, brown to dark gray, slightly gravelly, silty SAND (SM); fine to medium sand. Landfill material: fabric, charcoal, metal, glass, wire, nails.	
5		NG-F5-5-6.5	TOC		50 20 20			5
10								10
15								15
20	2" Sch. 40 PVC riser	G-F5-20-21.5	TOC		5 5 5		Medium dense, slightly moist, yellow-brown, slightly gravelly, silty SAND (SM); fine to coarse sand. Landfill material: glass, ceramic, nails, wire.	20
25					3 5 10			25
30					7 10 10			30
35					9 10 15		Petroleum-like odor	35
40	3/8" Bentonite chips	G-F5-40-41.5	TOC		10 12 15		Very stiff, slightly moist, yellow-gray, sandy SILT (ML). Medium dense, slightly moist, gray, silty SAND (SM); fine to medium sand, petroleum-like odor and liquid present.	40
45					8 11 15		Very stiff, slightly moist, yellow-brown to gray SILT (ML); petroleum-like odor.	45

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)

- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-5 (NG-F5)	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling- Scott / Hollow Stem Auger
Depth to Water (ft BGS): 115 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
					7 9 10		Medium dense to very dense, moist to very moist, olive brown, silty SAND (SM); fine to medium sand. Petroleum sheen at 50'.	
55					38 50		Trace gravel.	55
60					10 23 28			60
65					18 20 26		Very dense, slightly moist to moist, brown-gray SAND (SW); trace gravel, fine to coarse sand.	65
70					33 50			70
75	3/8" Bentonite chips				38 50			75
80					33 50			80
85					38 50			85
90					42 50		Very gravelly.	90
95					46 50			95

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-5 (NG-F5)	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:

Location: 1500 Rocky Point Road, Bremerton WA 98312

Driller/Method: Cascade Drilling- Scott / Hollow Stem Auger
Depth to Water (ft BGS): 115 ATD

Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
105	3/8" Bentonite chips				49 50			105
					49 50		Slightly silty, trace gravel.	
	10-20 Silica sand						Very dense, very moist, brown, silty, sandy GRAVEL (GM); fine to coarse, rounded gravel.	
110					48 50		Very dense, very moist, brown, very sandy GRAVEL (GP); trace silt.	110
115					46 50		Slightly silty.	115
	2" Sch. 40 prepacked screen 0.020" slot							
120					41 50		Very dense, very moist to wet, gray SAND (SP); trace gravel; fine to coarse sand, predominantly fine.	120
125					50			125
130					41 50			130
	Threaded cap							
135	Slough				38 50		Bottom of Boring at 136' BGS	135
140								140
145								145

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-6 (NG-A2)	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS): 126.8 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	8" Flush mount monument set in concrete						Asphalt	0
							Very dense, slightly moist, gray brown, slightly gravelly SAND (SP); trace silt, fine to medium sand, predominantly medium.	
5		NG-A2-5-6.5	TOC		19 20 23			5
10					19 25 27		Very dense, slightly moist, gray brown SAND (SW); fine to coarse sand; trace gravel.	10
15					12 15 18			15
20	2" Sch. 40 PVC riser	NG-A2-20-21	TOC		36 50			20
25					28 36 40		Very dense, slightly moist, gray brown SAND (SP); trace gravel; fine to medium sand.	25
30					31 50		Very dense, slightly moist, brown, very sandy GRAVEL (GW); trace silt, fine to coarse gravel; fine to coarse sand.	30
35					16 18 28		Very dense, slightly moist, gray brown, gravelly SAND (SP); trace silt, fine to medium sand.	35
40	3/8" Bentonite chips	G-A2-40-41.5	TOC		18 23 30			40
45					20 23 35			45

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-6 (NG-A2)	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS): 126.8 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
					27 35 38		Very dense, slightly moist, brown, silty SAND (SM); fine sand.	
55					31 50		Trace silt.	55
60					38 50			60
65					42 50			65
70					34 50			70
75	3/8" Bentonite chips				28 38 45		Very dense, slightly moist, gray brown, slightly silty SAND (SP-SM); fine to medium sand.	75
80					32 38 40			80
85					37 50			85
90					34 50			90
95					39 50		Very dense, moist, dark brown, very silty SAND (SM); fine sand.	95

Sampler Type:
- ○ No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-6 (NG-A2)	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS): 126.8 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
	3/8" Bentonite chips				39 50		Very dense, slightly moist, gray brown SAND (SP); trace silt; fine to medium sand.	
105					42 50			105
110					39 50		Hard, slightly moist, dark gray SILT and CLAY (ML/CL); thinly laminated; highly fractured and slickensided to brecciated texture.	110
115	10-20 Silica sand				44 50			115
120					41 50		Very dense, slightly moist, brown with iron-oxide staining, slightly silty SAND (SP-SM); fine to medium sand; trace organic fragments.	120
125	2" Sch. 40 prepacked screen 0.020" slot				41 50		Very dense, wet, dark brown, silty SAND (SM); fine to coarse sand.	125
130					48 50		Hard, wet, gray, slightly sandy SILT (ML); fine sand; trace fine organic fragments.	130
135	Threaded cap				48 50		Very dense, wet, gray, silty SAND (SM); fine sand. Bottom of Boring at 136.7' BGS	135
140								140
145								145

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)

- Static Water Level
- Water Level (ATD)

Logged by: JSL

Approved by: RRH

Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-7 (SG-J6)	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS): 125.2 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	8" Flush mount monument set in concrete				4		Grass over topsoil.	0
					5 8		Slightly moist, light brown, slightly silty SAND (SP-SM); trace gravel.	
					3 4		Slightly moist, brown, silty, gravelly SAND (SM).	
					2			
5		SG-J6-5	TOC		9 4		Slightly moist, dark brown, silty SAND (SM).	5
					3 3		Slightly moist, brown with iron oxide stain, slightly gravelly, silty SAND (SM); fine to coarse sand; fine to coarse gravel, predominantly fine gravel.	
					4 5			
10					4 4			10
					6			
					9 12			
					14 15		Light brown, very silty. Gravelly.	
15					23 26			15
					21 25 28		Slightly moist, gray sandy SILT (ML); trace gravel.	
20	2" Sch. 40 PVC riser	SG-J6-20	TOC		8 11 15			20
25					23 25 27		Slightly moist, brown, slightly silty, gravelly SAND (SW-SM); fine to coarse sand; fine gravel.	25
30					18 23		Slightly moist, light brown, gravelly SAND (SW); fine to coarse sand.	30
					26		Slightly moist, dark gray, SAND (SP); fine to coarse sand, predominantly fine to medium.	
35					18 23 25			35
40	3/8" Bentonite chips	SG-J6-40	TOC		18 25 27			40
45					21 28 31			45

Sampler Type:
- ○ No Recovery
- ◧ 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-7 (SG-J6)	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS): 125.2 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
55					42 50			55
					43 50		Slighlty moist, light gray brown, slightly gravelly SAND (SW); fine to coarse sand; fine gravel.	
60					39 50		Fine to coarse gravel.	60
65					43 50		Gravelly.	65
70					23 39 50		Slightly gravelly.	70
75	3/8" Bentonite chips				48 50		Gravelly.	75
80					44 50		Slightly gravelly.	80
85					47 50		Very gravelly.	85
90					50 50			90
95					48 50			95

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)

- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-7 (SG-J6)	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS): 125.2 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
	3/8" Bentonite chips				47 50		Slightly moist, gray brown, slightly silty SAND (SP-SM); fine sand.	
105					50 50		Rare organics.	105
110					48 50			110
	10-20 Silica sand							
115					50 50			115
	2" Sch. 40 prepacked screen 0.020" slot							
120					50 50			120
125					50 50		Wet.	125
130					42 50			130
135	Threaded cap						Bottom of Boring at 136' BGS	135
140								140
145								145

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-8	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 109 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/20/2011-12/21/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	8" Flush mount monument set in concrete				7		Light brown TOPSOIL.	0
					10 8 10		Very stiff, moist, brown with iron stain mottling, gravelly, very sandy SILT (ML) FILL.	
5					10 12 12 9 13 15 5 3 3 4		Loose, moist, dark brown, gravelly, silty SAND (SM) FILL; with LANDFILL DEBRIS; including glass, brick, plastic, charcoal, cermaic, organics, wood.	5
10	Bentonite chips (NSF/ANSI 60)				4 4 3 2 2			10
					3		Very moist, very silty.	
15					4 5 4 4 4 2 4 4		Very dense, moist, gravelly SAND (SW); fine to coarse sand; gravel up to 2" diameter.	15
20		MW-8-20	NWTPH-Dx, total As, total Pb		50 12 12 16		Medium dense, moist, gray brown, gravelly, very silty SAND (SM).	20
25					7 8 9		Medium dense, moist, brown, gravelly SAND (SW); fine to coarse sand; subrounded gravel.	25
30					8 8 8		Medium dense, moist, brown SAND (SP); iron stained strata.	30
35	2" Sch. 40 PVC casing				6 7 7		Faint stratification.	35
40					9 10 11		Gravelly; rounded gravel up to 2" in diameter.	40
45					16 50		Very dense, moist, gray SAND (SP); iron stained stratification; fine to medium sand; trace silt.	45

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: MV/AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-8	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 109 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/20/2011-12/21/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
					50		Pockets of light gray, silty sand; trace gravel.	
55	Bentonite grout				50			55
60					50		Basaltic gravel.	60
65					50		Faint stratification delineated by brown stained sand.	65
70					50		Stratification may be non-horizontal.	70
75					50			75
80		MW-8-80	NWTPH-Dx, total As, total Pb		50		Faint non-horizontal stratification.	80
85					50		1"silty sand layer.	85
90					50			90
95	Bentonite chips (NSF/ANSI 60)				50		Very dense, moist, light gray, gravelly SAND (SW); fine to coarse sand; fine gravel; mixed granitic and basaltic lithology.	95
							Very dense, moist, gray, SAND (SP); fine to medium sand.	

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: MV/AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-8	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:

Location: 1500 Rocky Point Road, Bremerton WA 98312

Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 109 ATD

Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/20/2011-12/21/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
105	#2/12 sand filter pack				50		Light gray, trace gravel.	105
					50			
110	2" Sch. 40 prepacked screen 0.020" slot	MW-8-110	NWTPH-Dx, total As, total Pb		50 18 21		Separate phase black viscous petroleum-like liquid.	110
115					13 18 21		Dense, wet, gray, sandy GRAVEL (GP); fine gravel; medium to course sand; separate phase black viscous petroleum-like liquid.	115
120	Threaded PVC endcap				50		Very dense, wet, gray, SAND (SW); fine to coarse sand. Bottom of Boring at 120.5' BGS	120
125								125
130								130
135								135
140								140
145								145

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)

- Static Water Level
- Water Level (ATD)

Logged by: MV/AET

Approved by: RRH

Figure No.

ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-9	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 116 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/19/2011-12/20/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	8" Flush mount monument set in concrete				5		Light brown TOPSOIL.	0
					5 5 5		Loose, moist, brown to dark brown, silty, gravelly SAND (SM) FILL; brown at 0.5'; subrounded gravel up to 1"; fine to medium sand.	
					3 3 3		Reddish brown silt pockets.	
5					5		Gray sandy pockets.	5
					7 4		Loose, brown and gray mottled, sandy SILT (ML) FILL; trace gravel.	
	Bentonite chips (NSF/ANSI 60)				5 2 1		Loose, moist, brown-gray, very silty, gravely SAND (SM) FILL; rare organics; petroleum-like droplets; gravel up to 2"; subrounded; fine to medium sand.	
10					2 3 8		Medium dense LANDFILL DEBRIS; including wood, glass, brick and plastic in a sandy gravelly silt matrix.	10
					16		Loose, moist, light gray, silty SAND (SM).	
					20 6 5		Gray and brown mottled, gravelly. 2" pocket of gray silt.	
15		MW-9-15	NWTPH-Dx, total As, total Pb		6 4		Very stiff, moist, gray and brown mottled SILT (ML); mm to cm scale blocky fractures; oxidized fracture surfaces and slickensides stops.	15
					4 4 3 3		Medium dense, moist, slightly sitly, gravelly SAND (SP-SM); strong petroleum-like odor; fine subrounded gravel; fine to medium sand.	
20					3 3 8 8		Trace gravel.	20
					5 6 7			
25					10		Medium dense, moist, gray SAND (SP); fine to medium sand; mild petroleum-like odor.	25
					9 10 10 10 10			
30					11 12 16			30
35	2" Sch. 40 PVC casing				4 17 20		Dense, trace silt; pocket of gravelly silty sand; granitic gravel.	35
40					12 24 27		Very dense, gray brown. 1 cm oxidized brown layer at 40.3' bgs	40
45					22 50		faint stratification; thin vertical dark brown laminae.	45

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET/MV
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-9	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 116 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/19/2011-12/20/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
55	Bentonite grout				50			55
					26 50		1" layer of fine sand. Gray.	
60					20 22 50/5		1" pockets of gray silt	60
65					27 50		faint stratification	65
70					20 50			70
75		MW-9-75	NWTPH-Dx, total As, total Pb		50		Diagonal, light gray, 1cm bed.	75
80					50		Brown, trace to slightly gravelly, isolated beds of silty sand.	80
85					50/4		Very dense, moist, brown, trace to slightly gravelly, slightly silty SAND (SP-SM); metamorphic gravel up to 1", subrounded to subangular; diamict structure.	85
90					10 14 22		Dense, moist, gray-brown, slightly gravelly SAND (SW); fine to coarse sand.	90
95					10 14 14		Medium dense, moist, gray-brown SAND (SP); trace gravel; fine to medium sand. Medium dense, moist, gray-brown SAND (SW); fine to coarse sand. Medium dense, moist, gray-brown SAND (SP); fine to medium sand.	95

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET/MV
Approved by: RRH
Figure No.

ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-9	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 116 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/19/2011-12/20/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
	Bentonite chips (NSF/ANSI 60)				7 7 8		Medium dense, moist, brown, gravelly SAND (SW); fine to coarse sand; fine, subrounded to subangular gravel, metamorphic clasts.	
105					50		Very dense.	105
110	#2/12 sand filter pack				50			110
115					2 4 6		Loose, wet, brown, very silty fine SAND (SM). Medium dense, wet, brown, SAND (SP); fine to medium sand, trace silt.	115
120	0.020" slot 2" Sch. 40	MW-9-120	NWTPH-Dx, total As, total Pb		50		Very dense.	120
125					50			125
	Threaded PVC endcap				50		Bottom of Boring at 127.5' BGS	
130								130
135								135
140								140
145								145

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET/MV
Approved by: RRH
Figure No.

ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-10	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 135 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/21/2011-12/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	8" Flush mount monument set in concrete						Asphalt.	
					7		Medium dense, dry, brown, slightly gravelly, silty SAND (SM) FILL; fine to medium sand.	
					7			
5		MW-10-5	NWTPH-Dx, total As, total Pb		8		Medium dense, dry, brown, slightly gravelly SAND (SP) FILL; trace silt, trace organics.	5
					7			
					5			
					6			
					8		Very dense, dry, brown, slightly silty, slightly gravelly SAND (SP-SM); wood, fine to medium sand, medium fine subrounded gravel.	
10					3			10
					6			
					50			
					50			
					50			
					50/5			
	Bentonite chips (NSF/ANSI 60)							
15					50			15
20					50		Very dense, slightly moist, brown, trace to slightly gravelly SAND (SP); fine to medium sand; predominately fine subrounded gravel.	20
25					50		Very dense, moist, brown, slightly gravelly SAND (SW); fine to coarse sand; fine subrounded gravel.	25
30					50			30
35	2" Sch. 40 PVC casing				22		Trace to slightly gravelly; fine subrounded gravel.	35
					50			
40					50			40
45					50		Gravelly.	45

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET/MV
Approved by: RRH
Figure No.

ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-10	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 135 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/21/2011-12/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
					50		Very dense, moist, brown SAND (SP); trace gravel, fine to medium sand.	
55					50		Gravelly.	55
60	Bentonite grout				50		Trace gravel.	60
65					50			65
70		MW-10-70	NWTPH-Dx, total As, total Pb		50		Gray-brown, faint stratification.	70
75					50			75
80					50			80
85					50			85
90					50			90
95					50		Very dense, moist, brown, silty sand (SM); fine sand.	95

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET/MV
Approved by: RRH
Figure No.

ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-10	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 135 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/21/2011-12/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
105					50		Very dense, very moist, gray-brown, very sandy SILT (ML); fine sand, faint iron stain stratification.	105
					50		1" thick dark brown fine sand layer Very dense, moist, gray-brown SAND (SP); fine to medium sand.	
110					50		Very dense, very moist, gray-brown, sandy SILT (ML); fine sand.	110
							Very Dense, moist, gray-brown SAND (SP); fine to medium sand.	
115	Bentonite chips (NSF/ANSI 60)				50			115
120					50		Very dense, moist, gray-brown, SAND (SW); fine to coarse sand; trace gravel.	120
							Hard, slightly moist, gray-purple CLAY (CL).	
125					50			125
130	#2/12 sand filter pack 0.010" slot 2" Sch. 40				50		Very dense, moist, gray-purple and brown mottled, silty SAND (SM); fine to medium sand; trace gravel; pocket of brown fine sandy silt and trace organics; charcoal.	130
135		MW-10-135	NWTPH-Dx, total As, total Pb		50		Very dense, wet, gray-purple, SAND (SW); fine to coarse sand (predominately fine to medium); trace silt.	135
140					50		Very dense, very moist, gray-blue, SAND (SP); fine to medium sand, predominately fine. could not tag water level, too much heave	140
145	Threaded PVC endcap				50		Wet, trace gravel. Bottom of Boring at 145.5' BGS	145

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET/MV
Approved by: RRH
Figure No.

ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-11	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 131 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/22/2011-12/27/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	8" Flush mount monument set in concrete						Asphalt.	0
							Brown, moist, silty, gravelly SAND (SM) FILL.	
					1			
					1		Loose, moist, dark brown, slightly silty, gravelly SAND (SP-SM) FILL; fine to medium sand.	
5					2			5
					2			
					2		Loose, moist, dark brown, slightly silty, gravelly SAND (SP-SM) with LANDFILL DEBRIS; including glass, wood, ceramic and organics.	
					2			
					2			
					2			
10					2		Loose, moist, brown, slightly gravelly, silty SAND (SM) FILL; fine to medium sand; subangular to subrounded gravel	10
					2			
					2			
					4		Medium dense.	
	Bentonite chips (NSF/ANSI 60)				3			
					3		Very dense.	
					4			
15					6			15
					6			
					11			
					11			
					11			
					50			
20		MW-11-20	NWTPH-Dx, total As, total Pb		50		Hard, moist, gray-brown, gravelly SILT (ML); trace sand; low plasticity; oxidized factures; diamict fabric; conchoidal fracture.	20
25					50		Very dense, moist, gray-brown, silty, gravelly SAND (SM); fine to coarse sand.	25
30					50		Very dense, moist, brown SAND (SP); trace SILT; fine to medium sand; trace gravel; metamorphic cobbles up to 3" in diameter.	30
35	2" Sch. 40 PVC casing				21		Gray-brown.	35
					50			
40					18			40
					50			
45					14			45
					18			
					35			

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET/MV
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-11	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 131 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/22/2011-12/27/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
55	Bentonite grout				19 50			55
					13 21 21		Very dense, moist, brown, slightly gravelly, silty SAND (SM). Very dense, moist, gray-brown SAND (SP); fine to medium sand.	
60					50			60
65					19 50/5		Hard, moist, gray-brown, sandy, gravelly SILT (ML); cobbles up to 2"; iron staining. Dense, moist, gray-brown, SAND (SP); fine to medium sand.	65
70		MW-11-70	NWTPH-Dx, total As, total Pb		50/5			70
75					50/5			75
80					50			80
85					50			85
90					50			90
95					50		Light gray pockets.	95

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET/MV
Approved by: RRH
Figure No.

ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-11	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Dave / Hollow Stem Auger
Depth to Water (ft BGS): 131 ATD
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/22/2011-12/27/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
105					50			105
110					50		Faint stratification.	110
115	Bentonite chips (NSF/ANSI 60)				50			115
120					50		Light gray, fine sand pockets.	120
125	#2/12 sand filter pack				50			125
130	129				50		Fine sand.	130
135		MW-11-135	NWTPH-Dx, total As, total Pb		50		Wet.	135
140	Threaded PVC endcap						Bottom of Boring at 141' BGS	140
145								145

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET/MV
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-12	1 of 3

Project Name: Crownhill Elementary School
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"

Ground Surface Elev: 134.72
Depth to Water (ft BGS): 115
Start/Finish Date: 10/25/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
0 / 135	8" Flush mount monument set in concrete						Grass over topsoil	0
5 / 130			PID = 0	50			**LANDFILL** Moist, dark brown LANDFILL DEBRIS in a sandy SILT (ML) matrix; debris includes plastic, metal, white powdery debris. (Blow count not representative of soil density)	5
10 / 125			PID = 1.3	6 5 4			Loose, with PVC debris.	10
15 / 120			PID = 0.0 PID = 0.8 PID = 0.0	3 3 3			Becomes gravelly, debris includes glass, rope, white powder, fabric, screws, charred material.	15
20 / 115			PID = 1.0 PID = 0.0	7 9 9			Becomes red; debris includes plastic, metal wire, charred material, fabric, glass, nails. (Blow count not representative of soil density)	20
25 / 110	Bentonite chips (NSF/ANSI 60)		PID = 0.0 PID = 0.0 PID = 0.0	7 9 20			Becomes red, dark brown, black, and white mottled; debris includes glass, drywall, charred material, nails, yellow plastic pieces. (Blow count not representative of soil density)	25
30 / 105			PID = 4.3 PID = 1.7	7 7 7			Moist, gray, sandy GRAVEL (GW) to very gravelly SAND (SW); fine to coarse sand, fine to coarse gravel, with cobbles up to 3", landfill debris includes wire. (Blow count not representative of soil density)	30
35 / 100	2" Sch. 40 PVC casing		PID = 1.8 PID = 13.1	10 50				35
40 / 95		MW-12-41	PID = 130. NWTPH-Dx	12 13 14			**VASHON ADVANCE OUTWASH** Medium dense, moist, dark gray SAND (SW); fine to coarse sand, trace silt, petroleum-like odor and sheen, blebs.	40
45 / 90			PID = 191 PID = 30.1	12 13 15			Medium dense, moist, dark gray SAND (SP); with cobbles, fine to medium sand, petroleum-like odor and sheen, blebs.	45
85								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: AET
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-12	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.72
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/25/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value ▲ / Water Content % ● (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
			PID = 16.2	8			Very stiff, moist, gray and tan-mottled SILT (ML) interbedded with medium dense, moist, dark gray and dark brown SAND (SP); fine to medium sand, stratification at approximately 45 degrees from horizontal, petroleum-like odor.	
			PID = 182	11				
			PID = 32.1	12				
55 / 80			PID = 1.7	12 14 15				55
60 / 75		MW-12-61.5	PID = 15.7 PID = 6.8 PID = 13.5, NWTPH-Dx	10 12 18			Medium dense, moist, gray, brown, slightly silty, gravelly SAND (SW-SM); fine to coarse sand, fine gravel, slight petroleum-like odor.	60
65 / 70			PID = 2.9	15 15 15			Hard, moist, brown, gravelly, sandy SILT (ML) interbedded with very thin beds gray SAND (SP); medium to coarse sand, beds at approximately 45 degrees from horizontal, blocky fractures in silt, slight petroleum-like odor.	65
70 / 65	Bentonite chips (NSF/ANSI 60)		PID = 0.0	13 50				70
75 / 60			PID = 4.9	21 50			Very dense, moist, gray, brown, slightly gravelly SAND (SP); medium to coarse sand, slight petroleum-like odor	75
80 / 55		MW-12-81	PID = 7.7 NWTPH-Dx	18 50				80
85 / 50			PID = 20.7	50				85
90 / 45			PID = 12.8	50			Very dense, moist, brown to gray, very sandy GRAVEL (GW); fine sand, subangular fine to coarse gravel, slight petroleum-like odor. Thin bed brown, gray, slightly gravelly, slightly silty SAND (SP-SM); fine to medium sand, slight petroleum-like odor.	90
	#2/12 sand filter pack							
95 / 40	0.020" slot 2" Sch. 40		PID = 28.7	50/3				95
35								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: AET
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-12	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.72
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/25/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
105 / 30			PID = 2.7	50			Very dense, moist, gray, very gravelly SAND to very sandy GRAVEL (SW-GW); fine to coarse sand, fine to coarse gravel.	
		MW-12-105.5	PID = 8.0, NWTPH-Dx	50			Very dense, moist, gray, very gravelly SAND (SW); fine to coarse sand, fine to coarse gravel, slight petroleum-like odor at 105'.	105
110 / 25	0.020" slot 2" Sch. 40		PID = 1.8	50				110
115 / 20	▽ 10/25/2012	MW-12-115.5	PID = 10.3, NWTPH-Dx	50			Very dense, wet, gray, gravelly SAND (SP); fine to medium sand, coarse gravel	115
120 / 15			PID = 2.0 PID = 1.4	12 16 18			Dense, wet GRAVEL (GP); coarse gravel.	120
125 / 10	Threaded PVC endcap		PID = 0.2	20 50/5			Very dense, wet, gravelly SAND (SW); trace silt, fine to coarse sand, fine, subangular gravel.	125
							Bottom of boring at 125' BGS.	
130 / 5								130
135 / 0								135
140 / -5								140
145 / -10								145
-15								

Sampler Type:
- ◯ No Recovery
- ◧ 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: AET
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-13	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.22
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 114.5
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/25/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
130	8" Flush mount monument set in concrete						Grass over topsoil	
5			PID = 0	10 19 16			**LANDFILL** Dense, dark brown, slightly silty, very gravelly SAND (SP-SM).	5
125								
10			PID = 0	8 6 5			Medium dense, moist, dark brown to brown-yellow, slightly silty, gravelly SAND (SP-SM); abundant landfill debris including brick, paper, glass, copper, steel.	10
120								
15			PID = 0.5	6 5 6			Abundant landfill debris including brick, glass, steel.	15
115								
20			PID = 0	6 5 6			Medium dense, very moist, dark brown, gravelly, very silty SAND (SM); abundant landfill debris including wood, brick, nails, paper.	20
110								
25	Bentonite chips (NSF/ANSI 60)		PID = 0	7 6 5			Trace gravel, trace landfill debris includes brick, glass.	25
105								
30			PID = 0	7 16 15			**VASHON ADVANCE OUTWASH** Dense, moist, brown, very sandy GRAVEL (GP); subrounded gravel, fine to coarse sand.	30
100								
35	2" Sch. 40 PVC casing		PID = 0	17 10 12			Medium dense, moist, brown, gravelly SAND (SW); fine to coarse sand, trace silt.	35
95								
40			PID = 0	16 15 15			Dense, medium to coarse sand.	40
90								
45		MW-13-45	PID = 84.4, NWTPH-Dx	10 16 17			Strong petroleum-like odor, saturated in product, heavy sheen.	45
85								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: RRH/AET
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-13	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.22
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 114.5
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/25/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
55 / 80			PID = 150	14 14 19			Dense, very moist to wet, dark gray, silty, sandy GRAVEL (GP-GM); saturated in product.	55
			PID = 31.5	19 19 15			Becomes wet, gray; strong odor, heavy sheen with blebs.	
60 / 75			PID = 91.5	25 26 20			Becomes moist, dark brown to brown, thin beds brown fine sand, strong petroleum-like odor, visible product.	60
65 / 70		MW-13-65	PID = 162 NWTPH-Dx	25 25 20				65
70 / 65	Bentonite chips (NSF/ANSI 60)		PID = 43	25 26 20			Becomes blue-gray; strong petroleum-like odor, heavy sheen with blebs.	70
75 / 60			PID = 82	20 20 20				75
80 / 55				>50	50+		Very dense, wet, gray, slightly silty, sandy GRAVEL (GP); with cobbles, strong petroleum-like odor, heavy sheen with blebs down to 115'.	80
85 / 50		MW-13-85	NWTPH-Dx	>50	50+			85
90 / 45			PID = 56.5	>50	50+			90
95 / 40	#2/12 sand filter pack 0.020" slot 2" Sch. 40		PID = 83.5	>50	50+			95
35								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: RRH/AET
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-13	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.22
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 114.5
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/25/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
105 (30)			PID = 75	>50	50+		Very dense, wet, gray, slightly silty, sandy GRAVEL (GP); with cobbles, strong petroleum-like odor, heavy sheen with blebs down to 115'.	105
		MW-13-105	PID = 84, NWTPH-Dx	>50	50+		Thin beds fine sand.	
110 (25)	0.020" slot 2" Sch. 40		PID = 65	>50	50+		Thin beds fine sand.	110
115 (20)	▽ 10/25/2012		PID = 0.0	>50	50+		Very dense, wet, gray-brown, silty, gravelly SAND (SM); fine to coarse sand, slight petroleum-like odor, no visible sheen.	115
120 (15)		○		>50	50+		No recovery.	120
125 (10)	Threaded PVC endcap	○		>50	50+		Bottom of boring at 125' BGS.	125
130 (5)								130
135 (0)								135
140 (-5)								140
145 (-10)								145
(-15)								

Sampler Type:
○ No Recovery
3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: RRH/AET
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-14	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.53
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/26/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value ▲ / Water Content % ● (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
0 / 134	8" Flush mount monument set in concrete						Grass over topsoil	0
5 / 130			PID = 1.7	9 16 21			**LANDFILL** Moist, brown, slightly silty, gravelly SAND (SP-SM). (Blow count not representative of soil density.) Moist, gray, gravelly SAND (SW); trace silt, fine to coarse sand. (Blow count not representative of soil density.)	5
10 / 125			PID = 0.0	7 8 7			Moist, dark brown LANDFILL DEBRIS in a gravelly SAND (SW) matrix; debris includes nails, metal, plastic, and glass.	10
15 / 120			PID = 0.0	3 4 5			Sandy SILT matrix; debris includes nails, brick, white powder, plastic, glass, large screws.	15
20 / 115			PID = 0.0	3 3 3			Silty SAND matrix; Landfill debris includes kiln firing, metal, plastic, nails.	20
25 / 110	Bentonite chips (NSF/ANSI 60)		PID = 0.0	11 12 12			Landfill debris includes rebar, glass, nails, plastic, metal. (Blow count not representative of soil density.)	25
30 / 105			PID = 1.5	50			Dark brown, sheen present. (Blow count not representative of soil density.)	30
35 / 100	2" Sch. 40 PVC casing		PID = 11.2	50			Wet, silty, sandy GRAVEL matrix; debris includes metal, wire. Free-phase petroleum product present in sample, sheen, strong odor, blebs. (Blow count not representative of soil density.)	35
40 / 95		MW-14-40	PID = 51.2, NWTPH-Dx	50			**VASHON ADVANCE OUTWASH** Medium dense, moist, black, slightly gravelly, silty SAND (SM); fine sand, fine to coarse gravel, strong petroleum-like odor.	40
45 / 90			PID = 223	20 10 10			Medium dense, moist, black, lightly silty SAND SP-SM); fine to coarse sand, fine gravel, strong petroleum-like odor and staining	45
85								

Sampler Type:
- ◯ No Recovery
- ◧ 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: AET
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-14	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.53
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/26/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
80			PID = 176 PID = 201	20 21 21			Dense, moist, gray to black, veriy silty, sandy GRAVEL (GM); fine to coarse sand, strong petroleum-like odor, blebs, heavy sheen	
55								55
			PID = 213	10 10 15			Medium dense, moist, black to tan with brown mottling, slightly silty, slightly gravelly SAND (SP); fine sand, strong petroleum-like odor, heavy sheen, blebs.	
75								
60		MW-14-60	PID = 410, NWTPH-Dx	10 15 18			Medium dense, very moist, gray and brown mottled, gravelly, silty SAND (SM); gravel to 3", fine sand, petroleum-like odor, heavy sheen, blebs.	60
70								
65			PID = 293	10 8 11			Medium dense, moist, gray and brown, mottled, slightly silty SAND (SP); trace coarse gravel, fine to medium sand, predominately fine, petroleum-like odor, sheen.	65
65								
70	Bentonite chips (NSF/ANSI 60)		PID = 285	10 18 11			Gray and dark brown alternating layers of SAND (SP); fine sand.	70
60								
75			PID = 389	8 10 11			Thin, gray crossbeds.	75
55								
80		MW-14-80	PID = 67.1, NWTPH-Dx	10 11 16			Petroleum-like odor, sheen present.	80
50								
85			PID = 85.9	11 24 50			Becomes trace silt, petroleum-like odor, sheen present.	85
45								
90			PID = 37	50			Very dense, moist, gravelly SAND (SW); fine to coarse sand, fine to coarse gravel, trace silt, petroleum-like odor, sheen present.	90
	#2/12 sand filter pack							
40								
95	0.020" slot 2" Sch. 40		PID = 59.7	50			Very dense, very moist, gray sandy GRAVEL (GP); coarse sand, fine to coarse gravel, predominately coarse, trace silt, petroleum-like odor, sheen, blebs.	95
35								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: AET
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-14	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.53
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/26/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
105 / 30		MW-14-100	PID = 14.0, NWTPH-Dx	50			Very dense, very moist, gray sandy GRAVEL (GP); coarse sand, fine to coarse gravel, predominately coarse, trace silt, petroleum-like odor, sheen, blebs.	105
			PID = 33.1	50			Slight petroleum-like odor.	
110 / 25	0.020" slot 2" Sch. 40		PID = 13.0	50				110
115 / 20	▽ 10/26/2011		PID = 1.3	50				115
120 / 15			PID = 0.0	50			Very dense, wet, gray, brown, gravelly SAND (SW); fine gravel, fine to coarse sand.	120
125 / 10	Threaded PVC endcap		PID = 0.0	50			Very dense, wet, gray-brown SAND (SP); trace gravel, medium to coarse sand.	125
							Bottom of boring at 124.5' BGS.	
130 / 5								130
135 / 0								135
140 / -5								140
145 / -10								145
-15								

Sampler Type:
- ◯ No Recovery
- ◧ 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
- HSA: Hollow Stem Auger
- MR: Mud Rotary

Logged by: AET
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-15	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.18
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/26/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
0 / 134	8" Flush mount monument set in concrete						Grass over topsoil.	0
5 / 130			PID = 5.7	50			**LANDFILL** Moist, brown, silty, gravelly SAND (SM); fine to coarse sand, landfill debris includes: wood, glass, metal. (Blow count not representative of soil density)	5
10 / 125			PID = 1.8	5 5 6			Medium dense.	10
15 / 120			PID = 0	50			Moist, gray, slightly silty, gravelly SAND (SW-SM); fine to coarse sand, landfill debris includes metal. (Blow count not representative of soil density)	15
20 / 115			PID = 0	50			Brown to gray, moist, slightly silty, sandy GRAVEL (GM-GW); coarse gravel, fine to coarse sand, landfill debris includes wood, concrete rubble. (Blow count not representative of soil density)	20
25 / 110	Bentonite chips (NSF/ANSI 60)		PID = 0	50			**VASHON ADVANCE OUTWASH** Very dense, moist, gray to brown, slightly silty, sandy GRAVEL (GM-GP); fine to coarse sand, fine gravel.	25
30 / 105			PID = 0	50/4				30
35 / 100	2" Sch. 40 PVC casing		PID = 0	50				35
40 / 95			PID = 0	50			Very dense, moist, gray, slightly silty SAND (SP-SM); fine to coarse sand, predominately medium to coarse sand.	40
45 / 90		MW-15-45	PID = 0, NWTPH-Dx	50				45
85								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: MV
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-15	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.18
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/26/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
80			PID = 0	32 50			Very dense, moist, gray, slightly silty SAND (SP-SM); fine to coarse sand, predominately medium to coarse sand.	
55			PID = 0	50			Becomes brown	55
75			PID = 0	50				60
70			PID = 0	50			3" interbeds of fine sand, grades to grey-brown.	65
65	Bentonite chips (NSF/ANSI 60)		PID = 0	50				70
60			PID = 0	27 50				75
55			PID = 0	50			Predominately fine sand.	80
50			PID = 0	50			Very dense, moist, gray SAND (SP); trace silt, fine to medium sand.	85
45			PID = 0	50			Trace coarse sand, trace fine gravel	90
40	#2/12 sand filter pack 0.020" slot 2" Sch. 40		PID = 0	50			Very dense, moist, grey-brown, slightly silty SAND (SP-SM); fine to medium sand	95
35								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: MV
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-15	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.18
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/26/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
105 / 30			PID = 0	50			Very dense, moist, grey-brown, slightly silty SAND (SP-SM); fine to medium sand	105
105 / 30			PID = 0	50				105
110 / 25	0.020" slot 2" Sch. 40	MW-15-110	PID = 0, NWTPH-Dx	50				110
115 / 20	▽ 10/26/2012		PID = 0	50			Wet at 115' BGS.	115
120 / 15			PID = 0	50				120
125 / 10	Threaded PVC endcap						Bottom of boring at 125' BGS.	125
130 / 5								130
135 / 0								135
140 / -5								140
145 / -10								145
-15								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: MV
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-16	1 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.07
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/26/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
0 / 134	8" Flush mount monument set in concrete						Grass over topsoil.	0
5 / 130			PID = 0	15 13 12			**LANDFILL** Medium dense, moist, dark gray, slightly gravelly, silty SAND (SM); fine to coarse sand.	5
10 / 125			PID = 0	11 13 16			Dark brown, gravelly, woody debris.	10
15 / 120			PID = 0	50			Very dense, moist, brown to gray, silty, sandy GRAVEL (GM); fine to coarse gravel, fine to coarse sand, landfill debris including metal and wood.	15
20 / 115		MW-16-20-20.5	PID = 0, NWTPH-Dx	19 20 20			**VASHON ADVANCE OUTWASH** Dense, moist, brown, sandy GRAVEL (GW); trace silt, fine to coarse gravel, fine to coarse sand.	20
25 / 110	Bentonite chips (NSF/ANSI 60)		PID = 0	50			Very dense.	25
30 / 105			PID = 0	50				30
35 / 100	2" Sch. 40 PVC casing		PID = 0	50			Very dense, moist, gray SAND (SW); trace silt, fine to medium sand.	35
40 / 95			PID = 0	50				40
45 / 90			PID = 0	21 21 20			Dense, light brown, faint stratification.	45
85								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: MV
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-16	2 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.07
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/26/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
80			PID = 0	50			Very dense, moist, gray SAND (SW); trace silt, fine to medium sand.	
55			PID = 0	50				55
75								
60			PID = 0	50			Very dense, moist, gray, sandy GRAVEL (GW); trace silt, fine to coarse gravel, fine to coarse sand.	60
70								
65			PID = 0	50			Very dense, moist, light gray-brown, slightly silty. slightly gravelly SAND (SP-SM); fine to medium sand, fine gravel.	65
65								
70	Bentonite chips (NSF/ANSI 60)		PID = 0	50				70
60								
75			PID = 0	50			Faint stratification. Strata dip at 45 degrees	75
55								
80			PID = 0	50			Trace gravel.	80
50								
85			PID = 0	50			Very dense, moist, dark gray-brown SAND (SP); trace silt, fine to medium sand.	85
45								
90			PID = 0	50				90
40	#2/12 sand filter pack							
95	0.020" slot 2" Sch. 40		PID = 0	50				95
35								

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: MV
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	MW-16	3 of 3

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.07
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Equipment: Cascade Drilling-Dave / CME 75
Depth to Water (ft BGS): 115
Drilling Method/Hammer: HSA / D & M / 300 lb jars / 30"
Start/Finish Date: 10/26/2012

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	Blows/ 6"	N-value / Water Content % (0 10 20 30 40 50)	Material Type	Description	Depth (ft)
105			PID = 0	50			Very dense, moist, dark gray-brown SAND (SP); trace silt, fine to medium sand. Trace fine gravel	105
110	0.020" slot 2" Sch. 40	MW-16-110-110.5	PID = 0, NWTPH-Dx	50			Very dense, moist, gray, dark brown to black, slightly silty SAND (SP-SM); fine to medium sand, strong petroleum-like odor, sheen present.	110
115	▽ 10/26/2012		PID = 0	50			Wet, stratified, trace gravel, strong petroleum-like odor.	115
120			PID = 0	50			Gray, trace silt, faint petroleum-like odor.	120
125	Threaded PVC endcap						Bottom of boring at 125' BGS.	125
130								130
135								135
140								140
145								145

30 25 20 15 10 5 0 -5 -10 -15

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

Drilling Method:
HSA: Hollow Stem Auger
MR: Mud Rotary

Logged by: MV
Approved by: RRH
Figure No.

GEOTECH BORING LOG CROWNHILL.GPJ November 30, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-A4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
139	Topsoil.						Grass over topsoil.	
1 / 138		NG-A4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM)	1
2 / 137								2
3 / 136				0				3
4 / 135								4
5 / 134				0			Slightly moist, gray brown, sandy GRAVEL (GP); trace silt	5
6 / 133				6.5				6
7 / 132	Hole backfilled with bentonite chips.	NG-A4-6-9	NWTPH-Dx, total As, total Pb					7
8 / 131				0				8
9 / 130								9
10 / 129								10
11 / 128							Becomes very sandy, fine-to-medium sand	11
12 / 127				0				12
13 / 126		NG-A4-12-15	NWTPH-Dx, total As, total Pb					13
14 / 125								14
15 / 124				0			Bottom of boring at 15' BGS	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-A5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
139	Topsoil.						Grass over topsoil.	
138		NG-A5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, gray-brown, silty, very gravelly SAND (SM); poorly graded fine-to-medium sand	1
137								2
136				0				3
135								4
134				0			Slightly moist, gray-brown, sandy GRAVEL (GP)	5
133				0				6
132	Hole backfilled with bentonite chips.	NG-A5-6-9	NWTPH-Dx, total As, total Pb					7
131				0				8
130								9
129				0				10
128				0				11
127								12
126		NG-A5-12-15	NWTPH-Dx, total As, total Pb	0				13
125								14
124				0			Bottom of boring at 15' BGS	15
123								16
122								17
121								18
120								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-A6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	Topsoil						Grass over topsoil.	0
1 – 137		NG-A6-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown-gray, very silty, very sandy GRAVEL (GM); fine gravel	1
2 – 136				0				2
3 – 135				0			Slightly moist, brown-gray, very silty SAND (SM); poorly graded fine-to-medium sand, trace gravel	3
4 – 134				0				4
5 – 133				0			GRAVEL (GM); fine gravel	5
6 – 132				0				6
7 – 131	Hole backfilled with bentonite chips.	NG-A6-6-9	NWTPH-Dx, total As, total Pb	0				7
8 – 130				0				8
9 – 129				0				9
10 – 128				0				10
11 – 127				0				11
12 – 126				0				12
13 – 125		NG-A6-12-15	NWTPH-Dx, total As, total Pb	0			Sandy GRAVEL (GP)	13
14 – 124				0				14
15 – 123				0			Bottom of boring at 15' BGS	15
16 – 122								16
17 – 121								17
18 – 120								18
19 – 119								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-A8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 136	Topsoil						Grass over topsoil	0
1 / 135		NG-A8-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand	1
2 / 134				0				2
3 / 133				0				3
4 / 132				0			Very silty GRAVEL (GM); fine gravel	4
5 / 131				0				5
6 / 130				0				6
7 / 129	Hole backfilled with bentonite chips.	NG-A8-6-9	NWTPH-Dx, total As, total Pb	0			Very silty SAND (SM); poorly graded fine-to-medium sand	7
8 / 128				0				8
9 / 127				0				9
10 / 126				0			Very silty GRAVEL (GM)	10
11 / 125								11
12 / 124								12
13 / 123		NG-A8-12-15	NWTPH-Dx, total As, total Pb					13
14 / 122								14
15 / 121							Bottom of boring at 15' BGS	15
16 / 120								16
17 / 119								17
18 / 118								18
19 / 117								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-B2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
136	Asphalt patch						Asphalt	
135		NG-B2-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, gravelly, very silty SAND (SM); poorly sorted fine-to-medium sand	1
134				0			Moist, brown to gray, slightly silty, gravelly SAND (SP); poorly graded fine-to-medium sand	2
133				0				3
132				0				4
131				0				5
130				0				6
129	Hole backfilled with bentonite chips.	NG-B2-6-9	NWTPH-Dx, total As, total Pb	0			Very gravelly from 6' to 11'	7
128				0				8
127				0				9
126				0				10
125				0				11
124				0				12
123		NG-B2-12-15	NWTPH-Dx, total As, total Pb	0				13
122				0				14
121				0			Bottom of boring at 15' BGS	15
120								16
119								17
118								18
117								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-B3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Topsoil						Grass over topsoil	0
1 / 138		NG-B3-0-3 (dup)	NWTPH-Dx, total As, total Pb	0			Slightly moist, dark brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand	1
2 / 137				0				2
3 / 136				0			Very gravelly from 3' to 4'	3
4 / 135				0				4
5 / 134				0			Grades to slightly moist, dark brown SAND (SP); poorly graded fine-to-medium sand	5
6 / 133				0				6
7 / 132	Hole backfilled with bentonite chips.	NG-B3-6-9 (dup)	NWTPH-Dx, total As, total Pb	0				7
8 / 131				0				8
9 / 130				0			Grades to fine sand	9
10 / 129				0			Becomes grayer	10
11 / 128								11
12 / 127							Very gravelly from 12' to 13'	12
13 / 126		NG-B3-12-15 (dup)	NWTPH-Dx, total As, total Pb					13
14 / 125								14
15 / 124							Bottom of boring at 15' BGS	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-B4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Topsoil						Grass over topsoil	
137		NG-B4-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, silty, very sandy GRAVEL (GM); subangular to sub-rounded fine gravel	1
136				0				2
135				0				3
134				0				4
133				0			Gravel (GP); with landfill material: broken glass, fire brick, fibrous material, burnt debris, metal	5
132				0				6
131	Hole backfilled with bentonite chips.	NG-B4-6-9	NWTPH-Dx, total As, total Pb	0				7
130				0				8
129				0				9
128				0				10
127				0				11
126				0				12
125		NG-B4-12-15	NWTPH-Dx, total As, total Pb	0				13
124				0				14
123				0			Bottom of boring at 15' BGS	15
122								16
121								17
120								18
119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-B5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Topsoil						Grass over topsoil	
							Gravel (GP)	
1 / 136		NG-B5-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown to gray, very silty, very gravelly SAND (SM/SP); poorly graded fine-to-medium sand. Organics present at 1.5'	1
2 / 135				0				2
3 / 134				0				3
4 / 133				0				4
5 / 132				0			Grades to slightly moist, brown to gray, very silty, very sandy GRAVEL (GM); fine gravel.	5
6 / 131								6
7 / 130	Hole backfilled with bentonite chips.	NG-B5-6-9	NWTPH-Dx, total As, total Pb					7
8 / 129								8
9 / 128							very moist at 9'	9
10 / 127								10
11 / 126							Landfill material: metal, glass, ceramic, burnt debris	11
12 / 125								12
13 / 124		NG-B5-12-15	NWTPH-Dx, total As, total Pb					13
14 / 123								14
15 / 122							Bottom of boring at 15' BGS	15
16 / 121								16
17 / 120								17
18 / 119								18
19 / 118								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-B6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Topsoil						Grass over topsoil	
1							Slightly moist, brown to gray, gravelly, very silty SAND (SP/SM); poorly graded fine-to-medium sand.	1
136		NG-B6-0-3	NWTPH-Dx, total As, total Pb					
2								2
135								
3								3
134								
4								4
133								
5								5
132								
6								6
131							Grades to slightly moist, brown, gravelly, SAND (SP); poorly graded fine-to-medium sand.	
7	Hole backfilled with bentonite chips.							7
130		NG-B6-6-9	NWTPH-Dx, total As, total Pb					
8								8
129								
9								9
128								
10								10
127								
11								11
126								
12								12
125								
13							Very moist at 13'	13
124		NG-B6-12-15	NWTPH-Dx, total As, total Pb					
14							Grades to moist, brown, very silty SAND (SM); fine sand.	14
123								
15							Bottom of boring at 15' BGS	15
122								
16								16
121								
17								17
120								
18								18
119								
19								19
118								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-B7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 137	Topsoil						Grass over topsoil	0
1 / 136		NG-B7-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, silty SAND (SM/SP); trace gravel, fine-to-medium sand.	1
2 / 135				0				2
3 / 134				0			Scattered organics at 3'	3
4 / 133				0				4
5 / 132				0				5
6 / 131				0				6
7 / 130	Hole backfilled with bentonite chips.	NG-B7-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 129				0				8
9 / 128				0				9
10 / 127				0				10
11 / 126								11
12 / 125								12
13 / 124		NG-B7-12-15	NWTPH-Dx, total As, total Pb					13
14 / 123								14
15 / 122							Bottom of boring at 15' BGS.	15
16 / 121								16
17 / 120								17
18 / 119								18
19 / 118								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-B8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 135.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
135	Topsoil						Grass over topsoil	
1				0			Slightly moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
134		NG-B8-0-3	NWTPH-Dx, total As, total Pb					
2				0				2
133								
3				0				3
132								
4				0				4
131								
5				0				5
130								
6				0			Trace gravel 6' to 10'	6
129								
7	Hole backfilled with bentonite chips.			0				7
128		NG-B8-6-9	NWTPH-Dx, total As, total Pb					
8				0			Grades to very silty, fine sand	8
127								
9				0				9
126								
10				0				10
125								
11				0				11
124								
12				0				12
123								
13				0			Grades to brown, moist, very sandy SILT (ML).	13
122		NG-B8-12-15	NWTPH-Dx, total As, total Pb					
14				0				14
121								
15				0			Bottom of boring at 15' BGS.	15
120								
16								16
119								
17								17
118								
18								18
117								
19								19
116								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-B9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
1 / 136	Sand	NG-B9-0-3	NWTPH-Dx, total As, total Pb	0			Ballfield sand	
1 / 136				0			Slightly moist, brown to gray, SAND (SP); poorly graded fine-to-medium sand Scattered organics at 1'	1
2 / 135				0				2
3 / 134				0				3
4 / 133				0			Grades to fine sand	4
5 / 132				0				5
6 / 131				0				6
7 / 130	Hole backfilled with bentonite chips.	NG-B9-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 129				0				8
9 / 128				0				9
10 / 127				0				10
11 / 126				0				11
12 / 125				0				12
13 / 124		NG-B9-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 123				0			Gravel at 13.5'	14
15 / 122				0			Bottom of boring at 15' BGS.	15
16 / 121								16
17 / 120								17
18 / 119								18
19 / 118								19
117								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
136	Asphalt patch						Asphalt	
1				0			Moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand	1
135		NG-C2-0-3	NWTPH-Dx, total As, total Pb					
2				0				2
134							Moist, brown, gravelly SAND (SP); poorly graded fine-to-medium sand	
3				0				3
133								
4				0				4
132								
5				0				5
131								
6				0				6
130								
7	Hole backfilled with bentonite chips.			0				7
129		NG-C2-6-9	NWTPH-Dx, total As, total Pb					
8				0				8
128								
9				0				9
127								
10				0				10
126								
11				0				11
125								
12				0			Becomes very gravelly	12
124								
13				0				13
123		NG-C2-12-15	NWTPH-Dx, total As, total Pb					
14				0				14
122								
15				0			Bottom of boring at 15' BGS.	15
121								
16								16
120								
17								17
119								
18								18
118								
19								19
117								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Topsoil						Asphalt	
1 – 136		NG-C3-0-3	NWTPH-Dx, total As, total Pb	0			Moist, dark brown, gravelly, very silty SAND (SM; poorly graded fine-to-medium sand	1
2 – 135				0				2
3 – 134				0			Moist, brown to gray, very gravelly SAND (SP); poorly graded fine-to-medium sand	3
4 – 133				0				4
5 – 132				0				5
6 – 131				0				6
7 – 130	Hole backfilled with bentonite chips.	NG-C3-6-9	NWTPH-Dx, total As, total Pb	0				7
8 – 129				0				8
9 – 128				0				9
10 – 127				0			Silty 10.5'-11.5'	10
11 – 126				0				11
12 – 125				0				12
13 – 124		NG-C3-12-15	NWTPH-Dx, total As, total Pb	0				13
14 – 123				0				14
15 – 122				0			Bottom of boring at 15' BGS.	15
16 – 121								16
17 – 120								17
18 – 119								18
19 – 118								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil.						Grass over topsoil.	0
1 / 138							Moist, dark brown, gravelly, silty SAND (SM); abundant organics	1
1 / 137		NG-C4-0-3	NWTPH-Dx, total As, total Pb				Landfill material including glass, plastic, fire brick, wood, charcoal, white fibrous material, pea gravel, brick, and metal.	
2 / 137				0				2
3 / 136								3
4 / 135								4
5 / 134				0				5
6 / 133								6
7 / 132	Hole backfilled with bentonite chips.							7
8 / 131		NG-C4-6-9	NWTPH-Dx, total As, total Pb	0				8
9 / 130								9
10 / 129								10
11 / 128								11
12 / 127				0				12
13 / 126								13
14 / 125		NG-C4-12-15	NWTPH-Dx, total As, total Pb					14
15 / 124				0				15
16 / 123							Bottom of boring at 15' BGS.	16
17 / 122								17
18 / 121								18
19 / 120								19
119								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Topsoil.						Grass over topsoil.	
137		NG-C5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	1
136				0				2
135								3
134								4
133				0				5
132								6
131	Hole backfilled with bentonite chips.	NG-C5-6-9	NWTPH-Dx, total As, total Pb	0			Landfill material including glass, plastic, brick, metal, rope.	7
130								8
129								9
128				0				10
127								11
126				0				12
125		NG-C5-12-15	NWTPH-Dx, total As, total Pb					13
124								14
123				0			Bottom of boring at 15' BGS.	15
122								16
121								17
120								18
119								19

Sampler Type:
- ◯ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 137	Topsoil.						Grass over topsoil.	0
1 / 136		NG-C6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 135								2
3 / 134				0				3
4 / 133								4
5 / 132				0			Iron staining	5
6 / 131								6
7 / 130	Hole backfilled with bentonite chips.	NG-C6-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 129								8
9 / 128				0				9
10 / 127								10
11 / 126							Landfill material including glass, fire brick, wood, charcoal.	11
12 / 125				0				12
13 / 124		NG-C6-12-15	NWTPH-Dx, total As, total Pb					13
14 / 123				0				14
15 / 122							Bottom of boring at 15' BGS.	15
16 / 121								16
17 / 120								17
18 / 119								18
19 / 118								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C7	1 of 2

Project Name: Crownhill Elementary School
Ground Surface Elev: 135.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank/Eli / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011-3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 135	Topsoil.						Grass over topsoil.	0
1 / 135				0			Moist, dark gray to brown, slightly gravelly SAND (SW); fine to coarse sand.	1
1 / 134		NG-C7-0-3	NWTPH-Dx, total As, total Pb					
2 / 134				0			Moist, brown, very sandy SILT (ML).	2
2 / 133				0				
3 / 133				0				3
3 / 132								
4 / 132				0			Moist, brown, very gravelly SAND (SP); fine sand; rounded gravel.	4
5 / 131				0			Grades to sandy SILT (ML).	5
6 / 130				0				6
7 / 129	Hole backfilled with bentonite chips.			0			Moist, dark gray to brown, very silty SAND (SM); fine sand.	7
7 / 128		NG-C7-6-9	NWTPH-Dx, total As, total Pb					
8 / 128				0			Silt (ML).	8
9 / 127				0			Moist, brown to gray, very silty SAND (SM); fine sand.	9
10 / 126				0				10
11 / 125				0				11
12 / 124				0			Wet.	12
13 / 123				0				13
13 / 122		NG-C7-12-15	NWTPH-Dx, total As, total Pb					
14 / 122				0				14
15 / 121				0				15
16 / 120								16
17 / 119								17
18 / 118								18
19 / 117								19
116								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR/AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C7	2 of 2

Project Name: Crownhill Elementary School
Ground Surface Elev: 135.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank/Eli / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011-3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
21 / 115				0			Moist.	21
22 / 114							Landfill material including nails and charcoal, in wet, dark brown, gravelly, sandy silt matrix.	22
23 / 113				0			Moist, brown, slightly silty, sandy GRAVEL (GP-GM).	23
24 / 112								24
25 / 111				0				25
26 / 110								26
27 / 109								27
28 / 108				0				28
29 / 107								29
30 / 106				0				30
31 / 105							Moist, brown, silty, sandy GRAVEL (GM).	31
32 / 104				0				32
33 / 103							Moist, brown, slightly silty, sandy GRAVEL (GP-GM).	33
34 / 102				0				34
35 / 101							Bottom of boring at 35' BGS.	35
36 / 100								36
37 / 99								37
38 / 98								38
39 / 97								39
96								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR/AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 136	Topsoil.						Grass over topsoil.	0
1 / 135		NG-C8-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown gray SAND (SP); poorly graded fine-to-medium sand, trace silt, trace gravel.	1
2 / 134								2
3 / 133				0				3
4 / 132								4
5 / 131								5
6 / 130				0				6
7 / 129	Hole backfilled with bentonite chips.	NG-C8-6-9	NWTPH-Dx, total As, total Pb					7
8 / 128								8
9 / 127				0				9
10 / 126								10
11 / 125								11
12 / 124				0				12
13 / 123		NG-C8-12-15	NWTPH-Dx, total As, total Pb					13
14 / 122								14
15 / 121				0			Charcoal	15
16 / 120							Bottom of boring at 15' BGS.	16
17 / 119								17
18 / 118								18
19 / 117								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 137	Sand						Ball field sand	0
1 / 137		NG-C9-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray, brown SAND (SP); poorly graded fine-to-medium sand	1
2 / 136								2
3 / 135								3
4 / 134				0			Mottled iron staining 3' - 5'	4
5 / 133								5
6 / 132				0				6
7 / 131	Hole backfilled with bentonite chips.	NG-C9-6-9	NWTPH-Dx, total As, total Pb					7
8 / 130								8
9 / 129				0				9
10 / 128								10
11 / 127								11
12 / 126				0				12
13 / 125		NG-C9-12-15	NWTPH-Dx, total As, total Pb					13
14 / 124								14
15 / 123				0			Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19
118								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-C10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 137	Sand						Ballfield sand	0
1 / 136		NG-C10-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray brown SAND (SP): poorly graded fine-to-medium sand, predominantly fine	1
2 / 135				0				2
3 / 134				0				3
4 / 133				0				4
5 / 132				0				5
6 / 131				0				6
7 / 130	Hole backfilled with bentonite chips.	NG-C10-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 129				0				8
9 / 128				0				9
10 / 127				0				10
11 / 126				0				11
12 / 125				0			Iron staining.	12
13 / 124		NG-C10-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 123				0				14
15 / 122				0			Bottom of boring at 15' BGS.	15
16 / 121								16
17 / 120								17
18 / 119								18
19 / 118								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 136	Asphalt patch					Asphalt	Asphalt	0
1 / 135		NG-D1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand	1
2 / 134				0				2
3 / 133				0			Moist, brown to gray SAND (SP); poorly graded fine-to-medium sand	3
4 / 132				0				4
5 / 131				0			Very gravelly 5' to 6'	5
6 / 130				0				6
7 / 129	Hole backfilled with bentonite chips.	NG-D1-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 128				0				8
9 / 127				0				9
10 / 126				0				10
11 / 125				0				11
12 / 124				0				12
13 / 123		NG-D1-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 122				0				14
15 / 121				0			Bottom of boring at 15' BGS.	15
16 / 120								16
17 / 119								17
18 / 118								18
19 / 117								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 136	Asphalt patch					Asphalt	Asphalt	0
1 / 135		NG-D2-0-3	NWTPH-Dx, total As, total Pb	0			Moist, dark brown - gray, very gravelly, very silty SAND (SM); poorly graded fine-to-medium sand	1
2 / 134				0				2
3 / 133				0			Landfill material: fabric	3
4 / 132				0				4
5 / 131				0				5
6 / 130				0			Moist, brown, silty, very gravelly SAND (SP); poorly graded fine-to-medium sand	6
7 / 129	Hole backfilled with bentonite chips.	NG-D2-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 128				0				8
9 / 127				0				9
10 / 126				0				10
11 / 125				0				11
12 / 124				0				12
13 / 123		NG-D2-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 122				0				14
15 / 121				0			Bottom of boring at 15' BGS.	15
16 / 120								16
17 / 119								17
18 / 118								18
19 / 117								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Topsoil.						Grass over topsoil.	0
1 / 138		NG-D3-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 137								2
3 / 136				0				3
4 / 135				0			Charcoal	4
5 / 134								5
6 / 133				0.1				6
7 / 132	Hole backfilled with bentonite chips.	NG-D3-6-9	NWTPH-Dx, total As, total Pb				Wet, gray, gravelly, silty SAND (SM); abundant wood.	7
8 / 131							Petroleum-like odor 7' - 15'	8
9 / 130				35.9				9
10 / 129								10
11 / 128								11
12 / 127								12
13 / 126		NG-D3-12-15	NWTPH-Dx, total As, total Pb	41.9				13
14 / 125				4.3			Becomes moist, brown, very gravelly	14
15 / 124							Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 138	Topsoil.						Grass over topsoil.	0
1 – 137		NG-D4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, gravelly SAND (SM); numerous organics	1
2 – 136				0			Landfill material in gravelly silty sand matrix, topped with geofabric, including screws, glass, wood, charcoal, nails.	2
3 – 135				0				3
4 – 134				0				4
5 – 133				0				5
6 – 132				0				6
7 – 131	Hole backfilled with bentonite chips.	NG-D4-6-9	NWTPH-Dx, total As, total Pb	0				7
8 – 130				0				8
9 – 129				0				9
10 – 128				0				10
11 – 127				0			Moist, brown gray, sandy GRAVEL (GP).	11
12 – 126				0				12
13 – 125		NG-D4-12-15	NWTPH-Dx, total As, total Pb	0				13
14 – 124				0				14
15 – 123				0			Bottom of boring at 15' BGS.	15
16 – 122								16
17 – 121								17
18 – 120								18
19 – 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Topsoil.						Grass over topsoil.	
136		NG-D5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty, gravelly SAND (SP).	1
135				0				2
134				0				3
133				0				4
132							Landfill material in sandy silty matrix, including charcoal, glass, fire brick, nails, bricks, metal, wood, welding slag.	5
131				0				6
130	Hole backfilled with bentonite chips.	NG-D5-6-9	NWTPH-Dx, total As, total Pb					7
129				0				8
128								9
127				0				10
126								11
125								12
124		NG-D5-12-15	NWTPH-Dx, total As, total Pb					13
123				0				14
122							Bottom of boring at 15' BGS.	15
121								16
120								17
119								18
118								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil.						Grass over topsoil.	0
1 / 137		NG-D6-0-3	NWTPH-Dx, total As, total Pb				Moist, brown, slightly silty to silty, gravelly SAND (SP-SM).	1
2 / 136				0				2
3 / 135								3
4 / 134								4
5 / 133				0				5
6 / 132								6
7 / 131	Hole backfilled with bentonite chips.	NG-D6-6-9	NWTPH-Dx, total As, total Pb					7
8 / 130				0			Moist, brown with iron stain SAND (SP); poorly graded fine-to-medium sand, trace gravel.	8
9 / 129								9
10 / 128				0			Landfill material including plastic, glass, fibrous material, charcoal, fired brick, white spongy material.	10
11 / 127								11
12 / 126								12
13 / 125		NG-D6-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 124								14
15 / 123							Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 137	Topsoil.						Grass over topsoil.	0
1 / 137							Moist, brown, slightly silty to silty, gravelly SAND (SP-SM).	1
2 / 136		NG-D7-0-3	NWTPH-Dx, total As, total Pb	0				2
3 / 135								3
4 / 134				0				4
5 / 133								5
6 / 132				0				6
7 / 131	Hole backfilled with bentonite chips.						Moist, brown, slightly silty, very gravelly SAND (SP).	7
8 / 130		NG-D7-6-9	NWTPH-Dx, total As, total Pb	0				8
9 / 129							Moist, brown SAND (SP); poorly graded fine-to-medium sand; trace gravel.	9
10 / 128								10
11 / 127				0				11
12 / 126							Landfill material in sandy silt matrix, including glass, fire brick, charcoal, plastic.	12
13 / 125				0				13
14 / 124		NG-D7-12-15	NWTPH-Dx, total As, total Pb	0				14
15 / 123							Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19
118								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 134	Topsoil.						Grass over topsoil.	0
1 / 134		NG-D8-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, mottled silty SAND (SM), fine sand, and SAND (SP), fine-to-medium sand; trace gravel.	1
2 / 133				0				2
3 / 132				0				3
4 / 131								4
5 / 130				0				5
6 / 129				0			Wet, brown, trace to slightly silty SAND (SP); poorly graded fine-to-medium sand.	6
7 / 128	Hole backfilled with bentonite chips.							7
8 / 127		NG-D8-6-9	NWTPH-Dx, total As, total Pb	0				8
9 / 126							Moist, gray, silty SAND (SM); trace gravel; poorly graded fine-to-medium sand.	9
10 / 125				0				10
11 / 124								11
12 / 123				0			Moist, gray, gravelly, clayey SILT (ML).	12
13 / 122								13
14 / 121		NG-D8-12-15	NWTPH-Dx, total As, total Pb					14
15 / 120				0			Bottom of boring at 15' BGS.	15
16 / 119								16
17 / 118								17
18 / 117								18
19 / 116								19
115								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 136	Topsoil.						Grass over topsoil.	0
1 / 136							Moist, brown and iron stained, gravelly, silty CLAY (CL).	1
2 / 135		NG-D9-0-3	NWTPH-Dx, total As, total Pb	0				2
3 / 134								3
4 / 133				0				4
5 / 132							Moist, green gray, gravelly CLAY (CL).	5
6 / 131								6
7 / 130	Hole backfilled with bentonite chips.			0				7
8 / 129		NG-D9-6-9	NWTPH-Dx, total As, total Pb					8
9 / 128				0				9
10 / 127							Moist, dark brown, gravelly, silty CLAY (CL); abundant wood debris and organics.	10
11 / 126				0				11
12 / 125								12
13 / 124				0				13
14 / 123		NG-D9-12-15	NWTPH-Dx, total As, total Pb	0			Moist, olive gray, silty CLAY (CL).	14
15 / 122							Bottom of boring at 15' BGS.	15
16 / 121								16
17 / 120								17
18 / 119								18
19 / 118								19
117								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-D10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Topsoil.						Grass over topsoil.	
137		NG-D10-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown with iron stain, gravelly, silty CLAY (CL).	1
136				0				2
135								3
134				0				4
133								5
132				0				6
131	Hole backfilled with bentonite chips.	NG-D10-6-9	NWTPH-Dx, total As, total Pb	0				7
130							Become trace gravel.	8
129				0				9
128								10
127				0				11
126								12
125		NG-D10-12-15	NWTPH-Dx, total As, total Pb	0				13
124								14
123				0				15
122							Bottom of boring at 15' BGS.	16
121								17
120								18
119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Asphalt					Asphalt	Asphalt	
						Silty SAND (SM)	Silty SAND (SM)	
1 137		NG-E1-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray, slightly silty, gravelly SAND (SP); poorly graded fine-to-medium sand	1
2 136				0				2
3 135				0			Charred wood	3
4 134				0				4
5 133				0			Becomes moist, brown	5
6 132				0				6
7 131	Hole backfilled with bentonite chips.	NG-E1-6-9	NWTPH-Dx, total As, total Pb	0				7
8 130				0				8
9 129				0				9
10 128				0				10
11 127				0				11
12 126				0			Becomes trace gravel	12
13 125		NG-E1-12-15	NWTPH-Dx, total As, total Pb	0				13
14 124				0				14
15 123				0			Bottom of boring at 15' BGS.	15
16 122								16
17 121								17
18 120								18
19 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Asphalt patch						Asphalt	
1				0			Moist, dark brown, very gravelly, very silty SAND (SM); poorly graded fine-to-medium sand	1
136		NG-E2-0-3	NWTPH-Dx, total As, total Pb					
2				0				2
135								
3				0			Moist, brown to gray, slightly gravelly SAND (SP); poorly graded fine-to-medium sand	3
134								
4				0				4
133								
5				0				5
132								
6				0				6
131								
7	Hole backfilled with bentonite chips.			0				7
130		NG-E2-6-9	NWTPH-Dx, total As, total Pb					
8				0				8
129								
9				0				9
128								
10				0			Very gravelly 9'-10'	10
127								
11				0				11
126								
12				0			Moist, brown to gray, very gravelly sand (SW); well-graded fine to coarse sand	12
125								
13				0				13
124		NG-E2-12-15	NWTPH-Dx, total As, total Pb					
14				0				14
123								
15				0			Bottom of boring at 15' BGS.	15
122								
16								16
121								
17								17
120								
18								18
119								
19								19
118								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
140	Asphalt					Asphalt	Asphalt	
1		NG-E3-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, very silty, very gravelly SAND (SM/SP); poorly graded fine-to-medium sand.	1
139								
2				0				2
138								
3				0				3
137								
4				0			Grades to slightly moist, black to gray to brown, very silty, very sandy GRAVEL (GM); fine gravel	4
136								
5				0				5
135								
6				0				6
134	Hole backfilled with bentonite chips.							
7		NG-E3-6-9	NWTPH-Dx, total As, total Pb	0			Slightly moist, black to gray to brown, very silty, very gravelly SAND (SM/SP); fine-to-medium sand, fine gravel.	7
133								
8				0				8
132								
9				0				9
131								
10				0				10
130								
11				0				11
129								
12				0				12
128							Grades to SAND (SP); poorly graded fine-to-medium sand.	
13		NG-E3-12-15	NWTPH-Dx, total As, total Pb	0				13
127								
14				0				14
126								
15				0			Bottom of boring at 15' BGS.	15
125								
16								16
124								
17								17
123								
18								18
122								
19								19
121								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	Topsoil						Grass over topsoil	0
1 – 139		NG-E4-0-3	NWTPH-Dx, total As, total Pb				Slightly moist, very gravelly, very silty SAND (SM); fine sand	1
2 – 138								2
3 – 137								3
4 – 136							Landfill material in sandy gravel matrix, including fire brick, burnt wood/debris	4
5 – 135								5
6 – 134								6
7 – 133	Hole backfilled with bentonite chips.	NG-E4-6-9	NWTPH-Dx, total As, total Pb					7
8 – 132								8
9 – 131								9
10 – 130								10
11 – 129							Slightly moist, brown to gray, gravelly SAND (SW); trace silt, fine to coarse sand.	11
12 – 128								12
13 – 127		NG-E4-12-15	NWTPH-Dx, total As, total Pb					13
14 – 126								14
15 – 125							Bottom of boring at 15' BGS.	15
16 – 124								16
17 – 123								17
18 – 122								18
19 – 121								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass over topsoil	0
1 / 137		NG-E5-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 136				0				2
3 / 135				0				3
4 / 134				0			Landfill material in very gravelly, silty sand matrix, including broken glass, ceramic, burnt wood/debris, firebrick, metal nails.	4
5 / 133				0				5
6 / 132				0				6
7 / 131	Hole backfilled with bentonite chips.	NG-E5-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 130				0				8
9 / 129				0				9
10 / 128				0				10
11 / 127				0				11
12 / 126				0				12
13 / 125		NG-E5-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 124				0				14
15 / 123				0			Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 137	Topsoil						Grass over topsoil	0
1 / 137		NG-E6-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 136				0			Grades to brown SILT (ML)	2
3 / 135				0				3
4 / 134				0			Slightly moist, gray to brown, gravelly SAND (SP); fine sand, fine gravel.	4
5 / 133				0				5
6 / 132				0			Silty from 5.5' to 6'	6
7 / 131	Hole backfilled with bentonite chips.	NG-E6-6-9	NWTPH-Dx, total As, total Pb	0			Landfill material: woody debris, broken glass, fibrous material, insulation, metal, firebrick	7
8 / 130				0				8
9 / 129				0				9
10 / 128				0				10
11 / 127				0				11
12 / 126				0				12
13 / 125		NG-E6-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 124				0				14
15 / 123				0			Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19
118								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E6-HSA	1 of 5

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS):
Sampling Method: D & M
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 137	Topsoil						Grass over topsoil	
1 – 137	Concrete						Medium dense, moist, brown to black, slightly gravelly, silty SAND (SM); fine to coarse sand, with landfill material including metal, glass, crushed gravel, charcoal, wire, fabric, porcelain, concrete.	1
2 – 136								2
3 – 135								3
4 – 134								4
5 – 133		NG-E6-HSA -5-6.5	TOC		9 11 13		Gravelly, very silty.	5
6 – 132								6
7 – 131								7
8 – 130								8
9 – 129								9
10 – 128	3/8" Bentonite chips				2 3 3			10
11 – 127								11
12 – 126								12
13 – 125								13
14 – 124								14
15 – 123					7 10 11		Slightly moist, slightly gravelly, silty.	15
16 – 122								16
17 – 121								17
18 – 120								18
19 – 119								19
118								

Sampler Type:
- ○ No Recovery
- ▨ 2" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ June 16, 2011

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E6-HSA	2 of 5

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS):
Sampling Method: D & M
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
21 / 117	3/8" Bentonite chips	NG-E6-HSA -20-21	TOC		9 10 11		Gravelly.	21
22 / 116								22
23 / 115								23
24 / 114								24
25 / 113					23 50		Very dense, moist.	25
26 / 112								26
27 / 111								27
28 / 110								28
29 / 109								29
30 / 108					50		Very dense, slightly moist, brown, silty, very sandy GRAVEL (GM); fine to coarse sand.	30
31 / 107								31
32 / 106								32
33 / 105								33
34 / 104								34
35 / 103					43 50		Very dense, slightly moist, light brown, very gravelly SAND (SP); trace silt; medium sand.	35
36 / 102								36
37 / 101								37
38 / 100								38
39 / 99								39
98								

Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ June 16, 2011

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E6-HSA	3 of 5

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS):
Sampling Method: D & M
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
41 – 97		NG-E6-HSA -40-41.5	TOC		27 30 35		Dark brown.	41
42 – 96								42
43 – 95								43
44 – 94								44
45 – 93								45
46 – 92		NG-E6-HSA -46.2-46.5	NWTPH-Dx		15 18 20		Dense, slightly moist, gray brown, very silty SAND (SM); trace gravel; fine sand; petroleum-like odor. Gravelly.	46
47 – 91	3/8" Bentonite chips							47
48 – 90								48
49 – 89								49
50 – 88								50
51 – 87					14 15 17		Dense, slightly moist, gray brown, slightly silty, slightly sandy GRAVEL (GP).	51
52 – 86							Hard, slightly moist, lightl brown, clayey SILT (ML).	52
53 – 85								53
54 – 84								54
55 – 83							Wet.	55
56 – 82					18 20 24		Dense, wet, light brown to gray, silty SAND (SM); trace gravel; fine sand.	56
57 – 81							Hard, wet, light brown to gray, clayey SILT (ML).	57
58 – 80								58
59 – 79								59
78								

Sampler Type:
- ○ No Recovery
- ▨ 2" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ June 16, 2011

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E6-HSA	4 of 5

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS):
Sampling Method: D & M
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
61 – 77	3/8" Bentonite chips				14 17 18		Moist, very sandy, petroleum-like odor.	61
62 – 76								62
63 – 75								63
64 – 74								64
65 – 73							Slightly gravelly.	65
66 – 72					24 27 31			66
67 – 71								67
68 – 70								68
69 – 69								69
70 – 68		NG-E6-HSA -70-71.5	NWTPH-Dx		17 20 25		Dense, wet, black, very silty, very gravelly SAND (SM) with thin gravelly SILT (ML) lenses; fine to coarse sand; petroleum-like odor.	70
71 – 67							Hard, slightly moist, yellow brown, sandy, gravelly SILT (ML); fine to coarse sand; petroleum-like odor and liquid.	71
72 – 66								72
73 – 65								73
74 – 64								74
75 – 63							Wet, very sandy.	75
76 – 62					14 27 30		Very dense, wet, black, slightly silty, gravelly SAND (SW); fine to coarse sand; petroleum-like odor and liquid.	76
77 – 61								77
78 – 60								78
79 – 59								79
58								

Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ June 16, 2011

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E6-HSA	5 of 5

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Scott / Hollow Stem Auger
Depth to Water (ft BGS):
Sampling Method: D & M
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
81 / 57	3/8" Bentonite chips				23 50		Very dense, moist, black, yellow, and red mottled, slightly silty, very sandy GRAVEL (GW); fine to coarse sand; fine to coarse gravel; petroleum-like odor and liquid.	81
82 / 56								82
83 / 55								83
84 / 54								84
85 / 53					35 50		Sandy.	85
86 / 52								86
87 / 51								87
88 / 50								88
89 / 49								89
90 / 48					41 50		Very dense, moist, black, slightly silty SAND (SW); with yellow gray SILT (ML) pockets; fine to coarse sand; petroleum-odor and liquid.	90
91 / 47								91
92 / 46								92
93 / 45								93
94 / 44								94
95 / 43		NG-E6-HSA -95-96	NWTPH-Dx		44 50		Very gravelly.	95
96 / 42							Bottom of Boring at 96' BGS	96
97 / 41								97
98 / 40								98
99 / 39								99
38								

Sampler Type:
- No Recovery
- 2" OD Split Spoon Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: JSL
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ June 16, 2011

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 136	Topsoil						Grass over topsoil	0
1 / 136		NG-E7-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, very sandy SILT (ML)	1
2 / 135				0				2
3 / 134				0				3
4 / 133				0			Very moist, gray to brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	4
5 / 132				0			Grades to very silty SAND (SM); poorly graded fine sand Silt is green gray	5
6 / 131				0			Grades to slightly moist, gray to brown, gravelly, very silty SAND (SP-SM); poorly graded fine-to-medium sand	6
7 / 130	Hole backfilled with bentonite chips.	NG-E7-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 129				0				8
9 / 128				0			Grades to moist, gray, silty, very gravelly SAND (SP); poorly graded fine-to-medium sand, sub-rounded gravel.	9
10 / 127				0				10
11 / 126				0				11
12 / 125				0			Landfill material at 12': Broken glass, nails, burnt material, fire brick	12
13 / 124		NG-E7-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 123				0				14
15 / 122				0			Bottom of boring at 15' BGS.	15
16 / 121								16
17 / 120								17
18 / 119								18
19 / 118								19
117								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/28/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass over topsoil	0
1 / 138		NG-E8-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 137				0				2
3 / 136				0				3
4 / 135				0			Silt layer	4
5 / 134				0				5
6 / 133				0			Very moist to wet at 5.5'	6
7 / 132	Hole backfilled with bentonite chips.	NG-E8-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 131				0				8
9 / 130				0			Slightly moist, gray SAND (SP); poorly graded fine-to-medium sand interbedded with (SM).	9
10 / 129				0				10
11 / 128				0			Slightly moist, gray, very silty SAND (SM); fine sand.	11
12 / 127				0			Slightly moist, gray SAND (SP); poorly graded fine-to-medium sand.	12
13 / 126		NG-E8-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 125				0			Slightly moist, gray, very silty SAND (SM); fine sand.	14
15 / 124				0			Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19
119								

Sampler Type:
- No Recovery
- Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 134	Topsoil						Grass, topsoil	0
1 / 134		NG-E9-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, very silty SAND (SM) to very sandy SILT (ML); poorly graded fine sand, trace organics	1
2 / 133				0				2
3 / 132				0				3
4 / 131				0				4
5 / 130				0				5
6 / 129				0			Moist, gray SILT	6
7 / 128	Hole backfilled with bentonite chips.	NG-E9-6-9	NWTPH-Dx, total As, total Pb	0			Moist, gray, silty SAND (SM); trace gravel	7
8 / 127				0				8
9 / 126				0				9
10 / 125				0				10
11 / 124				0				11
12 / 123				0			Landfill material: broken glass, ceramic, charcoal	12
13 / 122		NG-E9-12-15	NWTPH-Dx, total As, total Pb	4.2				13
14 / 121				8.5 10.0				14
15 / 120				43			CLAY Bottom of boring at 15'.	15
16 / 119								16
17 / 118								17
18 / 117								18
19 / 116								19
115								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-E10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass, topsoil	0
1 / 137		NG-E10-0-3	NWTPH-Dx, total As, total Pb				Slightly moist, brown, silty SAND (SM); with organics	1
2 / 136							Gravelly	2
3 / 135							Brown CLAY (CL); scattered organics	3
4 / 134								4
5 / 133								5
6 / 132		NG-E10-6-9	NWTPH-Dx, total As, total Pb					6
7 / 131	Hole backfilled with bentonite chips.							7
8 / 130								8
9 / 129								9
10 / 128							Wet	10
11 / 127								11
12 / 126		NG-E10-12-15	NWTPH-Dx, total As, total Pb					12
13 / 125								13
14 / 124								14
15 / 123							Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-F1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Asphalt patch							0
1 / 137		NG-F1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, dark brown to dark gray, gravelly, silty SAND (SM-SW); well-graded fine to coarse sand, rounded gravel	1
2 / 136				0			Moist brown to gray sand (SP); poorly graded fine-to-medium sand, trace silt, trace gravel	2
3 / 135				0				3
4 / 134				0				4
5 / 133				0				5
6 / 132				0				6
7 / 131	Hole backfilled with bentonite chips.	NG-F1-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 130				0				8
9 / 129				0				9
10 / 128				0				10
11 / 127				0				11
12 / 126				0				12
13 / 125		NG-F1-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 124				0				14
15 / 123				0			Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Aspect CONSULTING

Boring Log

Project Number	Boring Number	Sheet
100094	NG-F2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	Asphalt patch					Asphalt	Asphalt	0
1 – 139		NG-F2-0-3	NWTPH-Dx, total As, total Pb	0			Very moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand	1
2 – 138				0				2
3 – 137				0			Moist, brown to gray, slightly silty SAND (SP); poorly graded fine-to-medium sand, trace gravel	3
4 – 136				0				4
5 – 135				0				5
6 – 134				0				6
7 – 133	Hole backfilled with bentonite chips.	NG-F2-6-9	NWTPH-Dx, total As, total Pb	0				7
8 – 132				0				8
9 – 131				0				9
10 – 130				0				10
11 – 129				0				11
12 – 128				0				12
13 – 127		NG-F2-12-15	NWTPH-Dx, total As, total Pb	0				13
14 – 126				0				14
15 – 125				0			Bottom of boring at 15' BGS.	15
16 – 124								16
17 – 123								17
18 – 122								18
19 – 121								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-F3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 141	Topsoil						Grass over topsoil	0
1 / 141		NG-F3-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, very gravelly, silty SAND (SM); poorly graded fine-to-medium sand	1
2 / 140								2
3 / 139				0			Landfill material including charcoal, metal, fire brick	3
4 / 138								4
5 / 137				0				5
6 / 136								6
7 / 135	Hole backfilled with bentonite chips.	NG-F3-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 134								8
9 / 133				0				9
10 / 132							Moist, gray - brown SAND (SP): poorly graded fine-to-medium sand, trace gravel	10
11 / 131								11
12 / 130				0				12
13 / 129								13
14 / 128		NG-F3-12-15	NWTPH-Dx, total As, total Pb					14
15 / 127				0			Bottom of boring at 15' BGS.	15
16 / 126								16
17 / 125								17
18 / 124								18
19 / 123								19
122								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-F4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
141	Topsoil.						Grass over topsoil.	
1							Moist, brown, gravelly, slightly silty to silty SAND (SP-SM).	1
140		NG-F4-0-3	NWTPH-Dx, total As, total Pb	0				
2								2
139				0				
3								3
138								
4							Landfill material in silty sand matrix, trace gravel, including brick, glass, charcoal, metallic slag-like material, wood, light fibrous material, metal, nails, copper wire.	4
137				0				
5								5
136								
6								6
135				0				
7	Hole backfilled with bentonite chips.							7
134		NG-F4-6-9	NWTPH-Dx, total As, total Pb					
8								8
133				0				
9								9
132								
10								10
131				0				
11								11
130								
12								12
129				0			Moist, brown, trace to slightly silty SAND (SW); trace gravel, fine to coarse sand.	
13								13
128		NG-F4-12-15	NWTPH-Dx, total As, total Pb					
14				0				14
127								
15							Bottom of boring at 15' BGS.	15
126								
16								16
125								
17								17
124								
18								18
123								
19								19
122								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
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_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-F5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
140	Asphalt						Asphalt	
139		NG-F5-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, sandy, gravelly SILT (ML).	1
138				0			Metal debris	2
137				0				3
136				0			Moist, brown, sandy, very silty GRAVEL (GM); fine gravel.	4
135				0			Landfill material including metal, broken glass, fabric, charcoal, fibrous material, firebrick, plastic, nails.	5
134				0				6
133	Hole backfilled with bentonite chips.	NG-F5-6-9	NWTPH-Dx, total As, total Pb	0				7
132				0				8
131				0				9
130				0			lighter-fluid-like smell	10
129								11
128								12
127		NG-F5-12-15	NWTPH-Dx, total As, total Pb					13
126								14
125							Bottom of boring at 15' BGS.	15
124								16
123								17
122								18
121								19

Sampler Type:
- No Recovery
- Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

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Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-F6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	Topsoil						Grass, topsoil	0
1 – 137		NG-F6-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray-brown, gravelly SAND (SP); poorly graded fine sand, sub-rounded gravel	1
2 – 136				0			Silty	2
3 – 135				0			Moist	3
4 – 134				0			Slightly moist, sandy, silty GRAVEL (GM)	4
5 – 133				0			Broken glass	5
6 – 132								6
7 – 131	Hole backfilled with bentonite chips.	NG-F6-6-9	NWTPH-Dx, total As, total Pb					7
8 – 130							Landfill material including glass, fire brick, white fibrous material, charred fibrous material, rope scraps, rubber, metal	8
9 – 129								9
10 – 128								10
11 – 127								11
12 – 126								12
13 – 125		NG-F6-12-15	NWTPH-Dx, total As, total Pb					13
14 – 124								14
15 – 123							Bottom of boring at 15'	15
16 – 122								16
17 – 121								17
18 – 120								18
19 – 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
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_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-F7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Topsoil						Grass over topsoil	
1 / 136		NG-F7-0-3	NWTPH-Dx, total As, total Pb				Slightly moist, brown, gravelly, very silty SAND (SM); fine sand.	1
2 / 135								2
3 / 134								3
4 / 133							Grades to moist, brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	4
5 / 132	▽ 3/25/2011						Grades to moist, very gravelly SAND (SW); fine to coarse sand.	5
6 / 131								6
7 / 130	Hole backfilled with bentonite chips.	NG-F7-6-9	NWTPH-Dx, total As, total Pb					7
8 / 129							Slightly moist, dark gray, very silty GRAVEL (GM); fine gravel	8
9 / 128							Very moist, gray, SAND (SP); poorly graded fine-to-medium sand	9
10 / 127							Slightly moist, dark gray, very silty GRAVEL (GM); fine gravel	10
11 / 126							Grades to wet, dark gray, slightly silty SAND (SP); poorly graded fine-to-medium sand	11
12 / 125							Becomes slightly moist with scattered woody debris	12
13 / 124		NG-F7-12-15	NWTPH-Dx, total As, total Pb					13
14 / 123							Color becomes brown, very gravelly	14
15 / 122							Bottom of boring at 15' BGS.	15
16 / 121								16
17 / 120								17
18 / 119								18
19 / 118								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
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_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-F8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Topsoil						Grass over topsoil	
137		NG-F8-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, very silty SAND (SM); trace gravel, fine-to-medium sand.	1
136				0				2
135				0			Silt lens from 2.5' to 3'	3
134	3/25/2011			0			Grades to moist, brown, gravelly SAND (SP); poorly graded fine-to-medium sand. Wood at 4.5'	4
133				0				5
132								6
131	Hole backfilled with bentonite chips.	NG-F8-6-9	NWTPH-Dx, total As, total Pb					7
130								8
129								9
128								10
127							Gray.	11
126								12
125		NG-F8-12-15	NWTPH-Dx, total As, total Pb				Silt lens from 13' to 14'	13
124								14
123							Bottom of boring at 15' BGS.	15
122								16
121								17
120								18
119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
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_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-F9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Topsoil						Grass over topsoil	0
1 / 138		NG-F9-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, very silty SAND (SM); trave gravel, fine-to-medium sand.	1
2 / 137				0				2
3 / 136	▽3/25/2011			0			Grades to slightly moist, brown, SAND (SP); poorly graded fine-to-medium sand.	3
4 / 135				0				4
5 / 134				0			Silt lens	5
6 / 133				0				6
7 / 132	Hole backfilled with bentonite chips.	NG-F9-6-9	NWTPH-Dx, total As, total Pb	0			Gray	7
8 / 131				0				8
9 / 130				0			Landfill material including copper wire, charcoal.	9
10 / 129				0			Slightly moist, blue gray, slightly sandy SILT (ML).	10
11 / 128								11
12 / 127							Light brown CLAY (CL).	12
13 / 126		NG-F9-12-15	NWTPH-Dx, total As, total Pb					13
14 / 125								14
15 / 124							Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-F10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Topsoil						Grass over topsoil	
137		NG-F10-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, very silty SAND (SM); scattered organics, fine sand.	1
136				0				2
135				0				3
134				0				4
133				0				5
132				0			Slightly moist, brown SILT (ML)	6
131	Hole backfilled with bentonite chips.	NG-F10-6-9	NWTPH-Dx, total As, total Pb	0			Brown CLAY (CL)	7
130							Silt lens from 8' to 8.5'	8
129								9
128								10
127							Very moist, brown, SAND (SP); poorly graded fine-to-medium sand.	11
126								12
125		NG-F10-12-15	NWTPH-Dx, total As, total Pb					13
124								14
123							Bottom of boring at 15' BGS.	15
122								16
121								17
120								18
119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-G1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Asphalt patch					Asphalt	Asphalt	0
1 / 139		NG-G1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, gravelly, very sandy SILT (ML)	1
2 / 138				0				2
3 / 137				0				3
4 / 136				0				4
5 / 135				0				5
6 / 134				0			Slightly moist, brown to gray to white SAND (SW); well-graded fine to coarse sand	6
7 / 133	Hole backfilled with bentonite chips.	NG-G1-6-9	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, gravelly, very sandy SILT (ML)	7
8 / 132				0				8
9 / 131				0				9
10 / 130				0			Moist, brown to gray, silty, very gravelly SAND (SP; poorly graded fine-to-medium sand	10
11 / 129				0				11
12 / 128				0				12
13 / 127		NG-G1-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 126				0				14
15 / 125				0			Bottom of boring at 15' BGS.	15
16 / 124								16
17 / 123								17
18 / 122								18
19 / 121								19
20 / 120								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-G2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 142	Topsoil						Grass over topsoil	0
1 / 142		NG-G2-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly , silty SAND (SM); poorly graded fine-to-medium sand	1
2 / 141								2
3 / 140								3
4 / 139				0				4
5 / 138							Moist, gray-brown SAND (SP); poorly graded fine-to-medium sand, mottled iron staining	5
6 / 137				0				6
7 / 136	Hole backfilled with bentonite chips.	NG-G2-6-9	NWTPH-Dx, total As, total Pb					7
8 / 135				0				8
9 / 134							SLightlyu moist, gray-brown, slightly gravelly, very silty SAND (SM); poorly graded fine-to-medium sand, mottled iron staining	9
10 / 133				0				10
11 / 132							Moist, brown, gray, sandy, silty GRAVEL (GM); well-graded fine to coarse sand	11
12 / 131				0				12
13 / 130								13
14 / 129		NG-G2-12-15	NWTPH-Dx, total As, total Pb	0				14
15 / 128							Bottom of boring at 15' BGS.	15
16 / 127								16
17 / 126								17
18 / 125								18
19 / 124								19
123								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-G5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	Topsoil						Grass over topsoil	0
1 – 139		NG-G5-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, sandy, very silty GRAVEL (GM); fine gravel.	1
2 – 138				0				2
3 – 137				0				3
4 – 136				0			Thick bed of fine sand 4' to 4.5'	4
5 – 135				0				5
6 – 134				0			Landfill material including firebrick, burnt debris, insulation, fibrous material, broken glass.	6
7 – 133	Hole backfilled with bentonite chips.	NG-G5-6-9	NWTPH-Dx, total As, total Pb	0				7
8 – 132				0				8
9 – 131				0				9
10 – 130				0				10
11 – 129				0				11
12 – 128				0			Gravelly with landfill material.	12
13 – 127		NG-G5-12-15	NWTPH-Dx, total As, total Pb	0				13
14 – 126				0				14
15 – 125				0			Bottom of boring at 15' BGS.	15
16 – 124								16
17 – 123								17
18 – 122								18
19 – 121								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-G6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Topsoil						Grass over topsoil	0
1 / 138		NG-G6-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, very sandy GRAVEL (GP); fine gravel.	1
2 / 137				0			Grades to sandy, very silty GRAVEL (GM); scattered organics, fine sub-rounded gravel.	2
3 / 136				0				3
4 / 135				0			Landfill material at 3.5': plastic	4
5 / 134				0			Grades to slightly moist, sandy GRAVEL (GP); trace silt, fine gravel.	5
6 / 133				0				6
7 / 132	Hole backfilled with bentonite chips.	NG-G6-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 131	▽ 3/25/2011			0				8
9 / 130				0			Grades to very silty GRAVEL (GM); scattered organics, fine sub-rounded gravel.	9
10 / 129				0				10
11 / 128								11
12 / 127								12
13 / 126		NG-G6-12-15	NWTPH-Dx, total As, total Pb					13
14 / 125								14
15 / 124							Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-G7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 138	Topsoil						Grass over topsoil	0
1 – 137		NG-G7-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, very gravelly SAND (SP); fine sand; rounded fine gravel.	1
2 – 136				0			Scattered landfill material from 2' to 10' including metal, broken glass, woody debris	2
3 – 135				0				3
4 – 134				0				4
5 – 133	▽ 3/25/2011			0				5
6 – 132				0				6
7 – 131	Hole backfilled with bentonite chips.	NG-G7-6-9	NWTPH-Dx, total As, total Pb	0			Slightly moist, dark gray, slightly sandy, very silty GRAVEL (GM); rounded fine gravel.	7
8 – 130				0				8
9 – 129				0				9
10 – 128				0			Wet, brown, slightly gravelly SAND (SP); fine-to-medium sand.	10
11 – 127				0				11
12 – 126				0				12
13 – 125		NG-G7-12-15	NWTPH-Dx, total As, total Pb	0				13
14 – 124				0				14
15 – 123				0			Slightly moist, dark gray, very silty GRAVEL (GM); fine gravel.	15
							Bottom of boring at 15' BGS.	
16 – 122								16
17 – 121								17
18 – 120								18
19 – 119								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-G8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Topsoil.						Grass over topsoil.	
137		NG-G8-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty SAND (SM); trace gravel; poorly graded fine-to-medium sand.	1
136				0				2
135				0				3
134				0			2" SAND (SP) lens; poorly graded fine-to-medium sand.	4
133							Wet, gray, slightly gravelly, very silty SAND (SM); poorly graded fine-to-medium sand, subround gravel; occasional charcoal flecks.	5
132				0				6
131	Hole backfilled with bentonite chips.	NG-G8-6-9	NWTPH-Dx, total As, total Pb	0				7
130								8
129				0				9
128							Wet, dark gray brown, slightly silty, gravelly SAND (SP-SM).	10
127				0				11
126								12
125		NG-G8-12-15	NWTPH-Dx, total As, total Pb	0				13
124								14
123							Bottom of boring at 15' BGS.	15
122								16
121								17
120								18
119								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-G9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass over topsoil	0
1 / 138		NG-G9-0-3	NWTPH-Dx, total As, total Pb				Slightly moist, brown, very silty SAND (SM); fine sand	1
2 / 137							Gravel at 2'	2
3 / 136							Moist, brown SAND (SP); poorly graded fine-to-medium sand.	3
4 / 135								4
5 / 134	▽ 3/25/2011						Becomes wet at 5'	5
6 / 133								6
7 / 132	Hole backfilled with bentonite chips.	NG-G9-6-9	NWTPH-Dx, total As, total Pb					7
8 / 131								8
9 / 130							Landfill material including glass, ceramic, wood, burnt debris	9
10 / 129							Wet, brown SAND (SP); trace gravel, fine-to-medium sand.	10
11 / 128								11
12 / 127								12
13 / 126							Grades to fine sand	13
14 / 125		NG-G9-12-15	NWTPH-Dx, total As, total Pb				Silt layer from 13.5' to 14'	14
15 / 124							Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19
119								

Sampler Type:
○ No Recovery
▌▌ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-G10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass over topsoil	0
1 / 138		NG-G10-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, slightly silty SAND (SP); scattered organics, fine-to-medium sand. Interbedded silt layers at 1' and 2'	1
2 / 137				0				2
3 / 136							Slightly moist, brown, sandy SILT (ML); fine sand.	3
4 / 135				0				4
5 / 134				0				5
6 / 133				0			Moist, brown SAND (SP); trace gravel, medium sand.	6
7 / 132	Hole backfilled with bentonite chips.	NG-G10-6-9	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown CLAY (CL); scattered organics.	7
8 / 131				0				8
9 / 130				0				9
10 / 129				0				10
11 / 128				0				11
12 / 127				0				12
13 / 126		NG-G10-12-15	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown to gray SAND (SP); poorly graded fine-to-medium sand.	13
14 / 125				0				14
15 / 124				0			Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19
119								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-H5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 141	Topsoil.						Grass over topsoil.	0
1 / 140		NG-H5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM).	1
2 / 139								2
3 / 138				0				3
4 / 137								4
5 / 136				0				5
6 / 135		NG-H5-6-9	NWTPH-Dx, total As, total Pb				Landfill material in silty sand matrix, including wood, light fibrous material, metal, charcoal, fire brick, glass.	6
7 / 134	Hole backfilled with bentonite chips.			0				7
8 / 133								8
9 / 132				0				9
10 / 131								10
11 / 130				0				11
12 / 129								12
13 / 128		NG-H5-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 127								14
15 / 126				0			Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-H6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Topsoil.						Grass over topsoil.	
137		NG-H6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM). brick shards.	1
136				0				2
135								3
134				0				4
133								5
132							Landfill material in sandy silt matrix, including glass, wood, charcoal, metal.	6
131	Hole backfilled with bentonite chips.	NG-H6-6-9	NWTPH-Dx, total As, total Pb	0				7
130								8
129				0				9
128								10
127				0				11
126								12
125		NG-H6-12-15	NWTPH-Dx, total As, total Pb					13
124							Concrete.	14
123							Bottom of boring at 15' BGS.	15
122								16
121								17
120								18
119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-H7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil.						Grass over topsoil.	0
1 / 138				0			Moist, brown, slightly silty, gravelly SAND (SP-SM).	1
2 / 137		NG-H7-0-3	NWTPH-Dx, total As, total Pb	0				2
3 / 136								3
4 / 135				0				4
5 / 134								5
6 / 133				0				6
7 / 132	Hole backfilled with bentonite chips.	NG-H7-6-9	NWTPH-Dx, total As, total Pb					7
8 / 131				0				8
9 / 130								9
10 / 129							Landfill material in sandy silt matrix, including rubber, charcoal, wood, glass, plastic; debris is sparse within matrix.	10
11 / 128				0				11
12 / 127								12
13 / 126				0				13
14 / 125		NG-H7-12-15	NWTPH-Dx, total As, total Pb					14
15 / 124				0			Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19
119								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-H8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Bark.					Bark	Bark over pea gravel.	0
1 / 137		NG-H8-0-3	NWTPH-Dx, total As, total Pb	0		Sand	Moist, brown, slightly silty, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	1
2 / 136				0		Sand		2
3 / 135						Sand		3
4 / 134						Silt	Moist, brown, gravelly, sandy SILT (ML).	4
5 / 133				0		Silt		5
6 / 132						Sand	Moist, brown, slightly silty, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	6
7 / 131	Hole backfilled with bentonite chips.	NG-H8-6-9	NWTPH-Dx, total As, total Pb	0		Sand		7
8 / 130				0		Sand		8
9 / 129						Sand		9
10 / 128				0		Sand	Wood and charcoal.	10
11 / 127						Sand	Moist, brown gray with iron stain SAND (SP); trace gravel, trace silt, fine-to-medium sand.	11
12 / 126				0		Sand		12
13 / 125						Sand		13
14 / 124		NG-H8-12-15	NWTPH-Dx, total As, total Pb	0		Sand		14
15 / 123							Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19

Sampler Type:
- No Recovery
- Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-H9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	Bark.					Bark	Bark over topsoil.	0
1 – 137		NG-H9-0-3	NWTPH-Dx, total As, total Pb	0		Topsoil	Moist, gray with iron stain, silty SAND (SM); trace gravel.	1
2 – 136						Native	Moist, brown, gravelly, silty SAND (SM).	2
3 – 135				0				3
4 – 134								4
5 – 133				0				5
6 – 132								6
7 – 131	Hole backfilled with bentonite chips.	NG-H9-6-9	NWTPH-Dx, total As, total Pb	0				7
8 – 130								8
9 – 129				0				9
10 – 128						Native	Moist, gray brown SAND (SP); trace silt, trace gravel, fine-to-medium sand.	10
11 – 127				0				11
12 – 126								12
13 – 125		NG-H9-12-15	NWTPH-Dx, total As, total Pb	0				13
14 – 124								14
15 – 123				0				15
16 – 122							Bottom of boring at 15' BGS.	16
17 – 121								17
18 – 120								18
19 – 119								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-H10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Bark.						Bark over topsoil.	
137		NG-H10-0-3	NWTPH-Dx, total As, total Pb	0			Moist to wet, gray brown, alternating gravelly SAND (SP) and silty SAND (SM) in very thin, frequent layers.	1
136				0				2
135								3
134				0				4
133								5
132				0				6
131	Hole backfilled with bentonite chips.	NG-H10-6-9	NWTPH-Dx, total As, total Pb					7
130				0				8
129							Moist, brown gray with iron stain, gravelly, silty CLAY (CL); blocky fracture.	9
128				0				10
127								11
126				0				12
125		NG-H10-12-15	NWTPH-Dx, total As, total Pb					13
124				0				14
123							Bottom of boring at 15' BGS.	15
122								16
121								17
120								18
119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-I4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 143.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 143	Topsoil.						Grass over topsoil.	0
1 / 142		NG-I4-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown, slightly silty, very gravelly SAND (SP); poorly graded fine-to-medium sand. Plastic.	1
2 / 141								2
3 / 140				0				3
4 / 139								4
5 / 138				0				5
6 / 137								6
7 / 136	Hole backfilled with bentonite chips.	NG-I4-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 135								8
9 / 134				0			Moist, gray brown, slightly gravelly SAND (SP); poorly graded fine-to-medium sand, predominantly fine.	9
10 / 133								10
11 / 132				0				11
12 / 131				0				12
13 / 130		NG-I4-12-15	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray, sandy GRAVEL (GP); trace silt.	13
14 / 129								14
15 / 128				0			Bottom of boring at 15' BGS.	15
16 / 127								16
17 / 126								17
18 / 125								18
19 / 124								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-I5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
139	Asphalt						Asphalt	
1 – 138		NG-I5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, sitly SAND (SP); poorly graded fine sand	1
2 – 137				0				2
3 – 136								3
4 – 135								4
5 – 134				0			Becomes brown-gray	5
6 – 133								6
7 – 132	Hole backfilled with bentonite chips.	NG-I5-6-9	NWTPH-Dx, total As, total Pb	0				7
8 – 131								8
9 – 130				0				9
10 – 129								10
11 – 128							Moist, brown, gray slightly silty, very sandy GRAVEL (GP)	11
12 – 127				0				12
13 – 126				0				13
14 – 125		NG-I5-12-15	NWTPH-Dx, total As, total Pb	0			Moist, gray brown, silty SAND (SM); poorly graded fine sand	14
15 – 124							Bottom of boring at 15' BGS.	15
16 – 123								16
17 – 122								17
18 – 121								18
19 – 120								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-I6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Asphalt patch.					Asphalt	Asphalt.	0
1 / 139		NG-I6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty SANd (SP-SM), trace gravel; poorly graded fine-to-medium sand, predominantly fine.	1
2 / 138								2
3 / 137				0				3
4 / 136								4
5 / 135				0				5
6 / 134								6
7 / 133	Hole backfilled with bentonite chips.	NG-I6-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 132								8
9 / 131				0				9
10 / 130								10
11 / 129				0				11
12 / 128								12
13 / 127				0			Wet, gray brown SAND (SP); poorly graded fine-to-medium sand.	13
14 / 126		NG-I6-12-15	NWTPH-Dx, total As, total Pb				Moist, gray brown, very silty SAND (SM); fine sand.	14
15 / 125				0			Bottom of boring at 15' BGS.	15
16 / 124								16
17 / 123								17
18 / 122								18
19 / 121								19
20 / 120								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-I7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 137	Asphalt.					Asphalt	Asphalt.	0
1 / 137		NG-I7-0-3	NWTPH-Dx, total As, total Pb	0			Moist to wet, brown SAND (SP); poorly graded fine-to-medium sand, predominantly fine.	1
2 / 136							Grades to brown, gravelly, silty SAND (SP); poorly graded fine-to-medium sand.	2
3 / 135				0				3
4 / 134								4
5 / 133				0				5
6 / 132								6
7 / 131	Hole backfilled with bentonite chips.	NG-I7-6-9	NWTPH-Dx, total As, total Pb	0			Asphalt debris.	7
8 / 130							Wet, brown, very sandy GRAVEL (GP); poorly graded fine-to-medium sand; angular gravel.	8
9 / 129				0			Moist, gray brown, slightly silty SAND (SP-SM); fine sand.	9
10 / 128								10
11 / 127				0				11
12 / 126				0				12
13 / 125		NG-I7-12-15	NWTPH-Dx, total As, total Pb	0			Asphalt debris.	13
14 / 124							Grades to very silty SAND (SM); fine sand.	14
15 / 123				0			Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19
118								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-I8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/25/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	Topsoil.						Grass over topsoil.	0
1 – 140		NG-I8-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown SAND (SP); poorly graded fine-to-medium sand, predominantly fine.	1
2 – 139								2
3 – 138				0				3
4 – 137								4
5 – 136				0				5
6 – 135								6
7 – 134	Hole backfilled with bentonite chips.	NG-I8-6-9	NWTPH-Dx, total As, total Pb	0			Gray brown with iron staining.	7
8 – 133								8
9 – 132				0				9
10 – 131								10
11 – 130				0				11
12 – 129							Grades to moist, gray brown, silty SAND (SM); fine sand.	12
13 – 128		NG-I8-12-15	NWTPH-Dx, total As, total Pb	0				13
14 – 127								14
15 – 126				0			Bottom of boring at 15' BGS.	15
16 – 125								16
17 – 124								17
18 – 123								18
19 – 122								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-I9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 147.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
147	Topsoil.						Grass over topsoil.	
1				0			Moist, brown and orange mottled, sandy, gravelly SILT (ML).	1
146		NG-I9-0-3	NWTPH-Dx, total As, total Pb					
2				0				2
145								
3				0				3
144								
4				0				4
143								
5				0			Grades to moist, brown SAND (SP); poorly graded fine-to-medium sand.	5
142								
6				0				6
141								
7	Hole backfilled with bentonite chips.			0				7
140		NG-I9-6-9	NWTPH-Dx, total As, total Pb					
8				0			Grades to gray.	8
139								
9				0				9
138								
10				0				10
137								
11				0			Iron stain.	11
136								
12				0				12
135								
13				0				13
134		NG-I9-12-15	NWTPH-Dx, total As, total Pb					
14				0				14
133								
15							Bottom of boring at 15' BGS.	15
132								
16								16
131								
17								17
130								
18								18
129								
19								19
128								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-J4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
140	Asphalt						Grass over topsoil	
1				0			Slightly moist, dark brown, very gravelly SAND (SW); fine to coarse sand.	1
139		NG-J4-0-3	NWTPH-Dx, total As, total Pb					
2				0			Grades to brown, gravelly, silty SAND (SP); poorly graded fine-to-medium sand.	2
138								
3				0				3
137							Landfill material including firebrick, broken glass, insulation/fibrous material, burnt debris	
4				0				4
136								
5				0				5
135								
6				0			Slightly moist, brown SILT (ML); trace organics and trace sand.	6
134								
7	Hole backfilled with bentonite chips.			0				7
133		NG-J4-6-9	NWTPH-Dx, total As, total Pb					
8				0			Slightly moist, brown CLAY (CL).	8
132								
9				0				9
131								
10				0				10
130								
11				0				11
129								
12				0			Moist, brown SAND (SP); poorly graded fine-to-medium sand.	12
128								
13				0				13
127		NG-J4-12-15	NWTPH-Dx, total As, total Pb					
14				0			Grades to fine sand	14
126								
15				0			Bottom of boring at 15' BGS.	15
125								
16								16
124								
17								17
123								
18								18
122								
19								19
121								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-J5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
141	Topsoil						Grass over topsoil	
1				0			Moist, brown to gray, very gravelly SAND (SP); trace silt, fine-to-medium sand.	1
140		NG-J5-0-3	NWTPH-Dx, total As, total Pb					
2				0				2
139								
3				0			Moist, brown gray SAND (SP).	3
138								
4				0				4
137								
5				0				5
136								
6				0				6
135								
7	Hole backfilled with bentonite chips.			0				7
134		NG-J5-6-9	NWTPH-Dx, total As, total Pb					
8				0				8
133								
9				0				9
132								
10				0				10
131								
11				0				11
130								
12				0				12
129								
13				0				13
128		NG-J5-12-15	NWTPH-Dx, total As, total Pb				Gravel bed, 13.5' to 14'	
14				0				14
127								
15				0			Bottom of boring at 15' BGS.	15
126								
16								16
125								
17								17
124								
18								18
123								
19								19
122								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-J6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Topsoil						Grass over topsoil	0
1 / 138		NG-J6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, very silty SAND (SM); trace gravel, fine-to-medium sand.	1
2 / 137				0				2
3 / 136				0			Grades to very gravelly SAND (SW); fine to coarse sand.	3
4 / 135				0			Charred organics, plastic.	4
5 / 134				0				5
6 / 133				0				6
7 / 132	Hole backfilled with bentonite chips.	NG-J6-6-9	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown CLAY (CL); trace gravel.	7
8 / 131				0				8
9 / 130				0			Moist, alternating brown and gray SAND (SP); poorly graded fine-to-medium sand.	9
10 / 129				0				10
11 / 128				0				11
12 / 127				0				12
13 / 126		NG-J6-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 125				0				14
15 / 124				0			Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-K1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 143.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
143	Topsoil						Grass over topsoil	
142		NG-K1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, very gravelly SAND (SP); poorly graded fine-to-medium sand.	1
141				0				2
140				0			Grades to very gravelly SAND (SW); fine to coarse sand.	3
139				0				4
138				0				5
137				0				6
136	Hole backfilled with bentonite chips.	NG-K1-6-9	NWTPH-Dx, total As, total Pb	0				7
135				0				8
134				0				9
133				0				10
132				0				11
131				0				12
130		NG-K1-12-15	NWTPH-Dx, total As, total Pb	0				13
129				0				14
128				0			Bottom of boring at 15' BGS.	15
127								16
126								17
125								18
124								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-K2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
141	Topsoil						Grass over topsoil	
1 / 140		NG-K2-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, gravelly SAND (Sm); poorly graded fine-to-medium sand.	1
2 / 139				0				2
3 / 138				0				3
4 / 137				0			Moist, brown SAND (SP).	4
5 / 136				0				5
6 / 135				0			Grades to moist, gray to brown. slightly silty, gravelly SAND (SW); fine to coarse sand, fine gravel.	6
7 / 134	Hole backfilled with bentonite chips.	NG-K2-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 133				0				8
9 / 132				0				9
10 / 131				0				10
11 / 130				0				11
12 / 129				0				12
13 / 128		NG-K2-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 127				0				14
15 / 126				0			Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-K3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 142	Asphalt patch.					Asphalt.		0
1 – 141		NG-K3-0-3	NWTPH-Dx, total As, total Pb	0			Moist, gray, sandy, gravelly SILT (ML).	1
2 – 140								2
3 – 139				0				3
4 – 138				0			Landfill material including brick, charcoal, glass.	4
5 – 137								5
6 – 136				0				6
7 – 135	Hole backfilled with bentonite chips.	NG-K3-6-9	NWTPH-Dx, total As, total Pb					7
8 – 134							Moist, brown, gravelly, slightly silty SAND (SP-SM).	8
9 – 133				0				9
10 – 132				0			Landfill material including charcoal, glass.	10
11 – 131								11
12 – 130							Moist, brown, gravelly, silty SAND (SM).	12
13 – 129		NG-K3-12-15	NWTPH-Dx, total As, total Pb	0			Abundant wood at 13'	13
14 – 128				0			Gray brown.	14
15 – 127							Bottom of boring at 15' BGS.	15
16 – 126								16
17 – 125								17
18 – 124								18
19 – 123								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-K4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 142	Topsoil						Grass over topsoil	0
1 / 142		NG-K4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, very gravelly SAND (SW); fine to coarse sand.	1
2 / 141				0				2
3 / 140				0				3
4 / 139				0				4
5 / 138				0				5
6 / 137				0				6
7 / 136	Hole backfilled with bentonite chips.	NG-K4-6-9	NWTPH-Dx, total As, total Pb	0			Landfill material including metal screws, charcoal, fibrous material, broken glass.	7
8 / 135				0				8
9 / 134				0				9
10 / 133				0				10
11 / 132				0				11
12 / 131				0				12
13 / 130		NG-K4-12-15	NWTPH-Dx, total As, total Pb	0			Abundant wood at 13'	13
14 / 129				0				14
15 / 128				0			Bottom of boring at 15' BGS.	15
16 / 127								16
17 / 126								17
18 / 125								18
19 / 124								19
123								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-K5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 141	Topsoil						Grass over topsoil	0
1 / 140		NG-K5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, slightly silty, very gravelly SAND (SP); poorly graded fine-to-medium sand	1
2 / 139				0				2
3 / 138				0			Scattered organics at 3'	3
4 / 137				0				4
5 / 136				0				5
6 / 135				0			Charcoal from 6' to 6.5' and from 7' to 7.5'	6
7 / 134	Hole backfilled with bentonite chips.	NG-K5-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 133				0				8
9 / 132				0				9
10 / 131				0				10
11 / 130				0				11
12 / 129				0				12
13 / 128		NG-K5-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 127				0				14
15 / 126				0			Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-L1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
142	Topsoil.						Grass over topsoil.	
141		NG-L1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, very gravelly SAND (SM).	1
140				0				2
139								3
138								4
137				0				5
136							Slightly moist, gray brown, slightly silty, sandy GRAVEL (GP).	6
135	Hole backfilled with bentonite chips.	NG-L1-6-9	NWTPH-Dx, total As, total Pb	0				7
134								8
133				0				9
132								10
131								11
130				0				12
129		NG-L1-12-15	NWTPH-Dx, total As, total Pb					13
128								14
127				0			Bottom of boring at 15' BGS.	15
126								16
125								17
124								18
123								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-L2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
141	Topsoil.						Grass over topsoil.	
1				0			Moist, brown, very gravelly SAND (SW); fine to coarse sand.	1
140		NG-L2-0-3	NWTPH-Dx, total As, total Pb					
2								2
139				0				
3								3
138								
4								4
137								
5				0				5
136								
6								6
135								
7	Hole backfilled with bentonite chips.			0				7
134		NG-L2-6-9	NWTPH-Dx, total As, total Pb					
8								8
133								
9								9
132								
10				0				10
131								
11								11
130								
12								12
129							Moist, brown, very gravelly SAND (SP); poorly graded fine-to-medium sand.	
13				0				13
128		NG-L2-12-15	NWTPH-Dx, total As, total Pb					
14								14
127								
15							Bottom of boring at 15' BGS.	15
126								
16								16
125								
17								17
124								
18								18
123								
19								19
122								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-L3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
142	Topsoil.						Grass over topsoil.	
141		NG-L3-0-3 (dup)	NWTPH-Dx, total As, total Pb	0			Moist, brown gray SAND (SP); trace gravel; poorly graded fine-to-medium sand.	1
140				0				2
139				0				3
138				0				4
137				0				5
136				0				6
135	Hole backfilled with bentonite chips.	NG-L3-6-9	NWTPH-Dx, total As, total Pb	0				7
134				0				8
133				0				9
132				0			Slightly moist, gray, sandy GRAVEL (GP).	10
131				0				11
130				0				12
129		NG-L3-12-15	NWTPH-Dx, total As, total Pb	0			Moist, brown gray SAND (SP).	13
128				0				14
127							Bottom of boring at 15' BGS.	15
126								16
125								17
124								18
123								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-L4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 143.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
143	Topsoil.						Grass over topsoil.	
142		NG-L4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	1
141				0				2
140				0			Moist, brown SAND (SP); poorly graded fine-to-medium sand.	3
139				0			Moist, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	4
138				0				5
137				0			Moist, brown SAND (SP); poorly graded fine-to-medium sand.	6
136	Hole backfilled with bentonite chips.	NG-L4-6-9	NWTPH-Dx, total As, total Pb	0			Moist, gray brown, slightly silty, sandy GRAVEL (GP).	7
135				0				8
134				0				9
133				0				10
132				0				11
131				0				12
130		NG-L4-12-15	NWTPH-Dx, total As, total Pb	0				13
129				0				14
128							Bottom of boring at 15' BGS.	15
127								16
126								17
125								18
124								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-L5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
142	Topsoil.						Grass over topsoil.	
141		NG-L5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM).	1
140				0				2
139								3
138								4
137				0			Moist, brown, sandy GRAVEL (GP); trace silt.	5
136								6
135	Hole backfilled with bentonite chips.	NG-L5-6-9	NWTPH-Dx, total As, total Pb					7
134				0			Moist, brown gray SAND (SP); poorly graded fine-to-medium sand.	8
133								9
132							Moist, brown gray, sandy GRAVEL (GP); trace silt.	10
131				0				11
130								12
129		NG-L5-12-15	NWTPH-Dx, total As, total Pb	0			Moist, brown gray SAND (SP); trace gravel, fine-to-medium sand.	13
128								14
127							Bottom of boring at 15' BGS.	15
126								16
125								17
124								18
123								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-M1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 153.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
153	Topsoil.						Grass over topsoil.	
152		NG-M1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	1
151				0				2
150								3
149				0				4
148								5
147								6
146	Hole backfilled with bentonite chips.	NG-M1-6-9	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly gravelly, very sandy SILT (ML); poorly graded fine-to-medium sand.	7
145							Moist, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	8
144				0				9
143								10
142				0				11
141								12
140		NG-M1-12-15	NWTPH-Dx, total As, total Pb	0				13
139								14
138				0			Moist to wet, gray brown SAND (SP); poorly graded fine-to-medium sand.	15
137							Bottom of boring at 15' BGS.	16
136								17
135								18
134								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-M3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 145.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
145	Asphalt						Asphalt	
144		NG-M3-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, very gravelly SAND (SP); poorly graded fine-to-medium sand.	1
143				0				2
142				0				3
141				0				4
140				0				5
139				0			Grades to moist, brown, gravelly, very silty SAND (SM); scattered organics, fine sand.	6
138	Hole backfilled with bentonite chips.	NG-M3-6-9	NWTPH-Dx, total As, total Pb	0				7
137				0				8
136				0			Grades to moist to very moist, brown to gray SAND (SP); trace gravel, fine-to-medium sand.	9
135				0				10
134				0				11
133				0			Grades to fine sand	12
132		NG-M3-12-15	NWTPH-Dx, total As, total Pb	0				13
131				0				14
130				0			Bottom of boring at 15' BGS.	15
129								16
128								17
127								18
126								19

Sampler Type:
- ◯ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-M4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 144.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 144	Asphalt					Asphalt	Asphalt	0
1 / 143		NG-M4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray SAND (SP); poorly graded fine-to-medium sand.	1
2 / 142				0				2
3 / 141				0			Becomes very gravelly SAND (SP) at 2.5'	3
4 / 140				0			Moist, dark brown SILT (ML); frequent organics.	4
5 / 139				0				5
6 / 138				0				6
7 / 137	Hole backfilled with bentonite chips.	NG-M4-6-9	NWTPH-Dx, total As, total Pb	0			Very moist, brown to gray, slightly silty SAND (SP); trace gravel, scattered organics, fine-to-medium sand.	7
8 / 136				0				8
9 / 135				0				9
10 / 134				0				10
11 / 133				0				11
12 / 132				0				12
13 / 131		NG-M4-12-15	NWTPH-Dx, total As, total Pb	0			Grades to fine sand	13
14 / 130				0				14
15 / 129				0			Bottom of boring at 15' BGS.	15
16 / 128								16
17 / 127								17
18 / 126								18
19 / 125								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	NG-M4b	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev:
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling - Dave / Hollow Stem Auger
Depth to Water (Not encountered)
Sampling Method: D & M / Hammer Weight: 300 lb jars / Hammer Drop: 30"
Start/Finish Date: 12/27/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0							Asphalt.	0
1							Medium dense, moist, brown, gravelly silty SAND (SM) FILL; fine to medium sand.	1
2		NG-M4B-1-2.5	NWTPH-Dx, total As, total Pb		11 16 10			2
3					12 12 12			3
4								4
5	Bentonite chips (NSF/ANSI 60)				6 3 3		Loose, moist, dark gray-brown, gravelly SAND (SP); trace silt.	5
6					1 1 1		Very loose, moist to wet, gray slightly gravelly, slightly silty SAND; 1" charcoal sand layer at 6' bgs.	6
7								7
8		NG-M4b-6.5-7	NWTPH-Dx, total As, total Pb		2 4 6		Loose, wet, brown and orange mottled SAND (SP); fine to medium sand; trace gravel; scattered organics.	8
9					1 5 7			9
10							Stiff, moist, gray and orange mottled CLAY (CL); trace gravel.	10
11					6 7 9			11
12		NG-M4b-12-13.5	NWTPH-Dx, total As, total Pb		12 18 20		Dense, moist, gray-brown, silty sand (SM); fine to medium sand; trace gravel.	12
13							Grades to hard, moist, gray-brown, sandy SILT (ML); trace gravel.	13
14					16 16 19			14
15							Bottom of boring at 14.5' BGS.	15
16								16
17								17
18								18
19								19

Sampler Type:
- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	OG-1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 124.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 4/1/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 124	Asphalt					Asphalt	Asphalt	0
1 / 123		OG-1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, slightly gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 122				0				2
3 / 121				0				3
4 / 120				0			Becomes dark brown; scattered organics Iron staining at 4'	4
5 / 119				0			Moist, brown, slightly silty, gravelly SAND (SP); poorly graded fine-to-medium sand	5
6 / 118				0				6
7 / 117	Hole backfilled with bentonite chips.	OG-1-6-9	NWTPH-Dx, total As, total Pb	0			Lens of brown silt from 7.5' to 8'	7
8 / 116				0				8
9 / 115				0				9
10 / 114				0				10
11 / 113				0				11
12 / 112				0				12
13 / 111		OG-1-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 110				0				14
15 / 109				0			Bottom of boring at 15' BGS.	15
16 / 108								16
17 / 107								17
18 / 106								18
19 / 105								19

Sampler Type:
- ◯ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	OG-2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 4/1/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
134	Topsoil.						Grass over topsoil.	
133		OG-2-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty to silty, gravelly SAND (SP-SM).	1
132								2
131				0				3
130							Slightly moist, gray, very sandy GRAVEL (GP).	4
129								5
128				0				6
127	Hole backfilled with bentonite chips.	OG-2-6-9	NWTPH-Dx, total As, total Pb	0				7
126								8
125								9
124				0				10
123								11
122				0			Moist, gray brown, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	12
121		OG-2-12-15	NWTPH-Dx, total As, total Pb	0				13
120								14
119							Bottom of boring at 15' BGS.	15
118								16
117								17
116								18
115								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	OG-3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 124.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 4/1/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
124	Asphalt					Asphalt	Asphalt	
1		OG-3-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
123								
2				0				2
122							Moist, brown to gray, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	
3				0				3
121								
4				0				4
120								
5				0				5
119								
6				0			Silty from 6' to 7'	6
118	Hole backfilled with bentonite chips.							
7		OG-3-6-9	NWTPH-Dx, total As, total Pb	0				7
117								
8				0			Iron staining at 8'	8
116								
9				0				9
115								
10				0			Becomes moist, brown to gray SAND (SP); poorly graded fine-to-medium sand	10
114								
11				0				11
113								
12				0				12
112								
13				0				13
111		OG-3-12-15	NWTPH-Dx, total As, total Pb					
14				0			Iron staining at 14'	14
110								
15				0			Bottom of boring at 15' BGS.	15
109								
16								16
108								
17								17
107								
18								18
106								
19								19
105								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	OG-5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 133.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 4/1/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
133	Topsoil.						Grass over topsoil.	
132		OG-5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty to silty, gravelly SAND (SP-SM); poorly graded fine-to-medium sand.	1
131								2
130								3
129				0				4
128								5
127								6
126	Hole backfilled with bentonite chips.	OG-5-6-9	NWTPH-Dx, total As, total Pb	0				7
125								8
124				0				9
123								10
122				0			Moist to wet, brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	11
121								12
120		OG-5-12-15	NWTPH-Dx, total As, total Pb	0			Moist to wet, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand, predominantly fine.	13
119				0				14
118							Bottom of boring at 15' BGS.	15
117								16
116								17
115								18
114								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	OG-6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 133.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 4/1/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 133	Gravel					Gravel	Gravel	0
1 / 132		OG-6-0-3 (dup)	NWTPH-Dx, total As, total Pb	0		Moist, gray brown SAND (SP); poorly graded fine-to-medium sand.		1
2 / 131								2
3 / 130				0				3
4 / 129								4
5 / 128				0				5
6 / 127								6
7 / 126	Hole backfilled with bentonite chips.	OG-6-6-9 (dup)	NWTPH-Dx, total As, total Pb	0				7
8 / 125								8
9 / 124				0				9
10 / 123								10
11 / 122				0				11
12 / 121								12
13 / 120		OG-6-12-15 (dup)	NWTPH-Dx, total As, total Pb					13
14 / 119				0				14
15 / 118							Bottom of boring at 15' BGS.	15
16 / 117								16
17 / 116								17
18 / 115								18
19 / 114								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	OG-7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 133
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 4/1/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 133	Gravel					Gravel	Gravel	0
1 – 132		OG-7-0-3 (dup)	NWTPH-Dx, total As, total Pb	0			Moist, brown and iron stained SAND (SP); poorly graded fine-to-medium sand, predominantly fine.	1
2 – 131								2
3 – 130				0				3
4 – 129								4
5 – 128				0				5
6 – 127								6
7 – 126	Hole backfilled with bentonite chips.	OG-7-6-9 (dup)	NWTPH-Dx, total As, total Pb				Wet.	7
8 – 125				0				8
9 – 124							Moist.	9
10 – 123								10
11 – 122				0				11
12 – 121							Fine to medium sand.	12
13 – 120		OG-7-12-15 (dup)	NWTPH-Dx, total As, total Pb					13
14 – 119				0				14
15 – 118							Bottom of boring at 15' BGS.	15
16 – 117								16
17 – 116								17
18 – 115								18
19 – 114								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	OG-8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 125.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 4/1/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
125	Asphalt					Asphalt	Asphalt	
125							Moist, brown, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	1
124		OG-8-0-3	NWTPH-Dx, total As, total Pb				Moist, brown, gravelly, very silty, SAND (SM); scattered organics, fine-to-medium sand.	2
123								3
122								4
121								5
120							Moist, brown to gray, slightly gravelly, SAND (SP); poorly graded fine-to-medium sand.	6
119	Hole backfilled with bentonite chips.							7
118		OG-8-6-9	NWTPH-Dx, total As, total Pb					8
117								9
116								10
115								11
114								12
113								13
112		OG-8-12-15	NWTPH-Dx, total As, total Pb					14
111							Moist, brown to gray, gravelly SAND (SW); fine to coarse sand.	15
							Bottom of boring at 15' BGS.	
110								16
109								17
108								18
107								19
106								

Sampler Type:
- No Recovery
- Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	OG-9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 124.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 4/1/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 124	Asphalt					Asphalt	Asphalt	0
1 / 123		OG-9-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, SAND (SP); poorly graded fine-to-medium sand.	1
2 / 122				0				2
3 / 121				0				3
4 / 120				0				4
5 / 119				0				5
6 / 118				0				6
7 / 117	Hole backfilled with bentonite chips.	OG-9-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 116				0				8
9 / 115				0				9
10 / 114				0				10
11 / 113				0				11
12 / 112				0				12
13 / 111		OG-9-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 110				0				14
15 / 109				0			Bottom of boring at 15' BGS.	15
16 / 108								16
17 / 107								17
18 / 106								18
19 / 105								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	OG-10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 133.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 133	Topsoil						Grass over topsoil	0
1 – 133							Moist, brown-gray SAND (SP); poorly graded fine-to-medium sand	1
2 – 132		OG-10-0-3 (dup)	NWTPH-Dx, total As, total Pb					2
3 – 131								3
4 – 130								4
5 – 129								5
6 – 128								6
7 – 127	Hole backfilled with bentonite chips.							7
8 – 126		OG-10-6-9	NWTPH-Dx, total As, total Pb					8
9 – 125								9
10 – 124								10
11 – 123								11
12 – 122								12
13 – 121		OG-10-12-15	NWTPH-Dx, total As, total Pb					13
14 – 120								14
15 – 119							Bottom of boring at 15' BGS.	15
16 – 118								16
17 – 117								17
18 – 116								18
19 – 115								19
114								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

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Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-E1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 135.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
135	Asphalt					Asphalt	Asphalt	
134		SG-E1-0-3 (dup)	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray to brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	1
133				0				2
132				0				3
131				0			Trace gravel from 4' to 11'	4
130				0				5
129				0				6
128	Hole backfilled with bentonite chips.	SG-E1-6-9 (dup)	NWTPH-Dx, total As, total Pb	0				7
127				0				8
126				0				9
125				0				10
124				0			Gravelly from 11' to 11.5'	11
123				0				12
122		SG-E1-12-15 (dup)	NWTPH-Dx, total As, total Pb	0				13
121				0				14
120				0			Bottom of boring at 15' BGS.	15
119								16
118								17
117								18
116								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-E2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 134.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 134	Gravel					Gravel	Gravel	0
1 / 133		SG-E2-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown to gray SAND (SP); poorly graded fine to medium sand, trace gravel	1
2 / 132				0				2
3 / 131				0				3
4 / 130				0				4
5 / 129				0				5
6 / 128				0				6
7 / 127	Hole backfilled with bentonite chips.	SG-E2-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 126				0				8
9 / 125				0				9
10 / 124				0				10
11 / 123				0				11
12 / 122				0				12
13 / 121		SG-E2-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 120				0				14
15 / 119				0			Bottom of boring at 15' BGS.	15
16 / 118								16
17 / 117								17
18 / 116								18
19 / 115								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-E3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 133.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
133	Topsoil					Asphalt	Asphalt	
1 – 132		SG-E3-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown to gray, slightly gravelly SAND (SP); poorly graded fine-to-medium sand	1
2 – 131				0				2
3 – 130				0				3
4 – 129				0				4
5 – 128				0				5
6 – 127				0				6
7 – 126	Hole backfilled with bentonite chips.	SG-E3-6-9	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown to gray SAND (SP); poorly graded fine-to-medium sand	7
8 – 125				0				8
9 – 124				0				9
10 – 123				0				10
11 – 122				0			Slightly moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand	11
12 – 121				0				12
13 – 120		SG-E3-12-15	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown to gray SAND (SP); poorly graded fine-to-medium sand	13
14 – 119				0				14
15 – 118				0			Bottom of boring at 15' BGS.	15
16 – 117								16
17 – 116								17
18 – 115								18
19 – 114								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-E4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 133.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 133	Topsoil.						Grass over topsoil.	0
1 / 132		SG-E4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, dark brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand; numerous organics.	1
2 / 131								2
3 / 130								3
4 / 129				0				4
5 / 128								5
6 / 127							Moist, gray brown, sandy, very gravelly SILT (ML).	6
7 / 126	Hole backfilled with bentonite chips.	SG-E4-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 125								8
9 / 124				0				9
10 / 123								10
11 / 122							Moist, gray brown, silty, very sandy GRAVEL (GP).	11
12 / 121				0				12
13 / 120		SG-E4-12-15	NWTPH-Dx, total As, total Pb					13
14 / 119				0				14
15 / 118							Bottom of boring at 15' BGS.	15
16 / 117								16
17 / 116								17
18 / 115								18
19 / 114								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-E5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 132.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 132	Topsoil.						Grass over topsoil.	0
1 / 131		SG-E5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, gravelly SAND (SM); poorly graded fine-to-medium sand.	1
2 / 130								2
3 / 129								3
4 / 128				0				4
5 / 127								5
6 / 126								6
7 / 125	Hole backfilled with bentonite chips.	SG-E5-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 124								8
9 / 123				0			Moist, brown, gravelly, very silty SAND (SM); fine sand.	9
10 / 122								10
11 / 121								11
12 / 120				0				12
13 / 119		SG-E5-12-15	NWTPH-Dx, total As, total Pb				Moist, brown gray, silty, very gravelly SAND (SM); poorly graded fine-to-medium sand.	13
14 / 118				0				14
15 / 117							Bottom of boring at 15' BGS.	15
16 / 116								16
17 / 115								17
18 / 114								18
19 / 113								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-E6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 132.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
132	Asphalt patch.						Asphalt.	
131		SG-E6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, very gravelly SAND (SM); poorly graded fine-to-medium sand.	1
130								2
129				0				3
128								4
127				0				5
126								6
125	Hole backfilled with bentonite chips.	SG-E6-6-9	NWTPH-Dx, total As, total Pb	0			Charcoal.	7
124								8
123				0				9
122								10
121				0			Moist, gray brown SAND (SP); fine-to-medium sand, predominantly fine; iron staining in thin frequent layers.	11
120								12
119		SG-E6-12-15	NWTPH-Dx, total As, total Pb	0				13
118								14
117							Bottom of boring at 15' BGS.	15
116								16
115								17
114								18
113								19

Sampler Type:
- No Recovery
- Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-F1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass over topsoil	0
1 / 137		SG-F1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray SAND (SP); poorly graded fine to medium sand, trace gravel, trace silt	1
2 / 136								2
3 / 135				0				3
4 / 134								4
5 / 133								5
6 / 132				0				6
7 / 131	Hole backfilled with bentonite chips.	SG-F1-6-9	NWTPH-Dx, total As, total Pb					7
8 / 130				0				8
9 / 129								9
10 / 128								10
11 / 127								11
12 / 126				0				12
13 / 125		SG-F1-12-15	NWTPH-Dx, total As, total Pb					13
14 / 124				0				14
15 / 123							Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-F2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
136	Topsoil						Grass over topsoil	
135		SG-F2-0-3	NWTPH-Dx, total As, total Pb	0			Moist, dark gray to brown, gravelly SAND (SW); well-graded fine to coarse sand	1
134				0			Moist, gray to brown, slightly gravelly SAND (SP); poorly graded fine to medium sand	2
133				0				3
132				0				4
131				0				5
130				0				6
129	Hole backfilled with bentonite chips.	SG-F2-6-9	NWTPH-Dx, total As, total Pb	0				7
128				0				8
127				0				9
126				0				10
125				0				11
124				0				12
123		SG-F2-12-15	NWTPH-Dx, total As, total Pb	0				13
122				0				14
121				0			Bottom of boring at 15' BGS.	15
120								16
119								17
118								18
117								19

Sampler Type:
- ◯ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-F3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
140	Topsoil.						Grass over topsoil.	
1 / 139		SG-F3-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty, gravelly SAND (SP); poorly graded fine-to-medium sand.	1
2 / 138				0				2
3 / 137				0			Asphalt debris.	3
4 / 136				0				4
5 / 135				0				5
6 / 134				0				6
7 / 133	Hole backfilled with bentonite chips.	SG-F3-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 132				0			Moist, brown, gravelly, silty SAND (SM); diamict structure.	8
9 / 131				0				9
10 / 130				0				10
11 / 129				0				11
12 / 128				0				12
13 / 127		SG-F3-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 126				0				14
15 / 125				0			Bottom of boring at 15' BGS.	15
16 / 124								16
17 / 123								17
18 / 122								18
19 / 121								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-F4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 140	Topsoil						Grass over topsoil	0
1 / 140				0			Moist, brown, sandy, silty GRAVEL (GM)	1
1 / 140		SG-F4-0-3	NWTPH-Dx, total As, total Pb				Landfill material including wood, charcoal, glass	1
2 / 139								2
3 / 138				0				3
4 / 137								4
5 / 136				0				5
6 / 135								6
7 / 134	Hole backfilled with bentonite chips.							7
7 / 134		SG-F4-6-9	NWTPH-Dx, total As, total Pb					7
8 / 133								8
9 / 132				0				9
10 / 131								10
11 / 130								11
12 / 129				0				12
13 / 128								13
13 / 128		SG-F4-12-15	NWTPH-Dx, total As, total Pb				Moist, brown, gravelly, slightly silty SAND (SP); poorly graded fine to medium sand	13
14 / 127				0				14
15 / 126							Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19
121								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-F5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 141	Topsoil						Grass over topsoil	0
							Silty, very gravelly SAND (SM)	
1 – 140		SG-F5-0-3	NWTPH-Dx, total As, total Pb				Landfill material in silty, very gravelly sand matrix, including charcoal, wood, glass	1
2 – 139				0				2
3 – 138								3
4 – 137								4
5 – 136				0				5
6 – 135								6
7 – 134	Hole backfilled with bentonite chips.	SG-F5-6-9	NWTPH-Dx, total As, total Pb					7
8 – 133				0				8
9 – 132								9
10 – 131				0				10
11 – 130								11
12 – 129								12
13 – 128		SG-F5-12-15	NWTPH-Dx, total As, total Pb					13
14 – 127				0				14
15 – 126							Bottom of boring at 15' BGS.	15
16 – 125								16
17 – 124								17
18 – 123								18
19 – 122								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-F6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Topsoil.						Grass over topsoil.	
136		SG-F6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, sandy GRAVEL (GM).	1
135							Moist, dark brown to black, silty, gravelly SAND (SM).	2
134							Moist, brown, slightly gravelly, slightly silty SAND (SP-SM).	3
133				0				4
132								5
131				0				6
130	Hole backfilled with bentonite chips.	SG-F6-6-9	NWTPH-Dx, total As, total Pb					7
129								8
128				0			Landfill debris in gravelly, silty sand matrix, including burnt wood, charcoal, glass.	9
127								10
126				0				11
125								12
124				0				13
123		SG-F6-12-15	NWTPH-Dx, total As, total Pb					14
122				0			Bottom of boring at 15' BGS.	15
121								16
120								17
119								18
118								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-G1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Asphalt patch					Asphalt	Asphalt	0
1 / 139		SG-G1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, slightly gravelly SAND (SP); poorly graded fine-to-medium sand	1
2 / 138				0				2
3 / 137				0			Bed of weill-graded fine to coarse sand	3
4 / 136				0				4
5 / 135				0				5
6 / 134				0				6
7 / 133	Hole backfilled with bentonite chips.	SG-G1-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 132				0				8
9 / 131				0				9
10 / 130				0				10
11 / 129				0				11
12 / 128				0			Silty 12'-14'	12
13 / 127		SG-G1-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 126				0				14
15 / 125				0			Bottom of boring at 15' BGS.	15
16 / 124								16
17 / 123								17
18 / 122								18
19 / 121								19
20 / 120								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-G2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
1 / 137	Topsoil						Slightly moist, gray, slightly sandy GRAVEL (GW); angular gravel	1
2 / 136		SG-G2-0-3	NWTPH-Dx, total As, total Pb				Moist, brown, slighty gravelly, silty SAND (SM); poorly graded fine-to-medium sand	2
3 / 135								3
4 / 134							Slightly moist, brown SAND (SW); well-graded fine to coarse sand	4
5 / 133								5
6 / 132							Bed coarse sand	6
7 / 131	Hole backfilled with bentonite chips.						Becomes trace silt	7
8 / 130		SG-G2-6-9	NWTPH-Dx, total As, total Pb					8
9 / 129								9
10 / 128							Slightly moist, brown, sandy SILT (ML)	10
11 / 127								11
12 / 126							Slightly moist, brown, slightly silty SAND (SW); well-graded fine to coarse sand	12
13 / 125								13
14 / 124		SG-G2-12-15	NWTPH-Dx, total As, total Pb					14
15 / 123							Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19
118								

Sampler Type:
- No Recovery
- Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-G3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 140	Bark					Bark	Bark over topsoil	0
1 / 140				0		Topsoil	Moist, brown, trace to silty, gravelly SAND (SP); poorly graded fine-to-medium sand	1
2 / 139		SG-G3-0-3	NWTPH-Dx, total As, total Pb				Charcoal	2
3 / 138				0				3
4 / 137								4
5 / 136								5
6 / 135				0			1' lens of silty, gravelly sand	6
7 / 134	Hole backfilled with bentonite chips.	SG-G3-6-9	NWTPH-Dx, total As, total Pb					7
8 / 133								8
9 / 132				0				9
10 / 131								10
11 / 130								11
12 / 129								12
13 / 128		SG-G3-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 127								14
15 / 126							Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19
121								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-G4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Topsoil						Grass over topsoil	0
1 / 139		SG-G4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty to silty, gravelly SAND (SP-SM).	1
2 / 138								2
3 / 137							Moist, brown SAND (SP); trace gravel; poorly graded fine-to-medium sand.	3
4 / 136				0				4
5 / 135								5
6 / 134								6
7 / 133	Hole backfilled with bentonite chips.	SG-G4-6-9	NWTPH-Dx, total As, total Pb	0			Charcoal.	7
8 / 132								8
9 / 131				0				9
10 / 130								10
11 / 129				0				11
12 / 128								12
13 / 127		SG-G4-12-15	NWTPH-Dx, total As, total Pb	0			Gravelly.	13
14 / 126								14
15 / 125							Bottom of boring at 15' BGS.	15
16 / 124								16
17 / 123								17
18 / 122								18
19 / 121								19
20 / 120								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-G5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
140	Topsoil						Bark over topsoil	
139		SG-G5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM).	1
138							Moist, brown, gravelly, silty SAND (SM); occasional landfill material including glass, charcoal, and wood.	2
137				0				3
136								4
135				0				5
134								6
133	Hole backfilled with bentonite chips.	SG-G5-6-9	NWTPH-Dx, total As, total Pb					7
132				0				8
131								9
130								10
129				0				11
128								12
127		SG-G5-12-15	NWTPH-Dx, total As, total Pb					13
126				0				14
125							Bottom of boring at 15' BGS.	15
124								16
123								17
122								18
121								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-G6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass over topsoil	0
1 / 138							Moist, brown, gravelly, silty SAND (SM); scattered landfill material as noted below	1
2 / 137		SG-G6-0-3	NWTPH-Dx, total As, total Pb	0				2
3 / 136								3
4 / 135				0			Charcoal.	4
5 / 134								5
6 / 133								6
7 / 132	Hole backfilled with bentonite chips.							7
8 / 131		SG-G6-6-9	NWTPH-Dx, total As, total Pb	0			Charcoal.	8
9 / 130								9
10 / 129				0			Glass.	10
11 / 128								11
12 / 127								12
13 / 126								13
14 / 125		SG-G6-12-15	NWTPH-Dx, total As, total Pb	0			Charcoal.	14
15 / 124							Charcoal.	15
							Bottom of boring at 15' BGS.	
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19
119								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-H1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 142	Topsoil						Grass over topsoil	0
1 / 141		SG-H1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, dark brown, sandy, very silty GRAVEL (GM); fine gravel.	1
2 / 140				0				2
3 / 139				0				3
4 / 138				0			Moist, dark brown gray, silty, very gravelly SAND (SW): fine to coarse sand.	4
5 / 137				0				5
6 / 136				0				6
7 / 135	Hole backfilled with bentonite chips.	SG-H1-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 134				0				8
9 / 133				0				9
10 / 132				0				10
11 / 131				0				11
12 / 130				0				12
13 / 129		SG-H1-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 128				0				14
15 / 127				0			Bottom of boring at 15' BGS.	15
16 / 126								16
17 / 125								17
18 / 124								18
19 / 123								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-H2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
139	Asphalt patch.						Asphalt.	
1 / 138		SG-H2-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, dark gray brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 137				0			Grades to moist, brown, mottled gravelly sand (SP) and silty SAND (SM); poorly graded fine-to-medium sand.	2
3 / 136				0			Grades to slightly moist, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	3
4 / 135				0				4
5 / 134				0				5
6 / 133				0			Gray brown.	6
7 / 132	Hole backfilled with bentonite chips.	SG-H2-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 131				0				8
9 / 130				0				9
10 / 129				0			Slightly moist, gray brown, very gravelly SAND (SW); fine to coarse sand.	10
11 / 128				0				11
12 / 127				0				12
13 / 126		SG-H2-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 125				0				14
15 / 124				0			Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-H3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 139	Bark.						Bark over topsoil.	0
1 – 139		SG-H3-0-3	NWTPH-Dx, total As, total Pb	1.4			Moist, brown, slightly silty, slightly gravelly SAND (SP-SM); poorly graded fine-to-medium sand. Charcoal.	1
2 – 138								2
3 – 137				0.5				3
4 – 136							Charcoal.	4
5 – 135				0				5
6 – 134							Moist, brown gray SAND (SP); trace gravel; poorly graded fine-to-medium sand.	6
7 – 133	Hole backfilled with bentonite chips.			0				7
8 – 132		SG-H3-6-9	NWTPH-Dx, total As, total Pb					8
9 – 131				0				9
10 – 130								10
11 – 129				0.3				11
12 – 128								12
13 – 127				0			Moist, brown, silty, very sandy GRAVEL (GP); diamict structure.	13
14 – 126		SG-H3-12-15	NWTPH-Dx, total As, total Pb	0.4				14
15 – 125							Bottom of boring at 15' BGS.	15
16 – 124								16
17 – 123								17
18 – 122								18
19 – 121								19
120								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-H4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
141	Bark.						Bark over topsoil.	
140		SG-H4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty, gravelly SAND (SP-SM); poorly graded fine-to-medium sand, predominantly medium.	1
139								2
138								3
137				0				4
136								5
135							Moist, brown gray, sandy GRAVEL (GP); fine-to-medium sand.	6
134	Hole backfilled with bentonite chips.	SG-H4-6-9	NWTPH-Dx, total As, total Pb	0				7
133								8
132								9
131				0				10
130								11
129				0			Very sandy.	12
128		SG-H4-12-15	NWTPH-Dx, total As, total Pb					13
127				0				14
126							Bottom of boring at 15' BGS.	15
125								16
124								17
123								18
122								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-H5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
140	Bark.						Bark over topsoil.	
139		SG-H5-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray brown, sandy GRAVEL (GP); poorly graded fine-to-medium sand.	1
138								2
137				0				3
136								4
135								5
134				0				6
133	Hole backfilled with bentonite chips.	SG-H5-6-9	NWTPH-Dx, total As, total Pb					7
132				0				8
131				0				9
130								10
129				0				11
128								12
127		SG-H5-12-15	NWTPH-Dx, total As, total Pb	0				13
126								14
125							Bottom of boring at 15' BGS.	15
124								16
123								17
122								18
121								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-H6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
139	Topsoil						Grass over topsoil	
138		SG-H6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, very gravelly SAND (SM).	1
137								2
136				0				3
135								4
134				0				5
133							Moist, brown gray, sandy GRAVEL (GP).	6
132	Hole backfilled with bentonite chips.	SG-H6-6-9	NWTPH-Dx, total As, total Pb	0				7
131								8
130								9
129				0				10
128								11
127				0				12
126		SG-H6-12-15	NWTPH-Dx, total As, total Pb					13
125								14
124				0			Bottom of boring at 15' BGS.	15
123								16
122								17
121								18
120								19

Sampler Type:
- No Recovery
- Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Aspect CONSULTING

Boring Log

Project Number	Boring Number	Sheet
100094	SG-I2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Asphalt patch.					Asphalt	Asphalt.	0
1 / 139		SG-I2-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, dark brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 138				0				2
3 / 137				0			Slightly moist, brown to gray, gravelly SAND (SP); poorly graded fine-to-medium sand.	3
4 / 136				0				4
5 / 135				0			Very gravelly.	5
6 / 134				0			Gravelly.	6
7 / 133	Hole backfilled with bentonite chips.	SG-I2-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 132				0				8
9 / 131				0				9
10 / 130				0				10
11 / 129				0				11
12 / 128				0				12
13 / 127		SG-I2-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 126				0				14
15 / 125				0			Bottom of boring at 15' BGS.	15
16 / 124								16
17 / 123								17
18 / 122								18
19 / 121								19
120								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
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Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-I3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
139	Asphalt.						Asphalt.	
138		SG-I3-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, dark brown, very gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
137				0				2
136				0			Slightly moist, gray to brown, gravelly SAND (SW); fine to coarse sand.	3
135				0				4
134				0				5
133				0				6
132	Hole backfilled with bentonite chips.	SG-I3-6-9	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray to brown, very gravelly SAND (SP).	7
131				0			Slightly gravelly.	8
130				0				9
129				0				10
128				0				11
127				0				12
126		SG-I3-12-15	NWTPH-Dx, total As, total Pb	0				13
125				0				14
124				0			Bottom of boring at 15' BGS.	15
123								16
122								17
121								18
120								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-I4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
141	Bark.						Bark over topsoil.	
140		SG-I4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	1
139								2
138								3
137				0				4
136								5
135							Moist, gray brown SAND (SP); trace gravel; poorly graded fine-to-medium sand, predominantly medium.	6
134	Hole backfilled with bentonite chips.	SG-I4-6-9	NWTPH-Dx, total As, total Pb	0				7
133								8
132				0				9
131								10
130								11
129				0				12
128		SG-I4-12-15	NWTPH-Dx, total As, total Pb	0			Moist, gray brown, sandy GRAVEL (GP).	13
127								14
126							Bottom of boring at 15' BGS.	15
125								16
124								17
123								18
122								19

Sampler Type:
No Recovery
Continuous Core

PID - Photoionization Detector (Headspace Measurement)
Static Water Level
Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-I5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 141	Topsoil						Grass over topsoil	0
1 – 140		SG-I5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty SAND (SM).	1
2 – 139								2
3 – 138				0				3
4 – 137								4
5 – 136							Moist, brown gray SAND (SP); trace gravel; fine-to-medium sand.	5
6 – 135				0				6
7 – 134	Hole backfilled with bentonite chips.							7
8 – 133		SG-I5-6-9 (dup)	NWTPH-Dx, total As, total Pb	0				8
9 – 132								9
10 – 131								10
11 – 130								11
12 – 129				0				12
13 – 128		SG-I5-12-15	NWTPH-Dx, total As, total Pb	0				13
14 – 127								14
15 – 126				0				15
16 – 125							Bottom of boring at 15' BGS.	16
17 – 124								17
18 – 123								18
19 – 122								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

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Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-I6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 140	Topsoil						Grass over topsoil	0
1 / 139		SG-I6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 138								2
3 / 137				0				3
4 / 136								4
5 / 135							Moist, gray brown SAND (SP); fine-to-medium sand. Wood.	5
6 / 134				0				6
7 / 133	Hole backfilled with bentonite chips.	SG-I6-6-9	NWTPH-Dx, total As, total Pb					7
8 / 132				0				8
9 / 131								9
10 / 130							Moist, gray brown, slightly gravelly SAND (SW); fine to coarse sand.	10
11 / 129				0				11
12 / 128								12
13 / 127		SG-I6-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 126								14
15 / 125							Bottom of boring at 15' BGS.	15
16 / 124								16
17 / 123								17
18 / 122								18
19 / 121								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-I7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Topsoil						Grass over topsoil	
137		SG-I7-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray to brown SAND (SP); trace silt; trace gravel; fine-to-medium sand.	1
136								2
135								3
134								4
133				0				5
132							Slightly moist, gray, silty SAND (SM); poorly graded fine-to-medium sand.	6
131	Hole backfilled with bentonite chips.	SG-I7-6-9	NWTPH-Dx, total As, total Pb					7
130				0			Slightly moist, light gray, gravelly SAND (SW); trace silt.	8
129							Slightly moist, brown to gray SAND (SP); trace silt; poorly graded fine-to-medium sand.	9
128							Slightly moist, gray, silty SAND (SM).	10
127							Slightly moist, brown to gray SAND (SM).	11
126				0				12
125		SG-I7-12-15	NWTPH-Dx, total As, total Pb					13
124								14
123							Bottom of boring at 15' BGS.	15
122								16
121								17
120								18
119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-I8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass over topsoil	0
1 / 137		SG-I8-0-3 (dup)	NWTPH-Dx, total As, total Pb				Moist, brown gray SAND (SP); poorly graded fine-to-medium sand.	1
2 / 136								2
3 / 135								3
4 / 134								4
5 / 133								5
6 / 132								6
7 / 131	Hole backfilled with bentonite chips.	SG-I8-6-9 (dup)	NWTPH-Dx, total As, total Pb				Roots.	7
8 / 130								8
9 / 129								9
10 / 128								10
11 / 127								11
12 / 126								12
13 / 125		SG-I8-12-15 (dup)	NWTPH-Dx, total As, total Pb					13
14 / 124								14
15 / 123							Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-I9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
138	Topsoil						Grass over topsoil	
137		SG-I9-0-3 (dup)	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly gravelly; very silty SAND (SM); poorly graded fine-to-medium sand.	1
136				0			Moist, brown gray SAND (SP); poorly graded fine-to-medium sand.	2
135				0				3
134				0				4
133				0				5
132				0				6
131	Hole backfilled with bentonite chips.	SG-I9-6-9 (dup)	NWTPH-Dx, total As, total Pb	0				7
130				0				8
129				0				9
128				0				10
127				0				11
126				0				12
125		SG-I9-12-15 (dup)	NWTPH-Dx, total As, total Pb	0				13
124				0				14
123				0			Bottom of boring at 15' BGS.	15
122								16
121								17
120								18
119								19

Sampler Type:
- ◯ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-I10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 136.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 136	Asphalt patch.					Asphalt	Asphalt.	0
1 / 135		SG-I10-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 134				0				2
3 / 133				0				3
4 / 132				0				4
5 / 131				0				5
6 / 130				0				6
7 / 129	Hole backfilled with bentonite chips.	SG-I10-6-9	NWTPH-Dx, total As, total Pb	0			Grades to moist, slightly gravelly SAND (SP); trace silt; poorly graded fine-to-medium sand.	7
8 / 128				0				8
9 / 127				0				9
10 / 126				0				10
11 / 125				0			Very gravelly.	11
12 / 124				0				12
13 / 123		SG-I10-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 122				0				14
15 / 121				0			Bottom of boring at 15' BGS.	15
16 / 120								16
17 / 119								17
18 / 118								18
19 / 117								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-J3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
139	Asphalt patch.						Asphalt.	
1 / 138		SG-J3-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, dark gray to brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 137				0				2
3 / 136				0				3
4 / 135				0				4
5 / 134				0				5
6 / 133				0				6
7 / 132	Hole backfilled with bentonite chips.	SG-J3-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 131				0			Landfill material including melted glass, fire brick, and fibrous material.	8
9 / 130				0				9
10 / 129				0			Moist, dark brown to gray, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	10
11 / 128				0				11
12 / 127				0				12
13 / 126		SG-J3-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 125				0				14
15 / 124				0			Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-J4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
139	Asphalt.						Asphalt.	
138		SG-J4-0-3	NWTPH-Dx, total As, total Pb	0			Moist, gray to brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
137				0				2
136				0				3
135				0				4
134				0				5
133				0				6
132	Hole backfilled with bentonite chips.	SG-J4-6-9	NWTPH-Dx, total As, total Pb	0				7
131				0				8
130				0				9
129				0				10
128				0			Moist, brown gray, silty, gravelly SAND (SW); fine to coarse sand.	11
127				0				12
126		SG-J4-12-15	NWTPH-Dx, total As, total Pb	0				13
125				0			Grades to Moist, brown gray SAND (SP).	14
124				0			Bottom of boring at 15' BGS.	15
123								16
122								17
121								18
120								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-J5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
142	Topsoil						Grass over topsoil	
141		SG-J5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty to silty, very gravelly SAND (SP-SM).	1
140								2
139								3
138				0			Landfill material in gravelly, silty sand matrix, including glass, fibers, charcoal, iron staining, and fabric.	4
137								5
136				0				6
135	Hole backfilled with bentonite chips.	SG-J5-6-9	NWTPH-Dx, total As, total Pb					7
134							Moist, brown gray, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	8
133								9
132								10
131								11
130								12
129		SG-J5-12-15	NWTPH-Dx, total As, total Pb					13
128								14
127							Bottom of boring at 15' BGS.	15
126								16
125								17
124								18
123								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-J7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/24/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass over topsoil	0
1 / 137		SG-J7-0-3	NWTPH-Dx, total As, total Pb	0			Very moist, red brown to black, sandy, silty GRAVEL (GM); rounded gravel.	1
2 / 136								2
3 / 135				0			Slighty moist, black, sandy GRAVEL (GP); with frequent glass and odor.	3
4 / 134				0				4
5 / 133				0				5
6 / 132								6
7 / 131	Hole backfilled with bentonite chips.	SG-J7-6-9	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty SAND (SM).	7
8 / 130								8
9 / 129				0				9
10 / 128				0				10
11 / 127				0				11
12 / 126				0			Slightly moist, brown to gray SAND (SP); trace silt; poorly graded fine-to-medium sand.	12
13 / 125		SG-J7-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 124								14
15 / 123				0			Bottom of boring at 15' BGS.	15
16 / 122								16
17 / 121								17
18 / 120								18
19 / 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-J8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Asphalt					Asphalt	Asphalt	
1				0			Moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
136		SG-J8-0-3	NWTPH-Dx, total As, total Pb					
2				0			Moist, brown SAND (SP); poorly graded fine-to-medium sand.	2
135								
3				0			Landfill material including glass, fire brick, fabric, rubber, and charcoal.	3
134								
4				0				4
133								
5				0				5
132								
6				0				6
131								
7	Hole backfilled with bentonite chips.			0				7
130		SG-J8-6-9	NWTPH-Dx, total As, total Pb					
8				0				8
129								
9				0				9
128								
10				0				10
127								
11				0			Moist, brown SAND (SP); poorly graded fine-to-medium sand.	11
126								
12				0				12
125								
13				0				13
124		SG-J8-12-15	NWTPH-Dx, total As, total Pb					
14				0				14
123								
15				0			Bottom of boring at 15' BGS.	15
122								
16								16
121								
17								17
120								
18								18
119								
19								19
118								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-J9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Asphalt					Asphalt	Asphalt	
1		SG-J9-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	1
136								
2				0				2
135								
3				0				3
134								
4				0				4
133								
5				0			Landfill material including asbestos, concrete, glass, charcoal.	5
132								
6				0				6
131								
7	Hole backfilled with bentonite chips.	SG-J9-6-9	NWTPH-Dx, total As, total Pb	0				7
130								
8				0				8
129								
9				0			Moist, brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	9
128								
10				0				10
127								
11				0			Moist, brown, very silty, very sandy GRVAEL (GM); poorly graded fine-to-medium gravel.	11
126								
12				0				12
125								
13		SG-J9-12-15	NWTPH-Dx, total As, total Pb	0				13
124								
14				0			Moist, brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	14
123								
15				0			Bottom of boring at 15' BGS.	15
122								
16								16
121								
17								17
120								
18								18
119								
19								19
118								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-J10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 135.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 135	Asphalt patch.					Asphalt	Asphalt.	0
1 / 135		SG-J10-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown to gray, gravelly SAND (SP); trace silt.	1
2 / 134				0				2
3 / 133				0				3
4 / 132				0			Moist, dark brown to brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	4
5 / 131				0				5
6 / 130				0				6
7 / 129	Hole backfilled with bentonite chips.	SG-J10-6-9	NWTPH-Dx, total As, total Pb	0			Very thin white and yellow layers.	7
8 / 128				0			Moist, brown gray SAND (SP); poorly graded fine-to-medium sand.	8
9 / 127				0				9
10 / 126				0				10
11 / 125				0			Landfill material: glass.	11
12 / 124				0			Moist, brown, slightly gravelly; very silty SAND (SM); poorly graded fine-to-medium sand.	12
13 / 123				0				13
14 / 122		SG-J10-12-15	NWTPH-Dx, total As, total Pb	0				14
15 / 121				0			Bottom of boring at 15' BGS.	15
16 / 120								16
17 / 119								17
18 / 118								18
19 / 117								19
116								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-K3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
140	Asphalt patch.						Asphalt.	
1							Moist, dark gray, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
139		SG-K3-0-3	NWTPH-Dx, total As, total Pb					
2								2
138							Moist, dark brown to dark gray, gravelly SAND (SP); poorly graded fine-to-medium sand.	
3								3
137								
4							Landfill material including, molten glass, glass shards, fibrous material, charcoal.	4
136								
5								5
135								
6								6
134								
7	Hole backfilled with bentonite chips.	SG-K3-6-9	NWTPH-Dx, total As, total Pb					7
133								
8								8
132								
9								9
131								
10								10
130								
11								11
129								
12								12
128								
13		SG-K3-12-15	NWTPH-Dx, total As, total Pb					13
127								
14								14
126								
15							Bottom of boring at 15' BGS.	15
125								
16								16
124								
17								17
123								
18								18
122								
19								19
121								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-K4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
141	Asphalt patch.						Asphalt.	
1 / 140		SG-K4-0-3	NWTPH-Dx, total As, total Pb	0			Very moist, brown, gravelly, very silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 139				0			Gray.	2
3 / 138				0				3
							Moist, blue-gray SILT (ML).	
4 / 137				0			Landfill material in gravelly sand matrix, including glass, fibrous material, metal, melted glass.	4
5 / 136				0				5
6 / 135				0				6
7 / 134	Hole backfilled with bentonite chips.	SG-K4-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 133				0			Matrix becomes very gravelly.	8
9 / 132				0				9
10 / 131				0				10
11 / 130				0				11
12 / 129				0				12
13 / 128		SG-K4-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 127				0				14
15 / 126				0			Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-K5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 142	Topsoil			0			Grass over topsoil	0
1 – 141		SG-K5-0-3	NWTPH-Dx, total As, total Pb				Moist, dark brown, silty GRAVEL (GM); occasional landfill material including glass and fire brick.	1
2 – 140				0				2
3 – 139								3
4 – 138				0				4
5 – 137								5
6 – 136							Moist, gray brown, very sandy GRAVEL (GP); fine to coarse sand.	6
7 – 135	Hole backfilled with bentonite chips.	SG-K5-6-9	NWTPH-Dx, total As, total Pb					7
8 – 134				0				8
9 – 133								9
10 – 132								10
11 – 131								11
12 – 130								12
13 – 129		SG-K5-12-15	NWTPH-Dx, total As, total Pb					13
14 – 128							Moist, gray brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	14
15 – 127							Bottom of boring at 15' BGS.	15
16 – 126								16
17 – 125								17
18 – 124								18
19 – 123								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-K6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 141	Topsoil						Grass over topsoil	0
1 / 140		SG-K6-0-3	NWTPH-Dx, total As, total Pb				Moist, brown, silty, very sandy GRAVEL (GM).	1
2 / 139								2
3 / 138								3
4 / 137								4
5 / 136								5
6 / 135								6
7 / 134	Hole backfilled with bentonite chips.	SG-K6-6-9	NWTPH-Dx, total As, total Pb					7
8 / 133								8
9 / 132							Charcoal.	9
10 / 131								10
11 / 130							Moist, brown, slightly silty, very sandy GRAVEL (GP).	11
12 / 129								12
13 / 128		SG-K6-12-15	NWTPH-Dx, total As, total Pb					13
14 / 127								14
15 / 126							Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-K7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0	Topsoil						Grass over topsoil	0
1 – 137		SG-K7-0-3	NWTPH-Dx, total As, total Pb	0			Moist to wet, brown, slightly gravelly, slightly silty SAND (SP); poorly graded fine-to-medium sand.	1
2 – 136				0			Asphalt.	2
3 – 135							Moist, brown, slightly silty to silty, gravelly SAND (SP-SM).	3
4 – 134				0				4
5 – 133								5
6 – 132								6
7 – 131	Hole backfilled with bentonite chips.	SG-K7-6-9	NWTPH-Dx, total As, total Pb	0				7
8 – 130								8
9 – 129							Landfill material including wood, orange ropey material, fabric, fire brick, wood, glass, and plastic.	9
10 – 128				0				10
11 – 127								11
12 – 126				0				12
13 – 125		SG-K7-12-15	NWTPH-Dx, total As, total Pb					13
14 – 124								14
15 – 123				0			Bottom of boring at 15' BGS.	15
16 – 122								16
17 – 121								17
18 – 120								18
19 – 119								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-K8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 138.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 138	Topsoil						Grass over topsoil	0
0.5 / 138							Moist, brown, gravelly, silty SAND (SM).	0.5
1 / 138		SG-K8-0-3	NWTPH-Dx, total As, total Pb	0			Asphalt.	1
1.5 / 137							Moist, brown, slightly silty to silty, gravelly SAND (SP-SM).	1.5
2 / 137								2
3 / 136								3
4 / 135				0				4
5 / 134								5
6 / 133								6
7 / 132	Hole backfilled with bentonite chips.	SG-K8-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 131				0				8
9 / 130								9
10 / 129								10
11 / 128								11
12 / 127				0			Wood.	12
13 / 126		SG-K8-12-15	NWTPH-Dx, total As, total Pb					13
14 / 125				0				14
15 / 124							Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19
119								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-K9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
137	Topsoil			0			Grass over topsoil	
1								1
136		SG-K9-0-3	NWTPH-Dx, total As, total Pb				Moist, brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	
2								2
135								
3				0				3
134								
4								4
133								
5								5
132				0			Asphalt.	
6								6
131								
7	Hole backfilled with bentonite chips.							7
130		SG-K9-6-9	NWTPH-Dx, total As, total Pb	0			Moist, dark brown, silty, very gravelly SAND (SM); poorly graded fine-to-medium sand.	
8								8
129							Moist, brown, sandy GRAVEL (GP); poorly graded fine-to-medium sand.	
9								9
128								
10								10
127				0				
11								11
126								
12								12
125								
13								13
124		SG-K9-12-15	NWTPH-Dx, total As, total Pb	0				
14								14
123								
15							Bottom of boring at 15' BGS.	15
122								
16								16
121								
17								17
120								
18								18
119								
19								19
118								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-K10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 137.6
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 137	Topsoil						Grass over topsoil.	0
1 / 136		SG-K10-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown SAND (SP); poorly graded fine-to-medium sand.	1
2 / 135								2
3 / 134				0			Moist, brown, slightly gravelly, silty SAND (SM).	3
4 / 133								4
5 / 132								5
6 / 131				0			Moist, brown SAND (SP); poorly graded fine-to-medium sand. Iron stain.	6
7 / 130	Hole backfilled with bentonite chips.	SG-K10-6-9	NWTPH-Dx, total As, total Pb					7
8 / 129								8
9 / 128				0				9
10 / 127				0				10
11 / 126								11
12 / 125								12
13 / 124		SG-K10-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 123								14
15 / 122							Bottom of boring at 15' BGS.	15
16 / 121								16
17 / 120								17
18 / 119								18
19 / 118								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 141	Topsoil						Grass over topsoil	0
1 / 140		SG-L1-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty, sandy GRAVEL (GP-GM).	1
2 / 139				0				2
3 / 138				0				3
4 / 137				0				4
5 / 136				0				5
6 / 135				0				6
7 / 134	Hole backfilled with bentonite chips.	SG-L1-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 133				0				8
9 / 132				0				9
10 / 131				0				10
11 / 130				0			Moist, gray brown SAND (SP); trace gravel; poorly graded fine-to-medium sand.	11
12 / 129				0				12
13 / 128		SG-L1-12-15 (dup)	NWTPH-Dx, total As, total Pb	0				13
14 / 127				0				14
15 / 126				0			Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
141	Topsoil						Grass over topsoil	
1 / 140		SG-L2-0-3	NWTPH-Dx, total As, total Pb	0			Very moist, brown to dark gray, silty, very gravelly SAND (SM); poorly graded fine-to-medium sand.	1
2 / 139				0				2
3 / 138				0				3
4 / 137				0			Becomes well-graded fine-to-coarse sand	4
5 / 136				0				5
6 / 135				0				6
7 / 134	Hole backfilled with bentonite chips.	SG-L2-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 133				0				8
9 / 132				0				9
10 / 131				0				10
11 / 130				0				11
12 / 129				0				12
13 / 128		SG-L2-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 127				0				14
15 / 126				0			Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.9
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 140	Topsoil						Grass over topsoil	0
1 / 140		SG-L3-0-3	NWTPH-Dx, total As, total Pb	0			Moist, dark brown, very gravelly, very silty SAND (SM); trace organics; poorly graded fine-to-medium sand.	1
2 / 139				0			Moist, gray to brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	2
3 / 138				0				3
4 / 137				0				4
5 / 136				0				5
6 / 135				0			Grades to moist, gray to brown, gravelly SAND (SW); fine to coarse sand.	6
7 / 134	Hole backfilled with bentonite chips.	SG-L3-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 133				0				8
9 / 132				0				9
10 / 131				0				10
11 / 130				0			Grades to moist, gray to brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	11
12 / 129				0				12
13 / 128		SG-L3-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 127				0				14
15 / 126				0			Bottom of boring at 15' BGS.	15
16 / 125								16
17 / 124								17
18 / 123								18
19 / 122								19
121								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 142
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 – 142	Topsoil						Grass over topsoil	0
1 – 141		SG-L4-0-3	NWTPH-Dx, total As, total Pb				Moist, brown, gravelly, silty SAND (SM).	1
2 – 140								2
3 – 139							Moist, brown gray, very gravelly SAND (SW); fine to coarse sand.	3
4 – 138								4
5 – 137								5
6 – 136								6
7 – 135	Hole backfilled with bentonite chips.	SG-L4-6-9	NWTPH-Dx, total As, total Pb					7
8 – 134								8
9 – 133								9
10 – 132								10
11 – 131							Grades to moist, gray to brown, very sandy GRAVEL (GP); poorly graded fine-to-medium gravel; fine to coarse sand.	11
12 – 130								12
13 – 129		SG-L4-12-15	NWTPH-Dx, total As, total Pb					13
14 – 128								14
15 – 127							Bottom of boring at 15' BGS.	15
16 – 126								16
17 – 125								17
18 – 124								18
19 – 123								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 144.4
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
144	Topsoil						Grass over topsoil	
1				0			Moist, brown gray, very gravelly SAND (SW); trace silt; fine to coarse sand.	1
143		SG-L5-0-3	NWTPH-Dx, total As, total Pb					
2				0				2
142								
3				0				3
141								
4				0				4
140								
5				0				5
139								
6				0				6
138								
7	Hole backfilled with bentonite chips.			0				7
137		SG-L5-6-9	NWTPH-Dx, total As, total Pb					
8				0				8
136								
9				0				9
135								
10				0				10
134								
11				0				11
133								
12				0				12
132								
13				0				13
131		SG-L5-12-15	NWTPH-Dx, total As, total Pb					
14				0				14
130								
15				0			Bottom of boring at 15' BGS.	15
129								
16								16
128								
17								17
127								
18								18
126								
19								19
125								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 145.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Frank / Direct Push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/30/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
145	Topsoil						Grass over topsoil	
144		SG-L6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, very gravelly SAND (SM); poorly graded fine-to-medium sand.	1
143				0				2
142				0				3
141				0			Moist, brown, very gravelly SAND (SW); fine to coarse sand.	4
140				0				5
139				0			Charcoal.	6
138	Hole backfilled with bentonite chips.	SG-L6-6-9	NWTPH-Dx, total As, total Pb	0				7
137				0				8
136				0				9
135				0				10
134				0			Gray.	11
133				0				12
132		SG-L6-12-15	NWTPH-Dx, total As, total Pb	0				13
131				0				14
130				0			Bottom of boring at 15' BGS.	15
129								16
128								17
127								18
126								19

Sampler Type:
- ◯ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: MAR
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 141.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
141	Topsoil						Grass over topsoil	
1							Moist, brown, slightly gravelly, slightly silty SAND (SP-SM).	1
140		SG-L7-0-3	NWTPH-Dx, total As, total Pb	0				
2							Moist, brown, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	2
139								
3				0				3
138								
4								4
137				0				
5							Slightly moist, brown gray, sandy GRAVEL (GP); poorly graded fine-to-medium sand.	5
136								
6				0				6
135								
7	Hole backfilled with bentonite chips.							7
134		SG-L7-6-9	NWTPH-Dx, total As, total Pb					
8								8
133				0				
9								9
132								
10								10
131								
11								11
130								
12								12
129								
13								13
128		SG-L7-12-15	NWTPH-Dx, total As, total Pb	0				
14								14
127								
15							Bottom of boring at 15' BGS.	15
126								
16								16
125								
17								17
124								
18								18
123								
19								19
122								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 140.2
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 140	Topsoil						Grass over topsoil	0
1 / 139		SG-L8-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown with iron stain, gravelly SAND (SP); poorly graded fine-to-medium sand.	1
2 / 138				0				2
3 / 137							Slightly moist, gray, sandy GRAVEL (GP); poorly graded fine-to-medium sand. Charcoal.	3
4 / 136				0				4
5 / 135								5
6 / 134				0				6
7 / 133	Hole backfilled with bentonite chips.	SG-L8-6-9	NWTPH-Dx, total As, total Pb					7
8 / 132				0				8
9 / 131								9
10 / 130				0				10
11 / 129								11
12 / 128				0				12
13 / 127		SG-L8-12-15	NWTPH-Dx, total As, total Pb					13
14 / 126				0				14
15 / 125							Bottom of boring at 15' BGS.	15
16 / 124								16
17 / 123								17
18 / 122								18
19 / 121								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 139.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 139	Topsoil						Topsoil.	0
1 / 138		SG-L9-0-3	NWTPH-Dx, total As, total Pb	0			Moist, orange brown, slightly silty to silty, gravelly SAND (SP-SM); poorly graded fine-to-medium sand.	1
2 / 137								2
3 / 136				0				3
4 / 135								4
5 / 134				0				5
6 / 133							Moist, brown SAND (SP); trace gravel; poorly graded fine-to-medium sand.	6
7 / 132	Hole backfilled with bentonite chips.	SG-L9-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 131								8
9 / 130				0				9
10 / 129				0				10
11 / 128								11
12 / 127								12
13 / 126		SG-L9-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 125								14
15 / 124							Bottom of boring at 15' BGS.	15
16 / 123								16
17 / 122								17
18 / 121								18
19 / 120								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-L10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 146.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/31/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 146	Topsoil						Topsoil.	0
1 / 146							Moist, brown, gravelly, silty SAND (SM); poorly graded fine-to-medium sand.	1
2 / 145		SG-L10-0-3	NWTPH-Dx, total As, total Pb	0				2
3 / 144								3
4 / 143								4
5 / 142							Moist, red brown, slightly silty, slightly gravelly SAND (SP); poorly graded fine-to-medium sand.	5
6 / 141				0				6
7 / 140	Hole backfilled with bentonite chips.	SG-L10-6-9	NWTPH-Dx, total As, total Pb					7
8 / 139							Moist, gray brown, gravelly SAND (SP); trace silt; poorly graded fine-to-medium sand.	8
9 / 138				0				9
10 / 137								10
11 / 136				0			Slightly moist, gray, sandy GRAVEL (GP); poorly graded fine-to-medium sand.	11
12 / 135							Moist, brown gray SAND (SP); poorly graded fine-to-medium sand.	12
13 / 134								13
14 / 133		SG-L10-12-15	NWTPH-Dx, total As, total Pb	0				14
15 / 132							Bottom of boring at 15' BGS.	15
16 / 131								16
17 / 130								17
18 / 129								18
19 / 128								19
127								

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M1	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 160.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
160	Topsoil						Grass over topsoil	
159		SG-M1-0-3	NWTPH-Dx, total As, total Pb	0			Moist brown, slightly gravelly SAND (SP); poorly graded fine-to-medium sand, predominantly medium.	1
158								2
157				0				3
156								4
155				0				5
154								6
153	Hole backfilled with bentonite chips.	SG-M1-6-9	NWTPH-Dx, total As, total Pb	0			Moist, gray, sandy GRAVEL (GP); medium sand.	7
152								8
151				0				9
150								10
149				0				11
148								12
147		SG-M1-12-15	NWTPH-Dx, total As, total Pb					13
146				0				14
145							Bottom of boring at 15' BGS.	15
144								16
143								17
142								18
141								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M2	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 162.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
162	Topsoil						Grass over topsoil	
161		SG-M2-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, brown gray, sandy GRAVEL (GP).	1
160								2
159				0				3
158								4
157				0				5
156								6
155	Hole backfilled with bentonite chips.	SG-M2-6-9	NWTPH-Dx, total As, total Pb	0				7
154								8
153				0				9
152								10
151				0			Slightly moist, brown gray, silty, sandy GRAVEL (GM).	11
150								12
149		SG-M2-12-15	NWTPH-Dx, total As, total Pb	0				13
148								14
147				0			Bottom of boring at 15' BGS.	15
146								16
145								17
144								18
143								19

Sampler Type:
- ◯ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M3	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 162.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
162	Topsoil						Grass over topsoil	
1 / 161		SG-M3-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown gray, sandy GRAVEL (GP).	1
2 / 160				0				2
3 / 159				0				3
4 / 158				0				4
5 / 157				0				5
6 / 156				0				6
7 / 155	Hole backfilled with bentonite chips.	SG-M3-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 154				0			Very sandy.	8
9 / 153				0				9
10 / 152				0				10
11 / 151				0			Sandy.	11
12 / 150				0				12
13 / 149		SG-M3-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 148				0				14
15 / 147				0			Bottom of boring at 15' BGS.	15
16 / 146								16
17 / 145								17
18 / 144								18
19 / 143								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M4	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 160.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 160	Topsoil						Grass over topsoil	0
1 / 160							Moist, brown, gravelly SAND (SP); poorly graded fine-to-medium sand, predominantly fine.	1
2 / 159		SG-M4-0-3	NWTPH-Dx, total As, total Pb	0				2
3 / 158								3
4 / 157				0				4
5 / 156								5
6 / 155				0				6
7 / 154	Hole backfilled with bentonite chips.	SG-M4-6-9	NWTPH-Dx, total As, total Pb				Very gravelly.	7
8 / 153				0				8
9 / 152				0				9
10 / 151								10
11 / 150				0				11
12 / 149							Moist, gray brown, sandy GRAVEL (GP).	12
13 / 148				0				13
14 / 147		SG-M4-12-15	NWTPH-Dx, total As, total Pb					14
15 / 146				0			Bottom of boring at 15' BGS.	15
16 / 145								16
17 / 144								17
18 / 143								18
19 / 142								19
141								

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M5	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 161.7
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 161	Topsoil						Grass over topsoil	0
1 / 160		SG-M5-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, very gravelly SAND (SM).	1
2 / 159							Charcoal.	2
3 / 158				0				3
4 / 157								4
5 / 156				0				5
6 / 155								6
7 / 154	Hole backfilled with bentonite chips.	SG-M5-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 153								8
9 / 152				0			Charcoal.	9
10 / 151							Moist, brown, slightly silty, sandy GRAVEL (GP-GM).	10
11 / 150				0				11
12 / 149								12
13 / 148		SG-M5-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 147								14
15 / 146							Bottom of boring at 15' BGS.	15
16 / 145								16
17 / 144								17
18 / 143								18
19 / 142								19

Sampler Type:
- ○ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M6	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 159.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
159	Topsoil						Grass over topsoil	
158		SG-M6-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly, sandy SILT to silty SAND (ML-SM).	1
157				0				2
156								3
155				0				4
154				0				5
153								6
152	Hole backfilled with bentonite chips.	SG-M6-6-9	NWTPH-Dx, total As, total Pb	0				7
151								8
150				0				9
149								10
148							Moist, brown gray SAND (SP); trace gravel; poorly graded fine-to-medium sand.	11
147				0				12
146		SG-M6-12-15	NWTPH-Dx, total As, total Pb					13
145				0				14
144							Bottom of boring at 15' BGS.	15
143								16
142								17
141								18
140								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M7	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 158.5
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 158	Topsoil						Grass over topsoil	0
1 / 157		SG-M7-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, gravelly SAND (SW); fine to coarse sand.	1
2 / 156				0				2
3 / 155								3
4 / 154								4
5 / 153				0				5
6 / 152							Moist, gray brown, gravelly SAND (SP); poorly graded fine-to-medium sand.	6
7 / 151	Hole backfilled with bentonite chips.	SG-M7-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 150							Moist, gray brown SAND (SP); poorly graded fine-to-medium sand.	8
9 / 149				0				9
10 / 148								10
11 / 147								11
12 / 146								12
13 / 145		SG-M7-12-15	NWTPH-Dx, total As, total Pb	0				13
14 / 144				0				14
15 / 143							Bottom of boring at 15' BGS.	15
16 / 142								16
17 / 141								17
18 / 140								18
19 / 139								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M8	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 158.1
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
158	Topsoil						Grass over topsoil	
157		SG-M8-0-3	NWTPH-Dx, total As, total Pb	0			Slightly moist, gray brown SAND (SP); fine sand.	1
156								2
155				0				3
154								4
153				0				5
152							Slightly moist, gray brown SILT (ML); coarse silt.	6
151	Hole backfilled with bentonite chips.	SG-M8-6-9	NWTPH-Dx, total As, total Pb	0				7
150								8
149				0				9
148								10
147							Slightly clayey silt.	11
146				0			Iron staining in vertical seams.	12
145		SG-M8-12-15	NWTPH-Dx, total As, total Pb					13
144								14
143							Bottom of boring at 15' BGS.	15
142								16
141								17
140								18
139								19

Sampler Type:
○ No Recovery
▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)
▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M9	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 154.3
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
154	Topsoil						Grass over topsoil	
153		SG-M9-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, slightly silty, gravelly SAND (SP-SM); poorly graded fine-to-medium sand.	1
152								2
151				0				3
150								4
149								5
148				0				6
147	Hole backfilled with bentonite chips.	SG-M9-6-9	NWTPH-Dx, total As, total Pb					7
146				0			Moist, brown gray with iron stain mottling SAND (SP); poorly graded fine-to-medium sand, grades finer with depth.	8
145								9
144				0				10
143								11
142								12
141		SG-M9-12-15	NWTPH-Dx, total As, total Pb	0				13
140								14
139							Bottom of boring at 15' BGS.	15
138								16
137								17
136								18
135								19

Sampler Type:
- No Recovery
- Continuous Core

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
100094	SG-M10	1 of 1

Project Name: Crownhill Elementary School
Ground Surface Elev: 151.8
Location: 1500 Rocky Point Road, Bremerton WA 98312
Driller/Method: Cascade Drilling-Eli / Limited access direct push
Depth to Water (ft BGS):
Sampling Method: Continuous core
Start/Finish Date: 3/29/2011

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery	Material Type	Description	Depth (ft)
0 / 151	Topsoil						Grass over topsoil	0
1 / 151		SG-M10-0-3	NWTPH-Dx, total As, total Pb	0			Moist, brown, silty, gravelly SAND (SM); poorly graded fine-to-medium sand, predominantly fine.	1
2 / 150				0				2
3 / 149								3
4 / 148								4
5 / 147				0				5
6 / 146							Moist, brown gray with iron stain SAND (SP); poorly graded fine-to-medium sand.	6
7 / 145	Hole backfilled with bentonite chips.	SG-M10-6-9	NWTPH-Dx, total As, total Pb	0				7
8 / 144								8
9 / 143								9
10 / 142				0			Moist, brown gray SAND (SP); poorly graded fine-to-medium sand.	10
11 / 141								11
12 / 140				0				12
13 / 139								13
14 / 138		SG-M10-12-15	NWTPH-Dx, total As, total Pb					14
15 / 137				0			Bottom of boring at 15' BGS.	15
16 / 136								16
17 / 135								17
18 / 134								18
19 / 133								19
132								

Sampler Type:
- ◯ No Recovery
- ▮ Continuous Core

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: RRH
Figure No.

_ENV BORING LOG CROWNHILL.GPJ May 24, 2012

APPENDIX B

Hydraulic Testing and Monitoring Data

Table B-1 - Summary of Groundwater Elevation Measurements

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

	MW-1		***MW-2***		***MW-3***		***MW-4***		***MW-5***		***MW-6***		***MW-7***		***MW-8***	
	GSE: 136.05		GSE: 136.60		GSE: 138.28		GSE: 138.63		GSE: 137.18		GSE: 134.20		GSE: 134.29		GSE: NM	
	TOCE: 135.83		TOCE: 138.47		TOCE: 139.86		TOCE: 138.35		TOCE: 136.95		TOCE: 133.87		TOCE: 133.86		TOCE: 133.36	
Measurement Date	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**
04/01/11	NA		115.52	22.95	124.39	15.47	124.39	13.96	114.24	22.71	124.15	9.72	122.40	11.46	---	---
04/05/11	120.00	15.83	115.40	23.07	124.28	15.58	124.28	14.07	114.11	22.84	124.15	9.72	122.26	11.60	---	---
04/09/11	119.89	15.94	115.38	23.09	NM	NM	124.11	14.24	113.93	23.02	124.06	9.81	122.09	11.77	---	---
07/25/11	120.90	14.93	115.58	20.25	NM	NM	124.45	11.38	114.11	21.72	123.52	10.35	122.91	12.92	---	---
10/26/11	122.46	13.37	116.42	22.05	87.70	52.16	126.12	12.23	114.85	22.10	123.55	10.32	124.85	9.01	---	---
12/21/11	120.00	15.83	117.17	21.30	NM	NM	126.83	11.52	115.70	21.25	123.82	10.05	125.35	8.51	---	---
01/16 -01/17/12	123.03	12.80	117.39	21.08	NM	NM	126.89	11.46	115.97	20.98	123.79	10.08	125.42	8.44	NM	NM
04/12 - 04/13/12	121.87	13.96	116.80	21.67	NM	NM	125.98	12.37	115.34	21.61	124.03	9.84	124.18	9.68	NM	NM
07/10-07/11/12	122.05	13.78	116.92	21.55	NM	NM	125.99	12.36	115.37	21.58	124.04	9.83	124.44	9.42	NM	NM
10/25-10/26/12	123.70	12.13	118.43	20.04	NM	NM	127.38	10.97	116.82	20.13	124.58	9.29	126.00	7.86	***106.85***	***26.69***
11/01/12	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
01/31/13	120.51	15.32	116.18	22.29	85.03	52.16	124.76	13.59	114.75	22.20	124.15	9.72	122.85	11.01	***103.30***	***30.24***
05/03/13	121.21	14.62	116.14	22.33	86.46	52.16	125.20	13.15	114.54	22.41	123.78	10.09	123.70	10.16	***104.82***	***28.72***
08/07 - 08/08/13	122.51	13.32	117.02	21.45	87.28	52.16	126.36	11.99	115.46	21.49	123.95	9.92	124.90	8.96	***106.26***	***27.28***

	MW-9		***MW-10***		***MW-11***		***MW-12***		***MW-13***		***MW-14***		***MW-15***		***MW-16***	
	GSE: NM		GSE: NM		GSE: NM		GSE: 134.72		GSE: 134.22		GSE: 134.53		GSE: 134.18		GSE: 134.07	
	TOCE: 134.39		TOCE: 132.33		TOCE: 130.28		TOCE: 133.87		TOCE: 133.61		TOCE: 133.58		TOCE: 133.37		TOCE: 133.27	
Measurement Date	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**	**DTW**	**Elev**
04/01/11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
04/05/11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
04/09/11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
07/25/11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/26/11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12/21/11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
01/16 -01/17/12	113.08	21.31	120.40	11.93	128.60	1.68	---	---	---	---	---	---	---	---	---	---
04/12 - 04/13/12	112.44	21.95	120.17	12.16	127.77	2.51	---	---	---	---	---	---	---	---	---	---
07/10-07/11/12	112.52	21.87	120.06	12.27	128.14	2.14	---	---	---	---	---	---	---	---	---	---
10/25-10/26/12	113.99	20.40	120.93	11.40	128.65	1.63	---	---	---	---	---	---	---	---	---	---
11/01/12	NM	NM	NM	NM	NM	NM	113.88	19.99	***114.95***	***19.96***	113.98	19.60	113.34	20.03	110.29	22.98
01/31/13	111.92	22.47	119.79	12.54	127.69	2.59	111.70	22.17	***110.45***	***24.46***	111.78	21.80	111.18	22.19	***102.70***	***31.02***
05/03/13	111.68	22.71	119.74	12.59	128.21	2.07	111.44	22.43	***110.99***	***23.92***	111.58	22.00	110.95	22.42	***105.11***	***28.61***
08/07 - 08/08/13	112.58	21.81	120.21	12.12	128.48	1.80	112.41	21.46	***112.25***	***22.66***	***114.24***	***19.45***	111.87	21.50	***110.00***	***23.72***

DTW Depth to Water
GSE Ground Surface Elevation
NM Not Measured
TOCE Top of Casing Elevation

NOTES:

1) All elevations are in units of feet, and are based on NAVD88 vertical datum.

2) ***Bold, red text*** indicates light non-aqueous-phase liquid (LNAPL) was observed in well. Refer to Table 7 for measured LNAPL thickness. Groundwater elevation shown has been corrected assuming an LNAPL specific gravity of 0.89.

Table B-2 - Hydraulic Conductivity Estimates from Slug Tests

PUBLIC REVIEW DRAFT

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Monitoring Well	MW-1	MW-2	MW-4	MW-5	MW-6	MW-7
Well Depth in Feet	**131.0**	**118.0**	**143.5**	**133.0**	**136.5**	**135.0**
Screen Length in Feet	**20.0**	**20.0**	**20.0**	**25.0**	**20.0**	**20.0**
Depth to Screen in Feet	**111.0**	**98.0**	**123.5**	**108.0**	**116.5**	**115.0**
Depth to Aquitard in Feet	**200**	**200**	**200**	**200**	**200**	**200**
Depth to Water in Feet	**120.90**	**115.58**	**124.45**	**114.11**	**123.52**	**122.91**
Depth to Sandpack in Feet	**105.0**	**75.0**	**121.0**	**107.0**	**114.0**	**114.0**
Slug Displacement (H_o) in Feet	**0**	**1.23**	**1.65**	**1.89**	**2.45**	**1.38**
Porosity (n)	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**
Radius of Casing (r_c) in Feet	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**
Radius of Borehole (r_w) in Feet	**0.33**	**0.33**	**0.33**	**0.33**	**0.33**	**0.33**
Saturated Aquifer Thickness (H) in Feet	79.1	85.1	75.6	85.9	76.5	77.1
Saturated Well Thinckness (L_w) in Feet	10.1	3.1	19.1	18.9	13.0	12.1
Effective Radius (r_{eff}) in Feet	0.167	0.167	0.167	0.167	0.167	0.167
Effective Screen Length (L_e) in Feet	10.1	3.1	19.1	18.9	13.0	12.1
Rising/Falling Head Test	Falling	Falling	Falling	Rising	Rising	Rising
Fully Submerged Sandpack	No	No	No	No	No	No
Transiently Exposed Sandpack	Yes	Yes	Yes	Yes	Yes	Yes
Transiently Exposed Screen	Yes	Yes	Yes	Yes	Yes	Yes
Partially Submerged Screen	Yes	Yes	Yes	Yes	Yes	Yes
Bouwer and Rice Parameters						
Normalized Head at t_1 (y_1) in Feet	0.385	0.848	0.590	0.530	0.472	0.783
Time - t_1 in Seconds	5.4	5.1	1.600	0.5	2.6	1.8
Normalized Head at t_2 (y_2) in Feet	0.281	0.602	0.310	0.252	0.272	0.482
Time - t_2 in Seconds	15.8	14.0	3.400	1.3	5.0	3.8
L_e/r_w	30.3	9.4	57.2	56.7	38.9	36.3
Coefficient A [a]	2.5	1.8	3.2	3.2	2.7	2.7
Coefficient B [a]	0.4	0.3	0.5	0.5	0.4	0.4
Coefficient C [a]	2.0	1.2	2.9	2.9	2.3	2.2
$\ln(R_e/r_w)$ [b]	2.1	1.2	2.7	2.6	2.3	2.3
Calculated K in cm/sec	2.7E-03	6.1E-03	2.1E-02	5.5E-02	1.8E-02	1.9E-02
Calculated K in ft/day	7.6	17.3	60.1	156	49.6	54.6
Screened Interval Soil Type [c]	SP	SP	ML/SP/GM	GM/GP/SP	ML/SP/SM	SP

Data analysis by method of Bouwer and Rice (1976; 1989)

Bold values are entered from field data and other values are calculated.

All depths are below ground surface

[a] A, B, and C coefficients are calculated using regression equations of Van Rooy (1988).

[b] R_e/r_w is the effective radial distance over which y is dissipated, divided by the radial distance of well development.

[c] Soil types are classified using the Unified Soil Classification System.

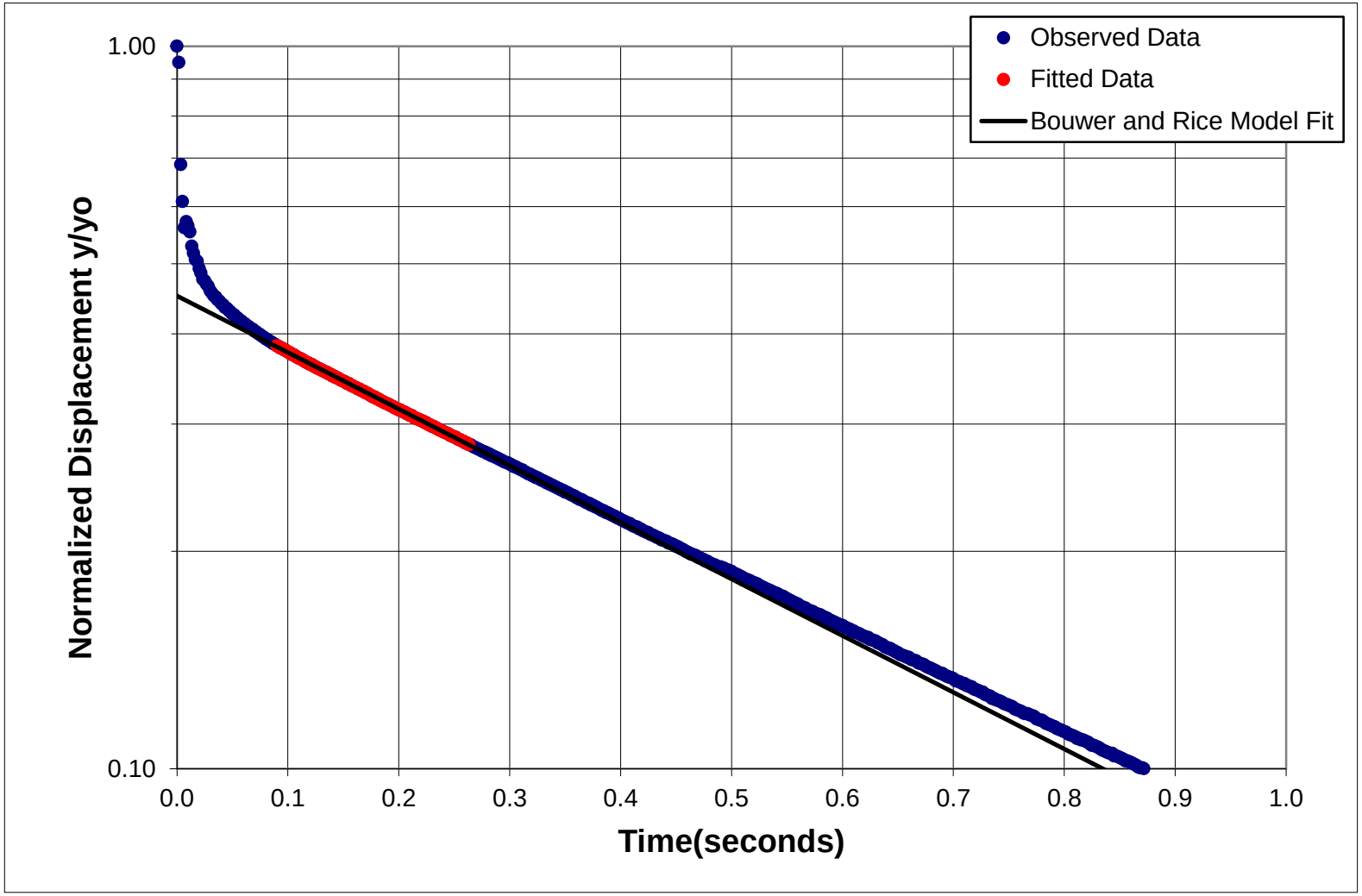

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Figure B.1 MW-1 Slug Response
Crownhill Elementary, Bremerton, Washington

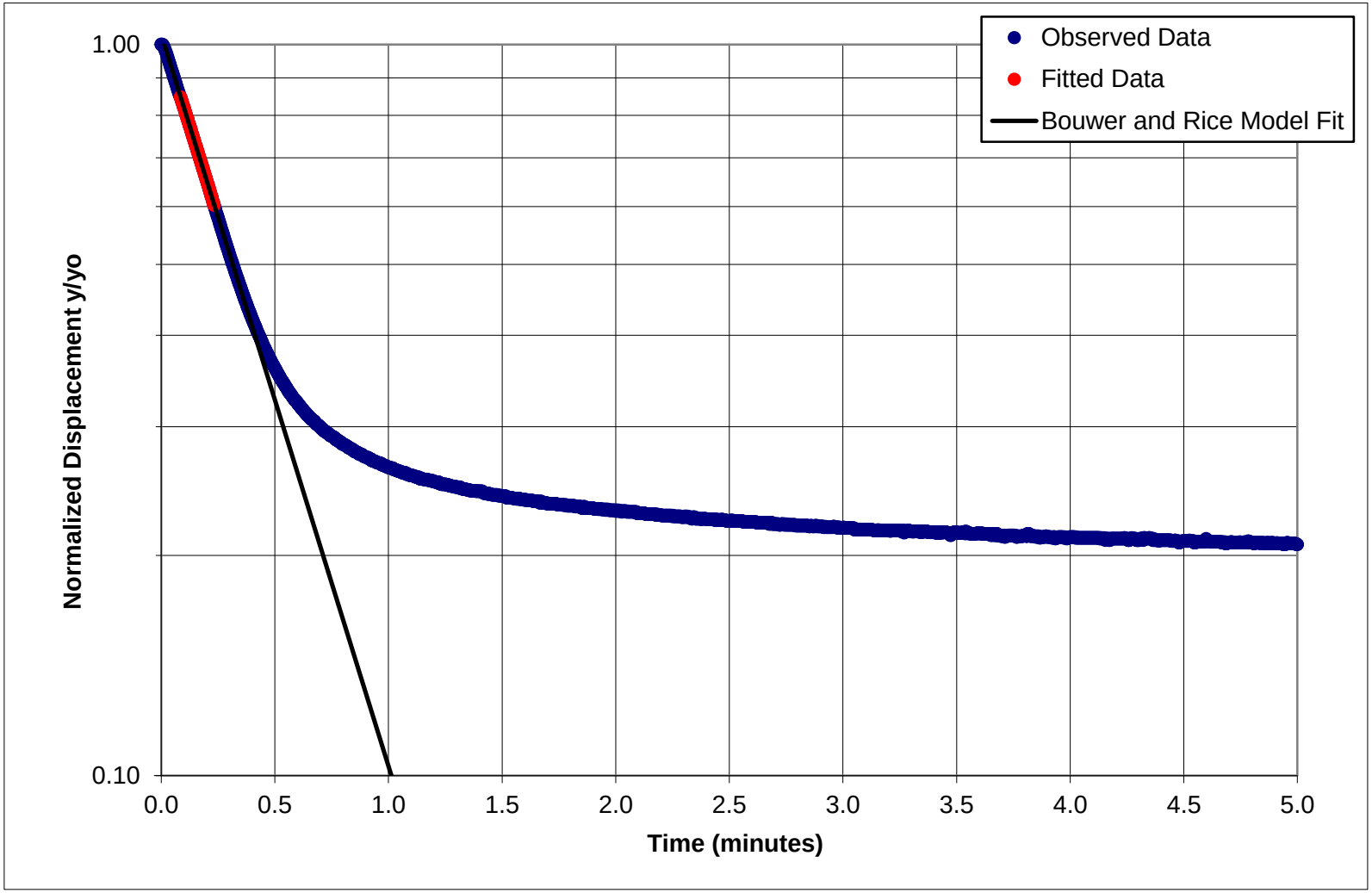

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Figure B.2 MW-2 Slug Response
Crownhill Elementary, Bremerton, Washington

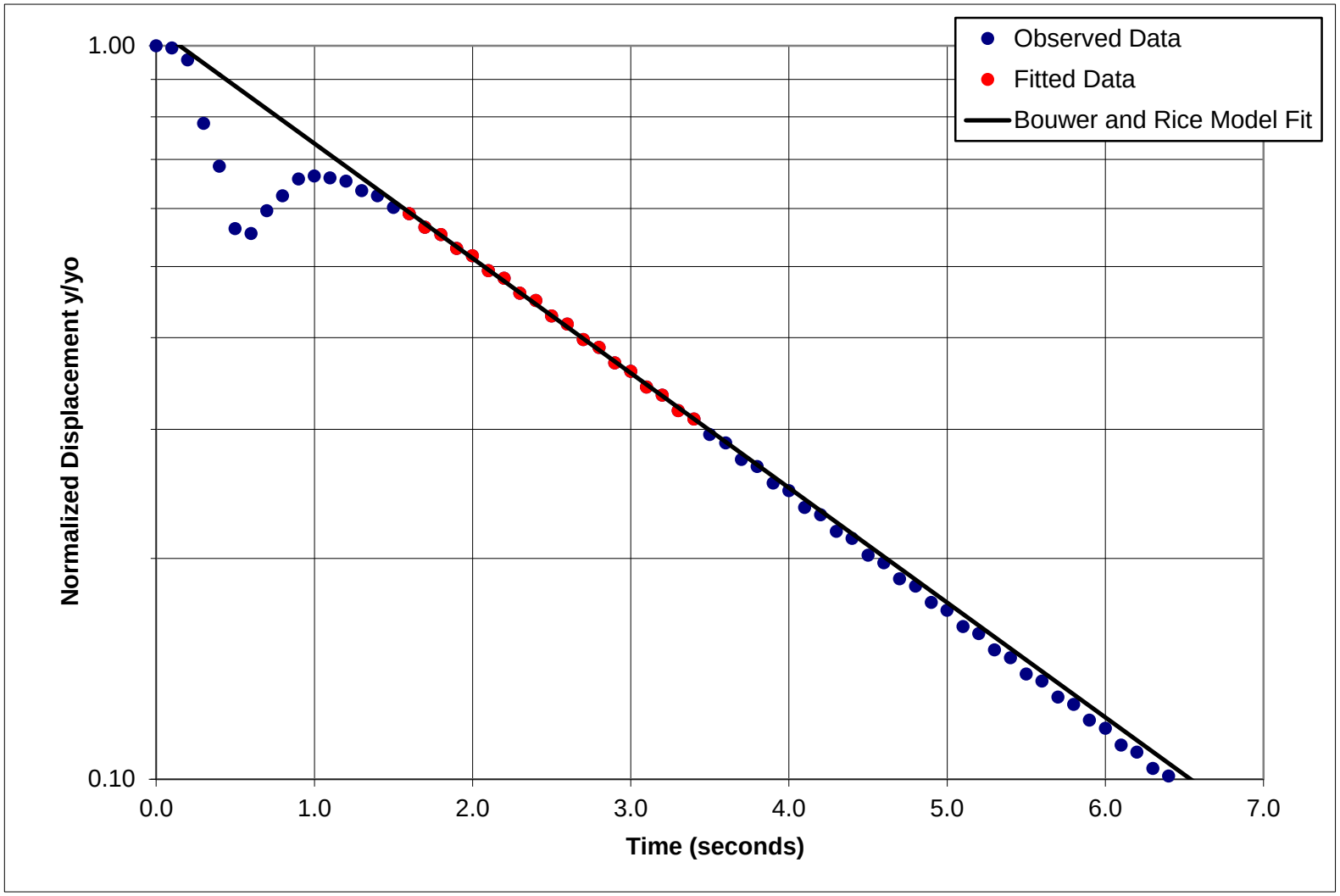

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Figure B.3 MW-4 Slug Response
Crownhill Elementary, Bremerton, Washington

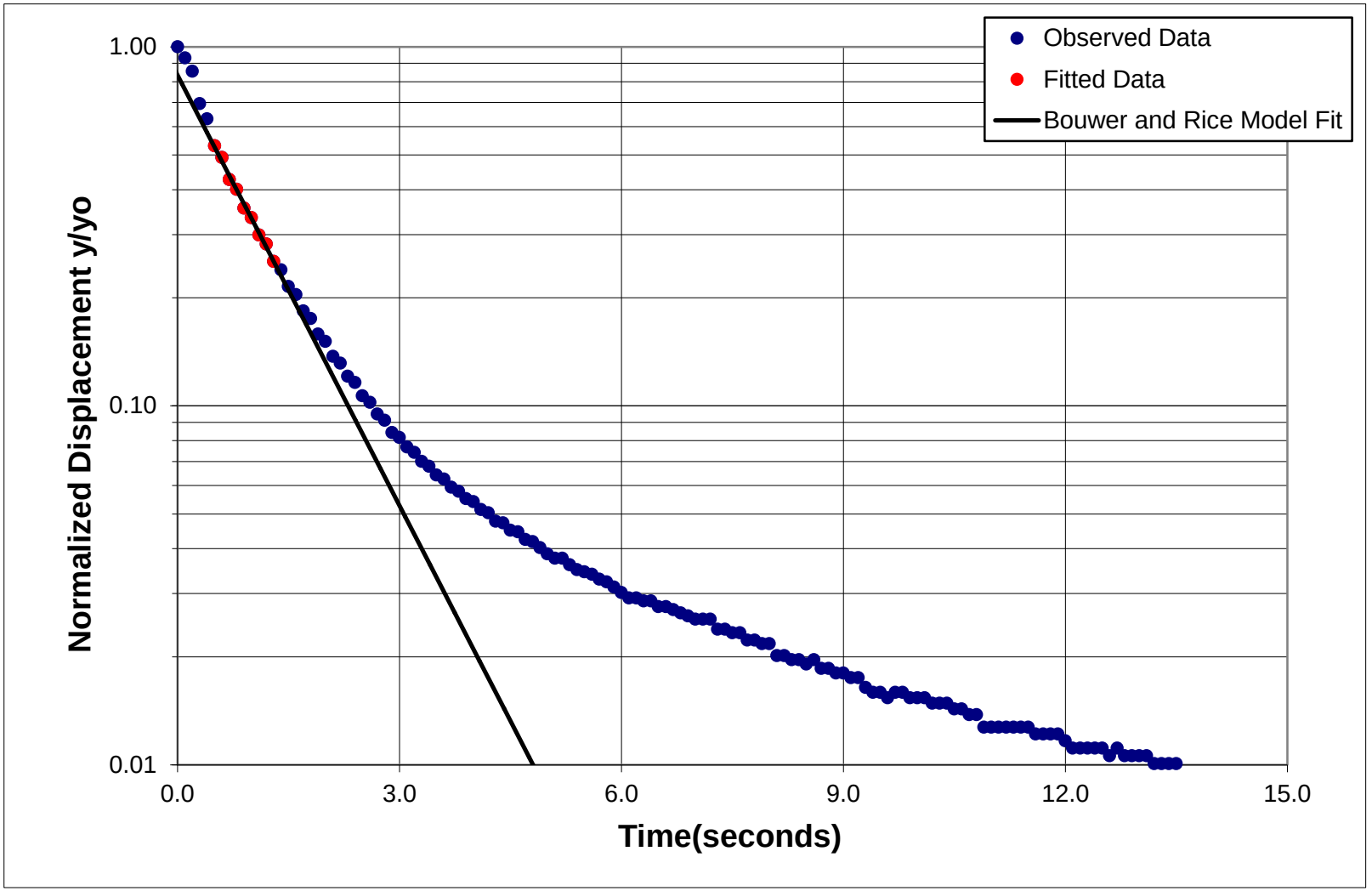

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Figure B.4 MW-5 Slug Response
Crownhill Elementary, Bremerton, Washington

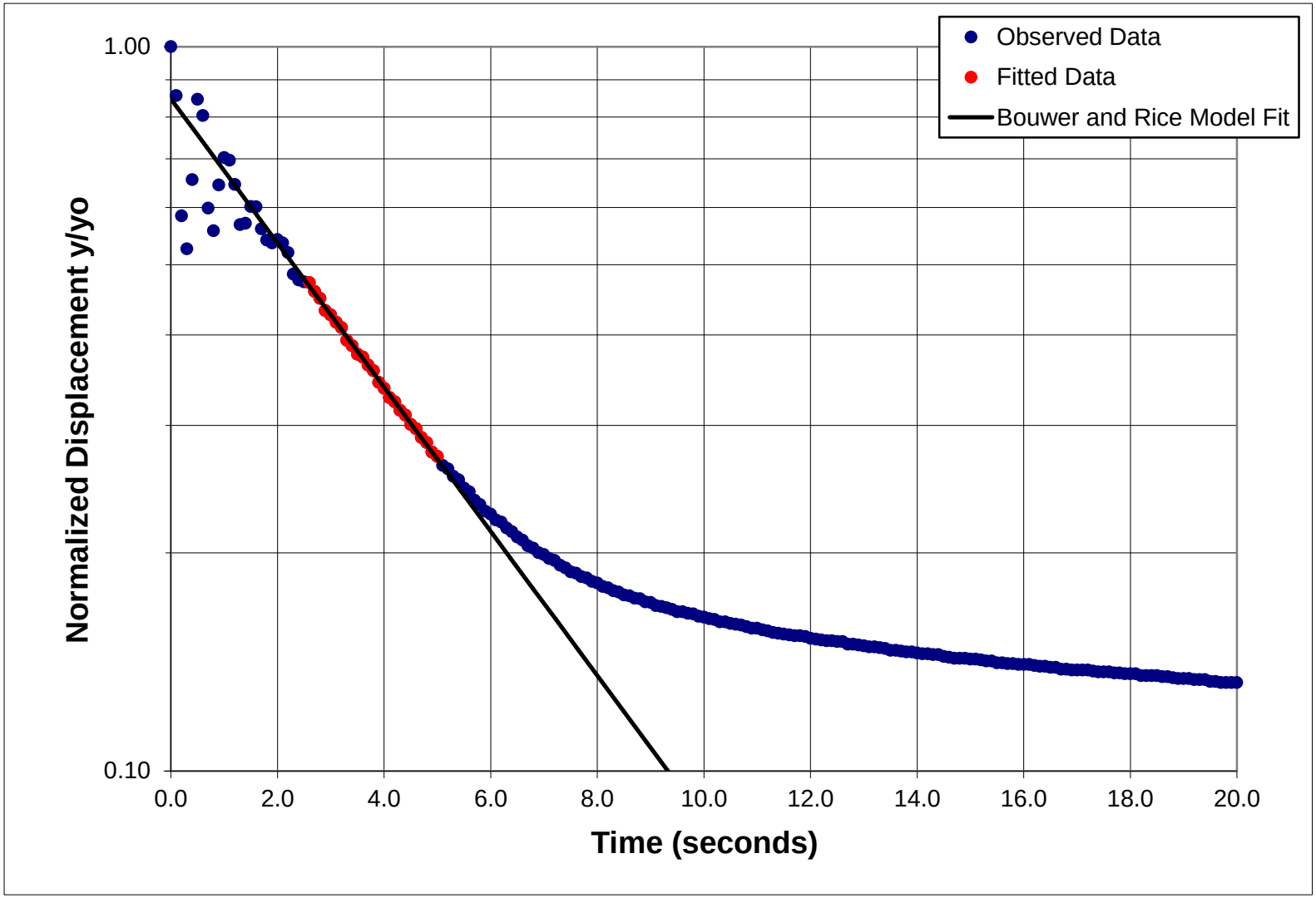

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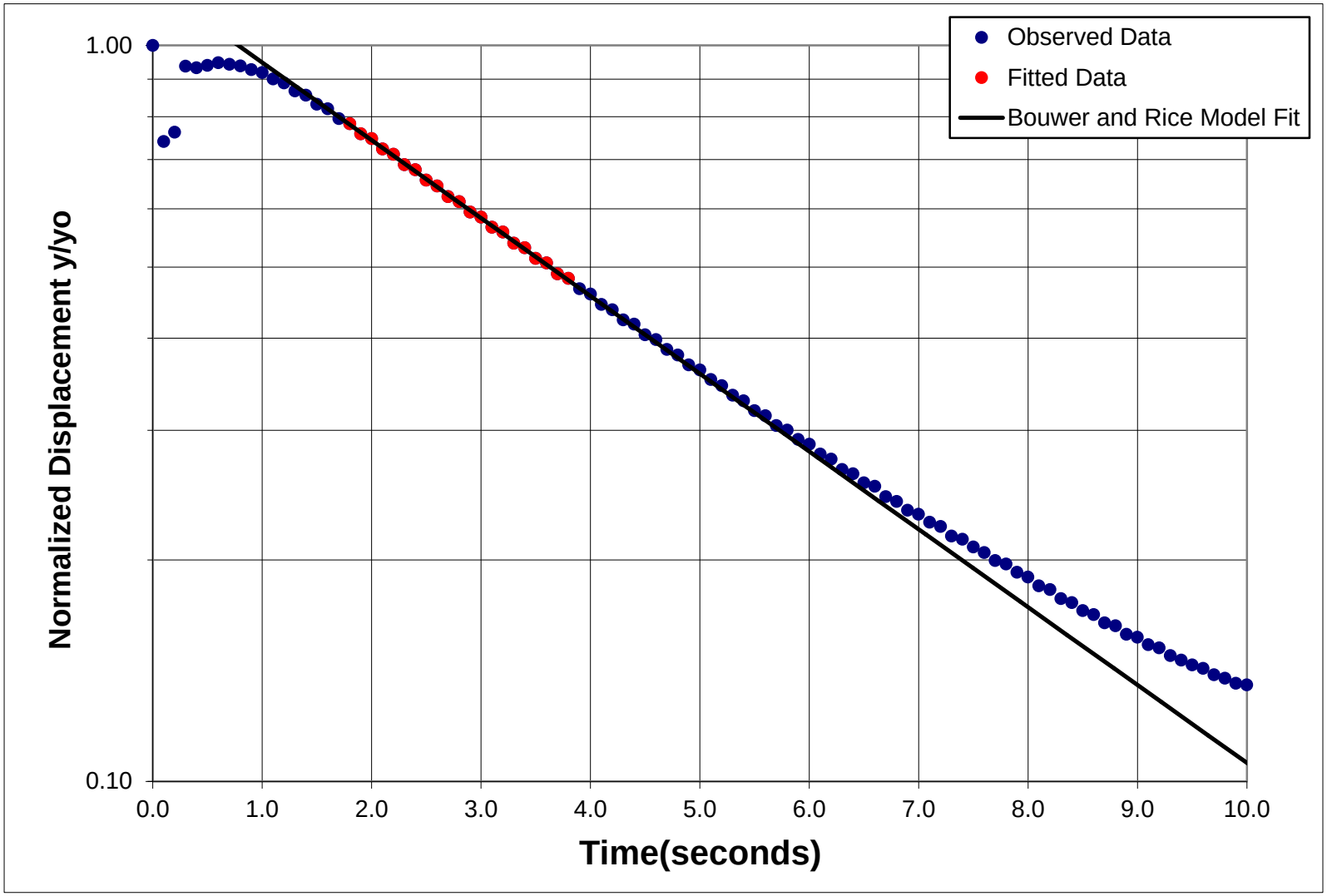
Figure B.5 MW-6 Slug Response
Crownhill Elementary, Bremerton, Washington



Aspect Consulting
10/1/13
V:\100094 BSD Crownhill Elementary RIFS\Deliverables\RI Report\Public Review Draft\Appendices\Table B-2 and Figs thru B.6

Figure B.6 MW-7 Slug Response
Crownhill Elementary, Bremerton, Washington

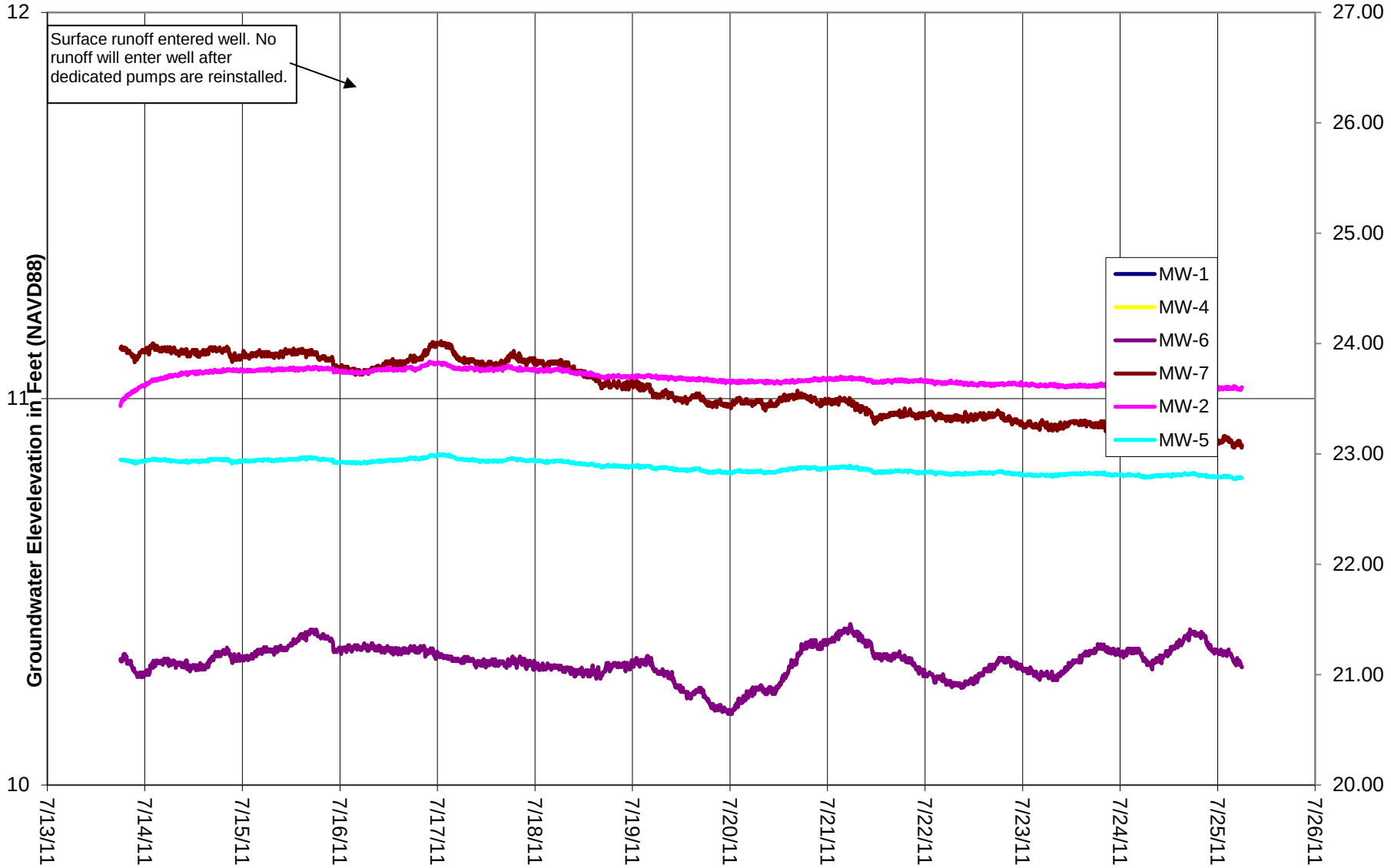


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Figure B.7 Tidal Study Transducer Data
Crownhill Elementary, Bremerton, Washington

APPENDIX C

Data Validation Reports

(included on CD)

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

Crownhill Elementary

Prepared for:

Aspect Consulting
179 Madrone Lane North
Bainbridge Island, Washington 98110

Prepared by:

EcoChem, Inc.
710 Second Avenue, Suite 660
Seattle, Washington 98104

EcoChem Project: C22806-1

June 16, 2011

Approved for Release:

Chris Ransom
Project Manager
EcoChem, Inc.

PROJECT NARRATIVE

Basis for Data Validation

This report summarizes the results of compliance review (EPA Stage 2A) performed on groundwater, soil, and quality control (QC) data for Crownhill Elementary. A complete list of samples is provided in the **Sample Index**.

Samples were analyzed by Friedman and Bruya, Inc., Seattle, Washington. The analytical method and EcoChem project chemists are listed below.

Analysis	Method	Primary Review	Secondary Review
Volatile Organic Compounds	SW8260C	Mark Brindle	Christine Ransom
Semivolatile Organic Coumpounds	SW8270		
Polycyclic Aromatic Hydrocarbons	SW8270D SIM		
Polychlorinated Biphenyls (PCB) Aroclor	SW8082		
Diesel Range Organic Hydrocarbons	NWTPH-Dx	Mark Brindle Melissa Swanson	
Metals and Hexavalent Chromium	200.8, SW7196		
Total Organic Carbon	SW9060	Melissa Swanson	

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the *Sampling and Analysis Plan (SAP) Crownhill Elementary School* (Aspect, March 9, 2011); *National Functional Guidelines for Organic Data Review* (USEPA 1999); and *National Functional Guidelines for Inorganic Data Review* (USEPA 1994, 2004)..

EcoChem's goal in assigning data validation qualifiers is to assist in proper data interpretation. If values are estimated (assigned a J), data may be used for site evaluation purposes; but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been labeled as do-not-report (DNR) should not be used for any purpose. Values with no data qualifier meet all data measurement quality objectives and are acceptable for use.

Data qualifier definitions, reason codes, and validation criteria are included as **Appendix A**. A Qualified Data Summary Table is included in **Appendix B**. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

SAMPLE INDEX
Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	VOC	SVOC	SIM	PCB	Fuels	Metals	Cr^{+6}	TOC
103342	SG-J6-3	103342-01	✓							
103342	SG-J6-0-3	103342-02		✓	✓	✓	✓	✓		
103342	SG-J6-8	103342-03	✓							
103342	SG-J6-6-9	103342-04		✓	✓	✓	✓	✓		
103342	SG-J6-14	103342-05	✓							
103342	SG-J6-12-15	103342-06		✓	✓	✓	✓	✓		
103342	SG-G2-3	103342-07	✓							
103342	SG-G2-0-3	103342-08		✓	✓	✓	✓	✓		
103342	SG-G2-9	103342-09	✓							
103342	SG-G2-6-9	103342-10		✓	✓	✓	✓	✓		
103342	SG-G2-14	103342-11	✓							
103342	SG-G2-12-15	103342-12		✓	✓	✓	✓	✓		
103342	SG-F3-2	103342-13	✓							
103342	SG-F3-0-3	103342-14		✓	✓	✓	✓	✓		
103342	SG-F3-7	103342-15	✓							
103342	SG-F3-6-9	103342-16		✓	✓	✓	✓	✓		
103342	SG-F3-12-15	103342-17		✓	✓	✓	✓	✓		
103342	SG-H3-2	103342-18	✓							
103342	SG-H3-0-3	103342-19		✓	✓	✓	✓	✓		
103342	SG-H3-8	103342-20	✓							
103342	SG-H3-6-9	103342-21		✓	✓	✓	✓	✓		
103342	SG-H3-13.5	103342-22	✓							
103342	SG-H3-12-15	103342-23		✓	✓	✓	✓	✓		
103342	NG-H9-2	103342-24	✓							
103342	NG-H9-0-3	103342-25		✓	✓	✓	✓	✓		
103342	NG-H9-8	103342-26	✓							
103342	NG-H9-6-9	103342-27		✓	✓	✓	✓	✓		
103342	NG-H9-12-15	103342-28		✓	✓	✓	✓	✓		
103342	NG-H9-13	103342-29	✓							
103342	NG-G8-2	103342-30	✓							
103342	NG-G8-0-3	103342-31		✓	✓	✓	✓	✓		
103342	NG-G8-8	103342-32	✓							
103342	NG-G8-6-9	103342-33		✓	✓	✓	✓	✓		
103342	NG-G8-13	103342-34	✓							
103342	NG-G8-12-15	103342-35		✓	✓	✓	✓	✓		
103342	NG-E6-2	103342-36	✓							
103342	NG-E6-0-3	103342-37		✓	✓	✓	✓	✓		
103342	NG-E6-7	103342-38	✓							
103342	NG-E6-6-9	103342-39		✓	✓	✓	✓	✓		
103342	NG-E6-13	103342-40	✓							
103342	NG-E6-12-15	103342-41		✓	✓	✓	✓	✓		
103342	SG-I7-0-3	103342-42					✓	✓	✓	
103342	SG-I7-8.5-10	103342-43					✓	✓	✓	
103342	SG-I7-12-15	103342-44					✓	✓	✓	
103342	NG-F4-0-3	103342-45					✓	✓	✓	
103342	NG-F4-6-9	103342-46					✓	✓	✓	
103342	NG-F4-12-15	103342-47					✓	✓	✓	
103342	NG-F5-0-3	103342-48					✓	✓	✓	
103342	NG-F5-8-10	103342-49					✓	✓	✓	
103342	NG-F5-12-15	103342-50					✓	✓	✓	
103342	NG-C7-2	103342-51	✓							

SAMPLE INDEX
Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	VOC	SVOC	SIM	PCB	Fuels	Metals	Cr^{+6}	TOC
103342	NG-C7-0-3	103342-52		✓	✓	✓	✓	✓	✓	
103342	NG-C7-7	103342-53	✓							
103342	NG-C7-6-9	103342-54		✓	✓	✓	✓	✓	✓	
103342	NG-C7-13	103342-55	✓							
103342	NG-C7-12-15	103342-56		✓	✓	✓	✓	✓	✓	
103342	NG-C7-18	103342-57	✓							
103342	NG-C7-17-20	103342-58		✓	✓	✓	✓	✓	✓	
103342	SG-J7-3	103342-59	✓							
103342	SG-J7-0-3	103342-60		✓	✓	✓	✓	✓	✓	
103342	SG-J7-9	103342-61	✓							
103342	SG-J7-6-9	103342-62		✓	✓	✓	✓	✓	✓	
103342	SG-J7-14	103342-63	✓							
103342	SG-J7-12-15	103342-64		✓	✓	✓	✓	✓	✓	
103342	NG-A7-6-9	103342-65			✓	✓	✓	✓	✓	
103342	NG-A7-7	103342-66	✓							
103342	NG-K3-0-3	103342-67					✓	✓		
103342	NG-K3-6-9	103342-68					✓	✓		
103342	NG-K3-12-15	103342-69					✓	✓		
103342	NG-I9-0-3	103342-70					✓	✓		
103342	NG-I9-6-9	103342-71					✓	✓		
103342	NG-I9-12-15	103342-72					✓	✓		
103342	SG-F3-13	103342-73	✓							
103360	RB-032511	103360-73	✓	✓	✓	✓	✓	✓		
103360	NG-D9-6-9	103360-01					✓	✓		
103360	NG-D9-12-15	103360-02					✓	✓		
103360	NG-H10-12-14	103360-03					✓	✓		
103360	NG-D10-0-3	103360-04					✓	✓		
103360	NG-D10-6-9	103360-05					✓	✓		
103360	NG-D10-12-15	103360-06					✓	✓		
103360	NG-F8-0-3	103360-07					✓	✓		
103360	NG-F8-6-9	103360-08					✓	✓		
103360	NG-F8-12-15	103360-09					✓	✓		
103360	NG-F9-0-3	103360-10					✓	✓		
103360	NG-F9-6-9	103360-11					✓	✓		
103360	NG-F9-12-15	103360-12					✓	✓		
103360	NG-F10-0-3	103360-13					✓	✓		
103360	NG-F10-6-9	103360-14					✓	✓		
103360	NG-F10-12-15	103360-15					✓	✓		
103360	NG-E10-0-3	103360-16					✓	✓		
103360	NG-E10-6-9	103360-17					✓	✓		
103360	NG-E10-12-15	103360-18					✓	✓		
103360	NG-E9-0-3	103360-19					✓	✓		
103360	NG-E9-6-9	103360-20					✓	✓		
103360	NG-E9-12-15	103360-21					✓	✓		
103360	NG-D9-0-3	103360-22					✓	✓		
103360	NG-F7-12-15	103360-23					✓	✓		
103360	NG-I8-0-3	103360-24					✓	✓		
103360	NG-I8-6-9	103360-25					✓	✓		
103360	NG-I8-12-15	103360-26					✓	✓		
103360	NG-I7-0-3	103360-27					✓	✓		
103360	NG-I7-6-9	103360-28					✓	✓		

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Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	VOC	SVOC	SIM	PCB	Fuels	Metals	Cr^{+6}	TOC
103360	NG-I7-12-15	103360-29					✓	✓		
103360	NG-I6-0-3	103360-30					✓	✓		
103360	NG-I6-6-9	103360-31					✓	✓		
103360	NG-I6-12-15	103360-32					✓	✓		
103360	NG-H6-6-9	103360-33					✓	✓		
103360	NG-H6-12-15	103360-34					✓	✓		
103360	NG-H7-0-3	103360-35					✓	✓		
103360	NG-H7-6-9	103360-36					✓	✓		
103360	NG-H7-12-15	103360-37					✓	✓		
103360	NG-H8-0-3	103360-38					✓	✓		
103360	NG-H8-6-9	103360-39					✓	✓		
103360	NG-H8-12-15	103360-40					✓	✓		
103360	NG-H10-0-3	103360-41					✓	✓		
103360	NG-H10-6-9	103360-42					✓	✓		
103360	NG-G10-0-3	103360-43					✓	✓		
103360	NG-G10-6-9	103360-44					✓	✓		
103360	NG-G10-12-15	103360-45					✓	✓		
103360	NG-G9-0-3	103360-46					✓	✓		
103360	NG-G9-6-9	103360-47					✓	✓		
103360	NG-G9-12-15	103360-48					✓	✓		
103360	NG-G7-0-3	103360-49					✓	✓		
103360	NG-G7-6-9	103360-50					✓	✓		
103360	NG-G7-12-15	103360-51					✓	✓		
103360	NG-G6-0-3	103360-52					✓	✓		
103360	NG-G6-6-9	103360-53					✓	✓		
103360	NG-G6-13.5-15	103360-54					✓	✓		
103360	NG-G5-0-3	103360-55					✓	✓		
103360	NG-G5-6-9	103360-56					✓	✓		
103360	NG-G5-13.5-15	103360-57					✓	✓		
103360	NG-F6-0-3	103360-58					✓	✓		
103360	NG-F6-6-9	103360-59					✓	✓		
103360	NG-F6-12-15	103360-60					✓	✓		
103360	NG-F7-0-3	103360-61					✓	✓		
103360	NG-F7-6-9	103360-62					✓	✓		
103360	NG-I5-0-3	103360-63					✓	✓		
103360	NG-I5-6-9	103360-64					✓	✓		
103360	NG-I5-12-15	103360-65					✓	✓		
103360	NG-I4-0-3	103360-66					✓	✓		
103360	NG-I4-6-9	103360-67					✓	✓		
103360	NG-I4-12-15	103360-68					✓	✓		
103360	NG-H5-0-3	103360-69					✓	✓		
103360	NG-H5-6-9	103360-70					✓	✓		
103360	NG-H5-12-15	103360-71					✓	✓		
103360	NG-H6-0-3	103360-72					✓	✓		
103384	NG-D8-0-3	103384-01					✓	✓		
103384	NG-D8-6-9	103384-02					✓	✓		
103384	NG-D8-12-15	103384-03					✓	✓		
103384	NG-D7-0-3	103384-04					✓	✓		
103384	NG-D7-6-9	103384-05					✓	✓		
103384	NG-D7-12-15	103384-06					✓	✓		
103384	NG-D6-0-3	103384-07					✓	✓		

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Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	VOC	SVOC	SIM	PCB	Fuels	Metals	Cr^{+6}	TOC
103384	NG-D6-6-9	103384-08					✓	✓		
103384	NG-D6-12-15	103384-09					✓	✓		
103384	NG-D5-0-3	103384-10					✓	✓		
103384	NG-D5-6-9	103384-11					✓	✓		
103384	NG-D5-12-15	103384-12					✓	✓		
103384	NG-D4-0-3	103384-13					✓	✓		
103384	NG-D4-6-9	103384-14					✓	✓		
103384	NG-D4-12-15	103384-15					✓	✓		
103384	NG-D3-0-3	103384-16					✓	✓		
103384	NG-D3-6-9	103384-17					✓	✓		
103384	NG-D3-12-15	103384-18					✓	✓		
103384	NG-C10-0-3	103384-19					✓	✓		
103384	NG-C10-6-9	103384-20					✓	✓		
103384	NG-C10-12-15	103384-21					✓	✓		
103384	NG-C9-0-3	103384-22					✓	✓		
103384	NG-C9-6-9	103384-23					✓	✓		
103384	NG-C9-12-15	103384-24					✓	✓		
103384	NG-E8-0-2	103384-25					✓	✓		
103384	NG-E8-6-9	103384-26					✓	✓		
103384	NG-E8-12-15	103384-27					✓	✓		
103384	NG-E7-0-3	103384-28					✓	✓		
103384	NG-E7-6-9	103384-29					✓	✓		
103384	NG-E7-12-15	103384-30					✓	✓		
103384	NG-E5-0-3	103384-31					✓	✓		
103384	NG-E5-6-9	103384-32					✓	✓		
103384	NG-E5-12-15	103384-33					✓	✓		
103384	NG-E4-0-3	103384-34					✓	✓		
103384	NG-E4-6-9	103384-35					✓	✓		
103384	NG-E4-12-15	103384-36					✓	✓		
103384	NG-E3-0-3	103384-37					✓	✓		
103384	NG-E3-6-9	103384-38					✓	✓		
103384	NG-E3-12-15	103384-39					✓	✓		
103384	NG-B9-0-3	103384-40					✓	✓		
103384	NG-B9-6-9	103384-41					✓	✓		
103384	NG-B9-12-15	103384-42					✓	✓		
103384	NG-B8-0-3	103384-43					✓	✓		
103384	NG-B8-6-9	103384-44					✓	✓		
103384	NG-B8-12-15	103384-45					✓	✓		
103384	NG-B7-0-3	103384-46					✓	✓		
103384	NG-B7-6-9	103384-47					✓	✓		
103384	NG-B7-12-15	103384-48					✓	✓		
103384	NG-B6-0-3	103384-49					✓	✓		
103384	NG-B6-6-9	103384-50					✓	✓		
103384	NG-B6-12-15	103384-51					✓	✓		
103384	NG-B5-0-3	103384-52					✓	✓		
103384	NG-B5-6-9	103384-53					✓	✓		
103384	NG-B5-12-15	103384-54					✓	✓		
103384	NG-B4-0-3	103384-55					✓	✓		
103384	NG-B4-6-9	103384-56					✓	✓		
103384	NG-B4-12-15	103384-57					✓	✓		
103384	NG-B3-0-3	103384-58					✓	✓		

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Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	VOC	SVOC	SIM	PCB	Fuels	Metals	Cr^{+6}	TOC
103384	NG-B3-6-9	103384-59					✓	✓		
103384	NG-B3-12-15	103384-60					✓	✓		
103384	NG-B10-0-3	103384-61					✓	✓		
103384	NG-B10-6-9	103384-62					✓	✓		
103384	NG-B10-12-15	103384-63					✓	✓		
103384	NG-A6-0-3	103384-64					✓	✓		
103384	NG-A6-6-9	103384-65					✓	✓		
103384	NG-A6-12-15	103384-66					✓	✓		
103384	NG-A8-0-3	103384-67					✓	✓		
103384	NG-A8-6-9	103384-68					✓	✓		
103384	NG-A8-12-15	103384-69					✓	✓		
103384	NG-C8-0-3	103384-70					✓	✓		
103384	NG-C8-6-9	103384-71					✓	✓		
103384	NG-C8-12-15	103384-72					✓	✓		
103384	NG-C6-0-3	103384-73					✓	✓		
103384	NG-C6-6-9	103384-74					✓	✓		
103384	NG-C6-12-15	103384-75					✓	✓		
103384	NG-C5-0-3	103384-76					✓	✓		
103384	NG-C5-6-9	103384-77					✓	✓		
103384	NG-C5-12-15	103384-78					✓	✓		
103384	NG-C4-0-3	103384-79					✓	✓		
103384	NG-C4-6-9	103384-80					✓	✓		
103384	NG-C4-12-15	103384-81					✓	✓		
103384	NG-A4-0-3	103384-82					✓	✓		
103384	NG-A4-6-9	103384-83					✓	✓		
103384	NG-A4-12-15	103384-84					✓	✓		
103384	NG-A5-0-3	103384-85					✓	✓		
103384	NG-A5-6-9	103384-86					✓	✓		
103384	NG-A5-12-15	103384-87					✓	✓		
103426	NG-E6-46.2-46.5	103426-01					✓			
103426	NG-E6-70-71.5	103426-04					✓			
103426	NG-E6-95-96	103426-09					✓			
103427	SG-J6-5	103427-01								✓
103427	SG-J6-20	103427-02								✓
103427	SG-J6-40	103427-03								✓
103427	NG-E6-5-6.5	103427-04								✓
103427	NG-E6-20-21.5	103427-05								✓
103427	NG-E6-40-41.5	103427-06								✓
103427	NG-A2-5-6.5	103427-07								✓
103427	NG-A2-20-21	103427-08								✓
103427	NG-A2-40-41.5	103427-09								✓
103427	NG-K3-5-6.5	103427-10								✓
103427	NG-K3-20-21.5	103427-11								✓
103427	NG-K3-40-41.5	103427-12								✓
103427	NG-F5-5-6.5	103427-13								✓
103427	NG-F5-20-21.5	103427-14								✓
103427	NG-F5-40-41.5	103427-15								✓
104011	NG-B2-0-3	104011-01					✓	✓		
104011	NG-B2-6-9	104011-02					✓	✓		
104011	NG-B2-12-15	104011-03					✓	✓		
104011	NG-C3-0-3	104011-04					✓	✓		

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Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	VOC	SVOC	SIM	PCB	Fuels	Metals	Cr^{+6}	TOC
104011	NG-C3-6-9	104011-05					✓	✓		
104011	NG-C3-12-15	104011-06					✓	✓		
104011	NG-C2-0-3	104011-07					✓	✓		
104011	NG-C2-6-9	104011-08					✓	✓		
104011	NG-C2-12-15	104011-09					✓	✓		
104011	NG-D2-0-3	104011-10					✓	✓		
104011	NG-D2-6-9	104011-11					✓	✓		
104011	NG-D2-12-15	104011-12					✓	✓		
104011	NG-G2-0-3	104011-13					✓	✓		
104011	NG-G2-6-9	104011-14					✓	✓		
104011	NG-G2-12-15	104011-15					✓	✓		
104011	NG-D1-0-3	104011-16					✓	✓		
104011	NG-D1-6-9	104011-17					✓	✓		
104011	NG-D1-12-15	104011-18					✓	✓		
104011	NG-E1-0-3	104011-19					✓	✓		
104011	NG-E1-6-9	104011-20					✓	✓		
104011	NG-E1-12-15	104011-21					✓	✓		
104011	SG-L7-0-3	104011-22					✓	✓		
104011	SG-L7-6-9	104011-23					✓	✓		
104011	SG-L7-12-15	104011-24					✓	✓		
104011	SG-L8-0-3	104011-25					✓	✓		
104011	SG-L8-6-9	104011-26					✓	✓		
104011	SG-L8-12-15	104011-27					✓	✓		
104011	SG-L9-0-3	104011-28					✓	✓		
104011	SG-L9-6-9	104011-29					✓	✓		
104011	SG-L9-12-15	104011-30					✓	✓		
104011	SG-L10-0-3	104011-31					✓	✓		
104011	SG-L10-6-9	104011-32					✓	✓		
104011	SG-L10-12-15	104011-33					✓	✓		
104011	OG-10-0-3	104011-34					✓	✓		
104011	OG-10-6-9	104011-35					✓	✓		
104011	OG-10-12-15	104011-36					✓	✓		
104011	SG-K10-0-3	104011-37					✓	✓		
104011	SG-K10-6-9	104011-38					✓	✓		
104011	SG-K10-12-15	104011-39					✓	✓		
104011	SG-K9-0-3	104011-40					✓	✓		
104011	SG-K9-6-9	104011-41					✓	✓		
104011	SG-K9-12-15	104011-42					✓	✓		
104011	SG-K8-0-3	104011-43					✓	✓		
104011	SG-K8-6-9	104011-44					✓	✓		
104011	SG-K8-12-15	104011-45					✓	✓		
104011	SG-K7-0-3	104011-46					✓	✓		
104011	SG-K7-6-9	104011-47					✓	✓		
104011	SG-K7-12-15	104011-48					✓	✓		
104011	SG-J8-0-3	104011-49					✓	✓		
104011	SG-J8-6-9	104011-50					✓	✓		
104011	SG-J8-12-15	104011-51					✓	✓		
104011	SG-J9-0-3	104011-52					✓	✓		
104011	SG-J9-6-9	104011-53					✓	✓		
104011	SG-J9-12-15	104011-54					✓	✓		
104011	SG-J10-0-3	104011-55					✓	✓		

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SDG	Sample ID	Lab ID	VOC	SVOC	SIM	PCB	Fuels	Metals	Cr^{+6}	TOC
104011	SG-J10-6-9	104011-56					✓	✓		
104011	SG-J10-12-15	104011-57					✓	✓		
104011	SG-I8-0-3	104011-58					✓	✓		
104011	SG-I8-6-9	104011-59					✓	✓		
104011	SG-I8-12-15	104011-60					✓	✓		
104011	OG-3-0-3	104011-61					✓	✓		
104011	OG-3-6-9	104011-62					✓	✓		
104011	OG-3-12-15	104011-63					✓	✓		
104011	OG-1-0-3	104011-64					✓	✓		
104011	OG-1-6-9	104011-65					✓	✓		
104011	OG-1-12-15	104011-66					✓	✓		
104011	OG-9-0-3	104011-67					✓	✓		
104011	OG-9-6-9	104011-68					✓	✓		
104011	OG-9-12-15	104011-69					✓	✓		
104011	OG-12-0-3	104011-70					✓	✓		
104011	OG-12-6-9	104011-71					✓	✓		
104011	OG-12-12-15	104011-72					✓	✓		
104011	OG-8-0-3	104011-73					✓	✓		
104011	OG-8-6-9	104011-74					✓	✓		
104011	OG-8-12-15	104011-75					✓	✓		
104011	OG-13-0-3	104011-76					✓	✓		
104011	OG-13-6-9	104011-77					✓	✓		
104011	OG-13-12-15	104011-78					✓	✓		
104011	OG-2-0-3	104011-79					✓	✓		
104011	OG-2-6-9	104011-80					✓	✓		
104011	OG-2-12-15	104011-81					✓	✓		
104011	OG-5-0-3	104011-82					✓	✓		
104011	OG-5-6-9	104011-83					✓	✓		
104011	OG-5-12-15	104011-84					✓	✓		
104011	OG-6-0-3	104011-85					✓	✓		
104011	OG-6-6-9	104011-86					✓	✓		
104011	OG-6-12-15	104011-87					✓	✓		
104011	OG-7-0-3	104011-88					✓	✓		
104011	OG-7-6-9	104011-89					✓	✓		
104011	OG-7-12-15	104011-90					✓	✓		
104011	SG-H9-0-3	104011-91					✓	✓		
104011	SG-H9-6-9	104011-92					✓	✓		
104011	SG-H9-12-15	104011-93					✓	✓		
104011	NG-F3-0-3	104011-94					✓	✓		
104011	NG-F3-6-9	104011-95					✓	✓		
104011	NG-F3-12-15	104011-96					✓	✓		
104011	OG-11-0-3	104011-97					✓	✓		
104011	SG-H10-0-3	104011-98					✓	✓		
104011	SG-H10-6-9	104011-99					✓	✓		
104011	SG-H10-12-15	104011-100					✓	✓		
104011	SG-I9-0-3	104011-101					✓	✓		
104011	SG-I9-6-9	104011-102					✓	✓		
104011	SG-I9-12-15	104011-103					✓	✓		
104011	SG-I10-0-3	104011-104					✓	✓		
104011	SG-I10-6-9	104011-105					✓	✓		
104011	SG-I10-12-15	104011-106					✓	✓		

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Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	VOC	SVOC	SIM	PCB	Fuels	Metals	Cr^{+6}	TOC
104011	OG-14-0-3	104011-107					✓	✓		
104011	OG-14-6-9	104011-108					✓	✓		
104011	OG-14-12-15	104011-109					✓	✓		
104011	OG-15-0-3	104011-110					✓	✓		
104011	OG-15-6-9	104011-111					✓	✓		
104011	OG-15-12-15	104011-112					✓	✓		
104011	RB-033111	104011-113					✓	✓		
104099	MW-1-040911	104099-01	✓	✓	✓		✓	✓		
104099	MW-2-040911	104099-02	✓	✓	✓		✓	✓		
104099	MW-4-040911	104099-03	✓	✓	✓		✓	✓		
104099	MW-5-040911	104099-04	✓	✓	✓		✓	✓		
104099	MW-6-040911	104099-05	✓	✓	✓		✓	✓		
104099	MW-7-040911	104099-06	✓	✓	✓		✓	✓		
104099	MW-1-040911-D	104099-07	✓	✓	✓		✓	✓		

DATA VALIDATION REPORT
Crownhill Elementary
Volatile Organic Compounds by Method SW8260C

This report documents the review of analytical data from the analysis of soil and groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
103342	29 Soil	EPA Stage 2A
103360	1 Rinsate Blank	EPA Stage 2A
104099	7 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. Ten percent (10%) of the QC sample results were also verified. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes (MS)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reported Results
	Surrogates		Reporting Limits
1	Laboratory Control Samples (LCS/LCSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

SDG 103360: One rinsate blank, RB-032511, was submitted. No target compounds were detected in this blank.

Laboratory Control Samples

SDG 103342: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) relative percent difference (RPD) value for dichlorodifluoromethane (31%) was greater than the 20% control limit. Dichlorodifluoromethane was not detected in the associated samples; no qualifiers were required.

Matrix Spikes

SDG 103360: A matrix spike (MS) analysis was performed using a batch QC sample. The percent recovery (%R) values for trichlorofluoromethane, 1,1-dichloroethene, and methylene chloride were less than the lower control limits. No qualifiers were applied since the parent sample was not from this SDG.

Field Duplicates

The RPD control limit is 35% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL (soils) or the RL (waters).

SDG 103342: One set of field duplicates were submitted: NG-C7-7 & NG-A7-7. No target analytes were detected in either sample. Field precision was acceptable.

SDG 104099: One set of field duplicates were submitted: MW-1-040911 & MW-1-040911-D. No target analytes were detected in either sample. Field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS recoveries. Precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values, with the exception noted above.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Semivolatile Organic Compounds by Method SW8270D

This report documents the review of analytical data from the analysis of soil and groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
103342	28 Soil	EPA Stage 2A
103360	1 Rinsate Blank	EPA Stage 2A
104099	7 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. Ten percent (10%) of the QC sample results were also verified. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
1	Laboratory Control Samples (LCS/LCSD)	2	Reported Results
2	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blank

SDG 103360: One rinsate blank, RB-032511, was submitted with this sample delivery group (SDG). No target compounds were detected in this blank.

Laboratory Control Samples

SDG 103342: Two laboratory control samples (LCS) were analyzed. Laboratory control sample duplicates (LCSD) were not analyzed. The percent recovery (%R) value for 4-nitrophenol in the first LCS and dimethyl phthalate and 4-nitrophenol in the second LCS were greater than the upper control limits. These compounds were not detected in the associated samples; no action was necessary based on the potential high bias.

SDG 104099: The relative percent difference (RPD) values for benzoic acid and 3-nitroaniline were greater than the 20% control limit in the LCS/LCSD. These analytes were not detected in the associated samples; no qualifiers were required.

Surrogate Compounds

SDG 103342: The surrogates 2-fluorophenol, phenol-d6, and 2,4,6-tribromophenol were not recovered in Sample SG-J7-0-3. The %R value for nitrophenol-d5 was greater than the upper control limit. This sample was analyzed at a 500x dilution factor; therefore no qualifiers were required.

The %R value for 2,4,6-tribromophenol was less than the lower control limit in Sample SG-J7-6-9. The sample was diluted 10x and reanalyzed. The 2,4,6-tribromophenol %R value was less than the lower control limit in the reanalysis. The results from original results should be used instead. The results for the compound associated with this surrogate, n-nitrosodiphenylamine, 4-nitroaniline, 4,6-dinitro-2-methylphenol, 4-bromophenyl phenyl ether, hexachlorobenzene, and pentachlorophenol were estimated (UJ-13) to indicate a potential low bias.

Matrix Spike/Matrix Spike Duplicates

SDG 103342: Two sets of matrix spike/matrix spike duplicate (MS/MSD) analyses were performed with this SDG. For QC Sample SG-G2-6-9, the relative percent difference (RPD) values for 4-chloroaniline and 3-nitroaniline were greater than the 20% control limit. These analytes were not detected in the parent sample; no qualifiers were required.

For QC Sample NG-C7-0-3, the RPD values for bis(2-chloroethyl)ether and 2,4-dinitrotoluene were greater than the 20% control limit. These analytes were not detected in the parent sample; no qualifiers were required. The MSD %R value for 4-chloroaniline was less than the lower control limit. The 4-chloroaniline %R value was within control limits in the MS. No qualifier was assigned based on the single outlier.

SDG 103360 & 104099: The laboratory did not analyze MS/MSD samples due to insufficient sample volume. Laboratory accuracy and precision were evaluated from the LCS/LCSD %R and RPD values.

Field Duplicates

The RPD control limit is 35% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than the RL.

SDG 104099: One set of field duplicates, Samples MW-1-040911 & MW-1-040911-D, was submitted with this SDG. No target analytes were detected in either the sample or duplicate. Field precision was acceptable.

Reported Results

SDG 103342: The %R values for the internal standard, chrysene-d12 were outside of the control limits in Samples SG-J6-0-3, SG-H3-0-3, SG-J7-0-3, and SG-J7-6-9. The affected analytes in these samples were "J" flagged by the laboratory. These samples were analyzed at dilutions; both sets of results were reported. In order to achieve the lowest possible reporting limits, the results from the original analyses should be used. The results for all compounds associated with chrysene-d12 were estimated (J/UJ-19) in the original analyses. All results from the re-analyses were flagged do-not-report (DNR-11).

Sample SG-J7-0-3 was analyzed at both 500x and 1000x dilutions. Bothe sets of data were reported. The results from the 500x dilution should be used; all results form the 1000x dilution were flagged (DNR-11).

Sample SG-J7-6-9 was re-analyzed at a 10x dilution due to a surrogate outlier in the original analysis. The surrogate was also out in the dilution. The results from the original analysis should be used. All results from the 10x dilution were flagged (DNR-11).

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD recovery values; and precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values.

Data were estimated based on surrogate and internal standard recovery outliers. Data were flagged as do-not-report (DNR) to indicate which results should not be used form multiple reported analyses. A usable result remains for all analytes and all samples; therefore completeness is unaffected.

Data flagged DNR should not be used for any purpose. All other data, as qualified, is acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Polycyclic Aromatic Hydrocarbons by Method SW8270D SIM

This report documents the review of analytical data from the analysis of soil and groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
103342	29 Soil	EPA Stage 2A
103360	1 Rinsate Blank	EPA Stage 2A
104099	7 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. Ten percent (10%) of the QC sample results were also verified. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
1	Laboratory Control Samples (LCS)	2	Reported Results
	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blank

SDG 103360: One rinsate blank, RB-032511, was submitted with this sample delivery group (SDG). No target compounds were detected in this blank.

Surrogate Compounds

SDG 103342: The percent recovery (%R) value for anthracene-d10 in Sample SG-J7-0-3 was greater than the upper control limit. No qualifiers were assigned as the sample was analyzed at a 500x dilution.

Laboratory Control Samples

SDG 103360: The laboratory control sample (LCS) %R value for fluorene was greater than the upper control limit. The laboratory control samples duplicate (LCSD) %R value was within control limits. No action was taken based on the single outlier.

SDG 104099: The LCSD %R value for fluoranthene was greater than the upper control limit. The LCS %R value was within control limits. No action was taken based on the single outlier.

Matrix Spike/Matrix Spike Duplicates

SDG 103360 & 104099: Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed with these SDG. Laboratory accuracy and precision were evaluated using the LCS/LCSD results.

Field Duplicates

The relative percent difference (RPD) control limit is 35% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL (soils) or the RL (waters).

SDG 103342: One set of field duplicates were submitted: NG-C7-6-9 & NG-A7-6-9. No target analytes were detected in either the sample or duplicate. Field precision was acceptable.

SDG 104099: One set of field duplicates were submitted: MW-1-040911 & MW-1-040911-D. All field precision criteria were met.

Reported Results

SDG 103342: The naphthalene result in the initial analysis of Sample SG-F3-0-3 exceeded the calibrated range of the instrument. The sample was diluted 50x and reanalyzed. Both sets of results were reported. The naphthalene result in the original analysis was qualified do-not-report (DNR-20). The results for all analytes except naphthalene in the 50x dilution were flagged (DNR-11).

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD recovery values. Precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values.

Data were flagged do-not-report (DNR) to indicate which result should not be used form multiple reported analyses. A usable result remains for all analytes and all samples; therefore completeness was no affected.

Data that has been flagged DNR should not be used for any purpose.

All other data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Polychlorinated Biphenyls by Method SW8082

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
103342	29 Soil	EPA Stage 2A
103360	1 Rinsate Blank	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. Ten percent (10%) of the quality control sample results were also verified. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Laboratory Duplicate
	Laboratory Blanks		Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
1	Field Blanks	1	Field Duplicates
	Laboratory Control Samples (LCS/LCSD)		Reporting Limits
	Surrogate Compounds		Reported Results

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

SDG 103360: One rinsate blank, RB-032511, was submitted. No target compounds were detected in this blank.

Matrix Spike/Matrix Spike Duplicates

SDG 103360: Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed due to insufficient sample volume. Laboratory accuracy and precision were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and relative percent difference (RPD) values.

Field Duplicates

The RPD control limit is 35% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG 103342: One set of field duplicates were submitted: NG-C7-6-9 & NG-A7-6-9. No target analytes were detected in either the sample or duplicate. Field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values. Precision was also acceptable as demonstrated by the laboratory duplicate, field duplicate, LCS/LCSD, and MS/MSD RPD values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Diesel Range Organic Hydrocarbons by NWTPH-Dx

This report documents the review of analytical data from the analysis of soil and groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
103342	44 Soil	EPA Stage 2A
103360	72 Soil, 1 Rinsate Blank	EPA Stage 2A
103384	87 Soil	EPA Stage 2A
103408	87 Soil	EPA Stage 2A
103426	3 Soil	EPA Stage 2A
103428	123 Soil	EPA Stage 2A
104099	7 Groundwater	EPA Stage 2A
104011	112 Soil, 1 Rinsate Blank	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. Ten percent (10%) of the QC sample results were also verified. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times		Matrix Spike/Matrix Spike Duplicate Samples (MS/MSD)
	Laboratory Blanks		Laboratory Duplicates
1	Field Blanks	1	Field Duplicates
1	Surrogates	2	Reported Results
	Laboratory Control Samples (LCS/LCSD)		Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

SDG 103360: One rinsate blank, Sample RB-032511, was submitted. No target analytes were detected in this rinsate blank.

SDG 104011: One rinsate blank, RB-033111, was submitted with this SDG. No target analytes were detected in this rinsate blank.

Surrogate Compounds

SDG 103384: The percent recovery (%R) value for the surrogate o-terphenyl in Sample NG-D3-6-9 was greater than the upper control limit, at 206%. This sample was analyzed at dilution (10x); no qualifiers were required.

Field Duplicates

The relative percent difference (RPD) control limit is 35% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL (soils) or the RL (waters).

SDG 103342: One set of field duplicates were submitted: NG-C7-6-9 and NG-A7-6-9. No target analytes were detected in either the sample or duplicate. Field precision was acceptable.

SDG 103384: Three sets of field duplicates were submitted: NG-B3-0-3 & NG-B10-0-3, NG-B3-6-9 & NG-B10-6-9, and NG-B3-12-15 & NG-B10-12-15. No target analytes were detected in any of these samples. Field precision was acceptable.

SDG 103408: Three sets of field duplicates were submitted: SG-E1-0-3 & SG-E7-0-3, SG-E1-6-9 & SG-E7-6-9, and SG-E1-12-15 & SG-E7-12-15. No target analytes were detected in any of these samples. Field precision was acceptable.

SDG 103428: Three sets of field duplicates were submitted: NG-L3-0-3 & NG-L6-0-3, SG-L1-12-15 & SG-L11-12-15, and SG-I5-6-9 & SG-I11-6-9. No target analytes were detected in any of these samples. Field precision was acceptable.

SDG 104011: Nineteen sets of field duplicates were submitted with this SDG. N No target analytes were detected in any of these samples. Field precision was acceptable.

Sample	Duplicate	Sample	Duplicate
OG-10-0-3	OG-11-0-3	OG-6-0-3	OG-15-0-3
SG-I8-0-3	SG-H9-0-3	OG-6-6-9	OG-15-6-9
SG-I8-6-9	SG-H9-6-9	OG-6-12-15	OG-15-12-15
SG-I8-12-15	SG-H9-12-15	OG-7-0-3	OG-14-0-3
OG-9-0-3	OG-12-0-3	OG-7-6-9	OG-14-6-9
OG-9-6-9	OG-12-6-9	OG-7-12-15	OG-14-12-15
OG-9-12-15	OG-12-12-15	SG-I9-0-3	SG-H10-0-3
OG-8-0-3	OG-13-0-3	SG-I9-6-9	SG-H10-6-9
OG-8-6-9	OG-13-6-9	SG-I9-12-15	SG-H10-12-15
OG-8-12-15	OG-13-12-15		

SDG 104099: One set of field duplicates, Samples MW-1-040911 and MW-1-040911-D, was submitted with this SDG. No target analytes were detected in either the sample or duplicate. Field precision was acceptable.

Reported Results

Several results were flagged by the laboratory with an "x" to indicate that the chromatographic pattern in the sample did not match that of the fuel standard used for calibration. These "x" flagged results were estimated (J-2). The following results were qualified:

SDG	Sample
103342	SG-G2-0-3: DRO SG-J7-0-3: DRO
103360	NG-F9-6-9: DRO NG-F9-12-15: DRO NG-H6-6-9: DRO NG-H6-12-15: DRO NG-G9-6-9: DRO NG-G7-6-9: DRO NG-H5-6-9: DRO NG-H5-12-15: DRO
103408	SG-F6-0-3: DRO SG-F5-12-15: DRO
103428	NG-E2-0-3: DRO SG-F5-12-15: DRO and RRO SG-H2-0-3: DRO SG-K3-12-15: DRO SG-L6-6-9: DRO and RRO
104011	SG-K7-0-3: DRO
104099	MW-5-040911: DRO and RRO

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and matrix spike/matrix spike duplicate (MS/MSD) %R values. Precision was also acceptable as demonstrated by the field duplicate, LCS/LCSD, and MS/MSD RPD values.

Data were estimated because the chromatographic pattern in the sample did not match the fuel standard.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Metals by Method 200.8
Hexavalent Chromium by Method SW7196

This report documents the review of analytical data from the analysis of soil and groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
103342	44 Soil	EPA Stage 2A
103360	72 Soil, 1 Rinsate Blank	EPA Stage 2A
104099	7 Groundwater	EPA Stage 2A
103384	87 Soil	EPA Stage 2A
103408	87 Soil	EPA Stage 2A
103428	123 Soil	EPA Stage 2A
104011	112 Soil, 1 Rinsate Blank	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables, with the exception noted below. The laboratory followed adequate corrective action processes.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. Ten percent (10%) of the QC sample results were also verified. No errors were noted.

SDG 103360: The rinsate blank analysis for hexavalent chromium was subcontracted to Fremont Analytical, Seattle, Washington. The result for this sample is not in the EDD

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

	Sample Receipt, Preservation, and Holding Times		Laboratory Duplicates
	Method Blanks	2	Field Duplicates
1	Field Blanks		Reported Results
	Laboratory Control Samples (LCS)		Reporting Limits
	Matrix Spike/Matrix Spike Duplicate (MS/MSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

SDG 103360: One rinsate blank, Sample RB-032511, was submitted. Copper and zinc were detected in this rinsate blank. In order to evaluate the effect on the associated samples, action levels were established at 5x the blank concentrations. All copper and zinc results in the associated samples were greater than the action levels; therefore no qualification of data was necessary.

SDG 104011: One rinsate blank, RB-033111, was submitted with this SDG. No target analytes were detected in this rinsate blank.

Matrix Spike/Matrix Spike Duplicate

SDG 104099: Matrix spike/matrix spike duplicate analyses were performed using a batch QC sample for dissolved metals. The arsenic percent recovery (%R) values were greater than the upper control limit. No qualifiers were applied as the parent sample was not from this sample delivery group (SDG).

Field Duplicates

The relative percent difference (RPD) control limit is 35% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG 104099: One set of field duplicates, Samples MW-1-040911 & MW-1-040911-D, was submitted with this SDG. Field precision was acceptable.

Field Duplicates

The RPD control limit is 35% for results greater than five times the RL. For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG 103342: One set of field duplicates were submitted: NG-C7-6-9 and NG-A7-6-9. The lead result for the field duplicate was less than 5x the RL and the difference between the sample and duplicate was greater than 2x the RL. The lead results for these two samples were estimated (J-9).

SDG 103384: Three sets of field duplicates were submitted: NG-B3-0-3 & NG-B10-0-3, NG-B3-6-9 & NG-B10-6-9, and NG-B3-12-15 & NG-B10-12-15. All field precision criteria were met.

SDG 103408: Three sets of field duplicates were submitted: SG-E1-0-3 & SG-E7-0-3, SG-E1-6-9 & SG-E7-6-9, and SG-E1-12-15 & SG-E7-12-15. For samples SG-E1-0-3 & SG-E7-0-3, the RPD for lead (61.9%) was greater than the control limit. The lead results for these two samples were estimated (J-9).

SDG 103428: Three sets of field duplicates were submitted: NG-L3-0-3 & NG-L6-0-3, SG-L1-12-15 & SG-L11-12-15, and SG-I5-6-9 & SG-I11-6-9. All field precision criteria were met.

SDG 104011: Nineteen sets of field duplicates were submitted with this SDG. Field precision was acceptable.

Sample	Duplicate	Sample	Duplicate
OG-10-0-3	OG-11-0-3	OG-6-0-3	OG-15-0-3
SG-I8-0-3	SG-H9-0-3	OG-6-6-9	OG-15-6-9
SG-I8-6-9	SG-H9-6-9	OG-6-12-15	OG-15-12-15
SG-I8-12-15	SG-H9-12-15	OG-7-0-3	OG-14-0-3
OG-9-0-3	OG-12-0-3	OG-7-6-9	OG-14-6-9
OG-9-6-9	OG-12-6-9	OG-7-12-15	OG-14-12-15
OG-9-12-15	OG-12-12-15	SG-I9-0-3	SG-H10-0-3
OG-8-0-3	OG-13-0-3	SG-I9-6-9	SG-H10-6-9
OG-8-6-9	OG-13-6-9	SG-I9-12-15	SG-H10-12-15
OG-8-12-15	OG-13-12-15		

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the LCS and MS/MSD recoveries. With the exception noted above, precision was also acceptable, as demonstrated by the MS/MSD, laboratory and field duplicate RPD values.

Data were estimated due to a field duplicate precision outlier.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Total Organic Carbon by Method SW9060

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Aquatic Research, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
103427	15 Soil	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. Ten percent (10%) of the QC sample results were also verified. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

Sample Receipt, Preservation, and Holding Times		Laboratory Duplicates
Method Blanks	1	Field Duplicates
Laboratory Control Samples (LCS)		Reported Results
Matrix Spikes (MS)		Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Duplicates

No field duplicates were submitted.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy and precision were acceptable as demonstrated by the laboratory control sample and matrix spike compound recoveries and duplicate relative percent difference value.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS, REASON CODES, AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Hold Time	Waters: 14 days preserved 7 Days: unpreserved (for aromatics) Solids: 14 Days	J(+)/UJ(-) if hold times exceeded If exceeded by > 3X HT: J(+)/R(-) (EcoChem PJ)	1
Tuning	BFB Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Storage Blank	One per SDG <CRQL	U(+) the specific analyte(s) results in all assoc.samples using the 5x or 10x rule	7
Trip Blank	Frequency as per project QAPP	Same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned	18
Field Blanks (if required in QAPP)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS *low conc. H2O VOA*	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS *regular VOA (H2O & solid)*	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Added to all samples Within method control limits	J(+) if %R >UCL J(+)/UJ(-) if %R <LCL but >10% (see PJ[1]) J(+)/R(-) if <10%	13
Internal Standard (IS)	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

PJ[1] No action if there are 4+ surrogates and only 1 outlier.

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

EcoChem Validation Guidelines for Pesticides, PCBs, Herbicides, and Phenol by GC/ECD (Based on Organic NFG 1999 & EPA SW-846 Methods 8081/8082/8041/8151)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext/analyzed > HT J(+)/R(-) if ext/analyzed > 3X HT (EcoChem PJ)	1
Resolution Check	Beginning of ICAL Sequence Within RTW Resolution >90%	Narrate (Use Professional Judgement to qualify)	14
Instrument Performance (Breakdown)	DDT Breakdown: < 20% Endrin Breakdown: <20% Combined Breakdown: <30% Compounds within RTW	J(+) DDT NJ(+) DDD and/or DDE R(-) DDT - If (+) for either DDE or DDD J(+) Endrin NJ(+) EK and/or EA R(-) Endrin - If (+) for either EK or EA	5A
Retention Times	Surrogates: TCX (+/- 0.05); DCB (+/- 0.10) Target compounds: elute before heptachlor epoxide (+/- 0.05) elute after heptachlor epoxide (+/- 0.07)	NJ(+)/R(-) results for analytes with RT shifts For full DV, use PJ based on examination of raw data	5B
Initial Calibration	Pesticides: Low=CRQL, Mid=4X, High=16X Multiresponse - one point Calibration %RSD<20% %RSD<30% for surr; two comp. may exceed if <30% Resolution in Mix A and Mix B >90%	J(+)/UJ(-)	5A
Continuing Calibration	Alternating PEM standard and INDA/INDB standards every 12 hours (each preceeded by an inst. Blank) %D < 25% Resolution >90% in IND mixes; 100% for PEM	J(+)/UJ(-) J(+)R(-) if %D > 90% PJ for resolution	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample result is < CRQL and < 5X rule (raise sample value to CRQL) U(+) if sample result is > or equal to CRQL and < 5X rule (at reported sample value)	7
Instrument Blanks	Analyzed at the beginning of every 12 hour sequence No analyte > 1/2 CRQL	Same as Method Blank	7
Field Blanks	Not addressed by NFG No results > CRQL	Apply 5X rule; U(+) < action level	6

EcoChem Validation Guidelines for Pesticides, PCBs, Herbicides, and Phenol by GC/ECD (Based on Organic NFG 1999 & EPA SW-846 Methods 8081/8082/8041/8151)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One set per matrix per batch Method Acceptance Criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One set per matrix per batch Method Acceptance Criteria	J(+) in parent sample if RPD > CL	9
LCS	One per SDG Method Acceptance Criteria	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	TCX and DCB added to every sample %R = 30-150%	J(+)/UJ(-) if both %R = 10 - 60% J(+) if both >150% J(+)/R(-) if any %R <10%	13
Quantitation/ Identification	Quantitated using ICAL calibration factor (CF) RPD between columns <40%	J(+) if RPD = 40 - 60% NJ(+) if RPD >60% EcoChem PJ - See TM-08	3
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11
Sample Clean-up	GPC required for soil samples Florisil required for all samples Sulfur is optional Clean-up standard check %R within CLP limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL	14
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate (Qualifiy if required by project QAPP)	9

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature & Preservation	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C	1
Holding Time	Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction	J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X (EcoChem PJ)	1
Initial Calibration	5 calibration points (All within 15% of true value) Linear Regression: $R^2 \geq 0.990$ If used, RSD of response factors ≤20%	Narrate if fewer than 5 calibration levels or if %R >15% J(+)/UJ(-) if R^2 <0.990 J(+)/UJ(-) if %RSD > 20%	5A
Mid-range Calibration Check Std.	Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115%	Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R >115%	5B
Method Blank	At least one per batch (≤20 samples) No results >RL	U (at the RL) if sample result is < RL & < 5X blank result.	7
		U (at reported sample value) if sample result is ≥ RL and < 5X blank result	7
Field Blanks (if required by project)	No results > RL	Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned.	6
MS samples (accuracy) (if required by project)	%R within lab control limits	Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. Use PJ if only one %R outlier	8
Precision: MS/MSD or LCS/LCSD or sample/dup	At least one set per batch (≤10 samples) RPD ≤ lab control limit	J(+) if RPD > lab control limits	9
LCS (not required by method)	%R within lab control limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% (EcoChem PJ)	10

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Surrogates	2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150%	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% No action if 2 or more surrogates are used, and only one is outside control limits. (EcoChem PJ)	13
Pattern Identification	Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match.	J(+)	2
Field Duplicates	Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50%	Narrate (Use Professional Judgement to qualify)	9
Two analyses for one sample (dilution)	Report only one result per analyte	"DNR" (or client requested qualifier) all results that should not be reported. (See TM-04)	11

EcoChem Validation Guidelines for Metals Analysis by ICP-MS (Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

EcoChem Validation Guidelines for Conventional Chemistry Analysis (Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler Temperature 4°C ±2°C Preservation: Method Specific	Use Professional Judgment to qualify based to qualify for coole temp outliers J(+)/UJ(-) if preservation requirements not met	1
Holding Time	Method Specific	Professional Judgment J(+)/UJ(-) if holding time exceeded J(+)/R(-) if HT exceeded by > 3X	1
Initial Calibration	Method specific r>0.995	Use professional judgment J(+)/UJ(-) for r < 0.995	5A
Initial Calibration Verification (ICV)	Where applicable to method Independent source analyzed immediately after calibration %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5A
Continuing Cal Verification (CCV)	Where applicable to method Every ten samples, immed. following ICV/ICB and end of run %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5B

Initial and Continuing Cal Blanks (ICB/CCB)	Where applicable to method
	After each ICV and CCV every ten samples and end of run
	| blank| < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Method Blank	One per matrix per batch
	(not to exceed 20 samples)
	blank < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blk value, U(+) results < action level
		For (-) blk value, J(+)/UJ(-) results < action level
			7

Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Matrix Spike	One per matrix per batch; 5% frequency 75-125% for samples less than 4 x spike level	J(+) if %R > 125% or < 75% UJ(-) if %R = 30-74% R(+/-) results < IDL if %R < 30%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x RL Diff <RL for samples >RL and <5 x RL (may use RPD < 35%, Diff < 2X RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

EcoChem Validation Guidelines for Conventional Chemistry Analysis (Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5X RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff<RL Solid: Diff < 2X RL	J(+)/UJ(-) in parent samples only	9

EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

QUALIFIED DATA SUMMARY TABLE
Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Reason Code
103342	NG-C7-6-9	103342-54	EPA200.8	Lead	5.56	mg/kg		J	9
103342	NG-A7-6-9	103342-65	EPA200.8	Lead	2.72	mg/kg		J	9
103408	SG-E1-0-3	103408-73	EPA200.8	Lead	27.3	mg/kg		J	9
103408	SG-E7-0-3	103408-76	EPA200.8	Lead	14.4	mg/kg		J	9
104099	MW-4-040911	104099-03	EPA200.8	Arsenic	3.8	ug/L		J	8
104099	MW-5-040911	104099-04	EPA200.8	Arsenic	1.38	ug/L		J	8
104099	MW-6-040911	104099-05	EPA200.8	Arsenic	6.33	ug/L		J	8,14
104099	MW-6-040911	104099-05	EPA200.8	Arsenic	4.93	ug/L		J	14
103342	SG-G2-0-3	103342-08	NWTPH-Dx	Diesel Range Hydrocarbons	61	mg/kg	x	J	2
103342	SG-J7-0-3	103342-60	NWTPH-Dx	Diesel Range Hydrocarbons	940	mg/kg	x	J	2
103360	NG-F9-6-9	103360-11	NWTPH-Dx	Diesel Range Hydrocarbons	1000	mg/kg	x	J	2
103360	NG-F9-12-15	103360-12	NWTPH-Dx	Diesel Range Hydrocarbons	310	mg/kg	x	J	2
103360	NG-H6-6-9	103360-33	NWTPH-Dx	Diesel Range Hydrocarbons	410	mg/kg	x	J	2
103360	NG-H6-12-15	103360-34	NWTPH-Dx	Diesel Range Hydrocarbons	180	mg/kg	x	J	2
103360	NG-G9-6-9	103360-47	NWTPH-Dx	Diesel Range Hydrocarbons	200	mg/kg	x	J	2
103360	NG-G7-6-9	103360-50	NWTPH-Dx	Diesel Range Hydrocarbons	140	mg/kg	x	J	2
103360	NG-H5-6-9	103360-70	NWTPH-Dx	Diesel Range Hydrocarbons	83	mg/kg	x	J	2
103360	NG-H5-12-15	103360-71	NWTPH-Dx	Diesel Range Hydrocarbons	210	mg/kg	x	J	2
103408	SG-F6-0-3	103408-43	NWTPH-Dx	Diesel Range Hydrocarbons	110	mg/kg	x	J	2
103408	SG-F6-12-15	103408-45	NWTPH-Dx	Diesel Range Hydrocarbons	260	mg/kg	x	J	2
103428	SG-K3-12-15	103428-107	NWTPH-Dx	Diesel Range Hydrocarbons	97	mg/kg	x	J	2
103428	NG-E2-0-3	103428-20	NWTPH-Dx	Diesel Range Hydrocarbons	140	mg/kg	x	J	2
103428	SG-F5-12-15	103428-61	NWTPH-Dx	Diesel Range Hydrocarbons	170	mg/kg	x	J	2
103428	SG-F5-12-15	103428-61	NWTPH-Dx	Lube Oil Range Hydrocarbons	490	mg/kg	x	J	2
103428	SG-H2-0-3	103428-71	NWTPH-Dx	Diesel Range Hydrocarbons	160	mg/kg	x	J	2
103428	SG-L6-6-9	103428-87	NWTPH-Dx	Diesel Range Hydrocarbons	970	mg/kg	x	J	2
103428	SG-L6-6-9	103428-87	NWTPH-Dx	Lube Oil Range Hydrocarbons	780	mg/kg	x	J	2
104011	SG-K7-0-3	104011-46	NWTPH-Dx	Diesel Range Hydrocarbons	58	mg/kg	x	J	2
104099	MW-5-040911	104099-04	NWTPH-Dx	Diesel Range Hydrocarbons	2100	ug/L	x	J	2
104099	MW-5-040911	104099-04	NWTPH-Dx	Lube Oil Range Hydrocarbons	310	ug/L	x	J	2
103342	SG-J6-0-3	103342-02	SW8270D	1,2,4-Trichlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	1,2-Dichlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	1,3-Dichlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	1,4-Dichlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2,4,5-Trichlorophenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2,4,6-Trichlorophenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2,4-Dichlorophenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2,4-Dimethylphenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2,4-Dinitrophenol	9	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2,4-Dinitrotoluene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2,6-Dinitrotoluene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2-Chloronaphthalene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2-Chlorophenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2-Methylnaphthalene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2-Methylphenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2-Nitroaniline	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	2-Nitrophenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	3 & 4 Methylphenol	6	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	3-Nitroaniline	9	mg/kg	U	DNR	11

QUALIFIED DATA SUMMARY TABLE
Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Reason Code
103342	SG-J6-0-3	103342-02	SW8270D	4,6-Dinitro-2-methylphenol	9	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	4-Bromophenyl phenyl ether	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	4-Chloro-3-methylphenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	4-Chloroaniline	30	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	4-Chlorophenyl phenyl ether	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	4-Nitroaniline	9	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	4-Nitrophenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Benzoic acid	15	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Benzyl alcohol	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Benzyl butyl phthalate	0.03	mg/kg	UJ	UJ	19
103342	SG-J6-0-3	103342-02	SW8270D	Benzyl butyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Bis(2-chloro-1-methylethyl) ether	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Bis(2-chloroethoxy)methane	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Bis(2-chloroethyl) ether	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Bis(2-ethylhexyl) phthalate	0.3	mg/kg	UJ	UJ	19
103342	SG-J6-0-3	103342-02	SW8270D	Bis(2-ethylhexyl) phthalate	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Carbazole	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Dibenzofuran	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Diethyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Dimethyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Di-n-butyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Di-n-octyl phthalate	0.03	mg/kg	UJ	UJ	19
103342	SG-J6-0-3	103342-02	SW8270D	Di-n-octyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Hexachlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Hexachlorobutadiene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Hexachlorocyclopentadiene	0.9	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Hexachloroethane	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Isophorone	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Nitrobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	N-Nitroso-di-n-propylamine	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	N-Nitrosodiphenylamine	0.3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Pentachlorophenol	3	mg/kg	U	DNR	11
103342	SG-J6-0-3	103342-02	SW8270D	Phenol	3	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	1,2,4-Trichlorobenzene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	1,2-Dichlorobenzene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	1,3-Dichlorobenzene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	1,4-Dichlorobenzene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2,4,5-Trichlorophenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2,4,6-Trichlorophenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2,4-Dichlorophenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2,4-Dimethylphenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2,4-Dinitrophenol	45	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2,4-Dinitrotoluene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2,6-Dinitrotoluene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2-Chloronaphthalene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2-Chlorophenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2-Methylnaphthalene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2-Methylphenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	2-Nitroaniline	1.5	mg/kg	U	DNR	11

QUALIFIED DATA SUMMARY TABLE
Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Reason Code
103342	SG-H3-0-3	103342-19	SW8270D	2-Nitrophenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	3 & 4 Methylphenol	30	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	3-Nitroaniline	45	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	4,6-Dinitro-2-methylphenol	45	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	4-Bromophenyl phenyl ether	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	4-Chloro-3-methylphenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	4-Chloroaniline	150	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	4-Chlorophenyl phenyl ether	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	4-Nitroaniline	45	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	4-Nitrophenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Benzoic acid	75	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Benzyl alcohol	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Benzyl butyl phthalate	0.060	mg/kg	J	J	19
103342	SG-H3-0-3	103342-19	SW8270D	Benzyl butyl phthalate	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Bis(2-chloro-1-methylethyl) ether	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Bis(2-chloroethoxy)methane	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Bis(2-chloroethyl) ether	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Bis(2-ethylhexyl) phthalate	0.3	mg/kg	UJ	UJ	19
103342	SG-H3-0-3	103342-19	SW8270D	Bis(2-ethylhexyl) phthalate	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Carbazole	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Dibenzofuran	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Diethyl phthalate	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Dimethyl phthalate	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Di-n-butyl phthalate	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Di-n-octyl phthalate	0.03	mg/kg	UJ	UJ	19
103342	SG-H3-0-3	103342-19	SW8270D	Di-n-octyl phthalate	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Hexachlorobenzene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Hexachlorobutadiene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Hexachlorocyclopentadiene	4.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Hexachloroethane	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Isophorone	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Nitrobenzene	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	N-Nitroso-di-n-propylamine	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	N-Nitrosodiphenylamine	1.5	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Pentachlorophenol	15	mg/kg	U	DNR	11
103342	SG-H3-0-3	103342-19	SW8270D	Phenol	15	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	1,2,4-Trichlorobenzene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	1,2-Dichlorobenzene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	1,3-Dichlorobenzene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	1,4-Dichlorobenzene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2,4,5-Trichlorophenol	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2,4,6-Trichlorophenol	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2,4-Dichlorophenol	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2,4-Dimethylphenol	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2,4-Dinitrophenol	900	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2,4-Dinitrotoluene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2,6-Dinitrotoluene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2-Chloronaphthalene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2-Chlorophenol	300	mg/kg	U	DNR	11

QUALIFIED DATA SUMMARY TABLE
Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Reason Code
103342	SG-J7-0-3	103342-60	SW8270D	2-Methylnaphthalene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2-Methylphenol	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2-Nitroaniline	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	2-Nitrophenol	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	3 & 4 Methylphenol	600	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	3-Nitroaniline	900	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	4,6-Dinitro-2-methylphenol	900	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	4-Bromophenyl phenyl ether	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	4-Chloro-3-methylphenol	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	4-Chloroaniline	3000	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	4-Chlorophenyl phenyl ether	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	4-Nitroaniline	900	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	4-Nitrophenol	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Benzoic acid	1500	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Benzyl alcohol	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Benzyl butyl phthalate	15	mg/kg	UJ	UJ	19
103342	SG-J7-0-3	103342-60	SW8270D	Benzyl butyl phthalate	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Bis(2-chloro-1-methylethyl) ether	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Bis(2-chloroethoxy)methane	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Bis(2-chloroethyl) ether	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Bis(2-ethylhexyl) phthalate	150	mg/kg	UJ	UJ	19
103342	SG-J7-0-3	103342-60	SW8270D	Bis(2-ethylhexyl) phthalate	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Carbazole	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Dibenzofuran	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Diethyl phthalate	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Dimethyl phthalate	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Di-n-butyl phthalate	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Di-n-octyl phthalate	15	mg/kg	UJ	UJ	19
103342	SG-J7-0-3	103342-60	SW8270D	Di-n-octyl phthalate	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Hexachlorobenzene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Hexachlorobutadiene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Hexachlorocyclopentadiene	90	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Hexachloroethane	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Isophorone	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Nitrobenzene	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	N-Nitroso-di-n-propylamine	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	N-Nitrosodiphenylamine	30	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Pentachlorophenol	300	mg/kg	U	DNR	11
103342	SG-J7-0-3	103342-60	SW8270D	Phenol	300	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	1,2,4-Trichlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	1,2-Dichlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	1,3-Dichlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	1,4-Dichlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2,4,5-Trichlorophenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2,4,6-Trichlorophenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2,4-Dichlorophenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2,4-Dimethylphenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2,4-Dinitrophenol	9	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2,4-Dinitrotoluene	0.3	mg/kg	U	DNR	11

QUALIFIED DATA SUMMARY TABLE
Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Reason Code
103342	SG-J7-6-9	103342-62	SW8270D	2,6-Dinitrotoluene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2-Chloronaphthalene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2-Chlorophenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2-Methylnaphthalene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2-Methylphenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2-Nitroaniline	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	2-Nitrophenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	3 & 4 Methylphenol	6	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	3-Nitroaniline	9	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	4,6-Dinitro-2-methylphenol	0.9 js	mg/kg	U	UJ	13
103342	SG-J7-6-9	103342-62	SW8270D	4,6-Dinitro-2-methylphenol	9	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	4-Bromophenyl phenyl ether	0.03 js	mg/kg	U	UJ	13
103342	SG-J7-6-9	103342-62	SW8270D	4-Bromophenyl phenyl ether	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	4-Chloro-3-methylphenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	4-Chloroaniline	30	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	4-Chlorophenyl phenyl ether	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	4-Nitroaniline	0.9 js	mg/kg	U	UJ	13
103342	SG-J7-6-9	103342-62	SW8270D	4-Nitroaniline	9	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	4-Nitrophenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Benzoic acid	15	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Benzyl alcohol	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Benzyl butyl phthalate	0.03	mg/kg	UJ	UJ	19
103342	SG-J7-6-9	103342-62	SW8270D	Benzyl butyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Bis(2-chloro-1-methylethyl) ether	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Bis(2-chloroethoxy)methane	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Bis(2-chloroethyl) ether	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Bis(2-ethylhexyl) phthalate	0.3	mg/kg	UJ	UJ	19
103342	SG-J7-6-9	103342-62	SW8270D	Bis(2-ethylhexyl) phthalate	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Carbazole	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Dibenzofuran	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Diethyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Dimethyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Di-n-butyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Di-n-octyl phthalate	0.03	mg/kg	U	UJ	19
103342	SG-J7-6-9	103342-62	SW8270D	Di-n-octyl phthalate	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Hexachlorobenzene	0.03 js	mg/kg	U	UJ	13
103342	SG-J7-6-9	103342-62	SW8270D	Hexachlorobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Hexachlorobutadiene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Hexachlorocyclopentadiene	0.9	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Hexachloroethane	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Isophorone	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Nitrobenzene	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	N-Nitroso-di-n-propylamine	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	N-Nitrosodiphenylamine	0.03 js	mg/kg	U	UJ	13
103342	SG-J7-6-9	103342-62	SW8270D	N-Nitrosodiphenylamine	0.3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Pentachlorophenol	0.3 js	mg/kg	U	UJ	13
103342	SG-J7-6-9	103342-62	SW8270D	Pentachlorophenol	3	mg/kg	U	DNR	11
103342	SG-J7-6-9	103342-62	SW8270D	Phenol	3	mg/kg	U	DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Acenaphthene	0.11	mg/kg		DNR	11

QUALIFIED DATA SUMMARY TABLE
Aspect - Crownhill Elementary

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Reason Code
103342	SG-F3-0-3	103342-14	SW8270DSIM	Acenaphthylene	0.1	mg/kg	U	DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Anthracene	0.1	mg/kg	U	DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Benz(a)anthracene	0.11	mg/kg		DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Benzo(a)pyrene	0.1	mg/kg	U	DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Benzo(b)fluoranthene	0.11	mg/kg		DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Benzo(g,h,i)perylene	0.11	mg/kg		DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Benzo(k)fluoranthene	0.1	mg/kg	U	DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Chrysene	0.21	mg/kg		DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Dibenzo(a,h)anthracene	0.1	mg/kg	U	DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Fluoranthene	0.14	mg/kg		DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Fluorene	0.35	mg/kg		DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Indeno(1,2,3-cd)pyrene	0.1	mg/kg	U	DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Naphthalene	0.96	mg/kg	ve	DNR	20
103342	SG-F3-0-3	103342-14	SW8270DSIM	Phenanthrene	0.46	mg/kg		DNR	11
103342	SG-F3-0-3	103342-14	SW8270DSIM	Pyrene	0.26	mg/kg		DNR	11

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

Crownhill Elementary
July 2011 Groundwater Sampling

Prepared for:

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EcoChem Project: C22806-2

September 22, 2011

Approved for Release:

Chris Ransom
Project Manager
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PROJECT NARRATIVE

Basis for Data Validation

This report summarizes the results of the compliance review (EPA Stage 2A) performed on groundwater and quality control (QC) data for Crownhill Elementary. A complete list of samples is provided in the **Sample Index**.

Samples were analyzed by Friedman and Bruya, Inc., Seattle, Washington. The analytical methods and EcoChem project chemists are listed below.

Analysis	Method	Primary Review	Secondary Review
Volatile Organic Compounds	SW8260C	Melissa Swanson	Christine Ransom
Semivolatile Organic Compounds	SW8270D		
Polycyclic Aromatic Hydrocarbons	SW8270D SIM		
Diesel Range Organic Hydrocarbons	NWTPH-Dx		
Metals	200.8		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the *Sampling and Analysis Plan (SAP) Crownhill Elementary School* (Aspect, March 9, 2011); *National Functional Guidelines for Organic Data Review* (USEPA 1999, 2005); and *National Functional Guidelines for Inorganic Data Review* (USEPA 1994, 2004).

EcoChem's goal in assigning data validation qualifiers is to assist in proper data interpretation. If values are estimated (assigned a J), data may be used for site evaluation purposes; but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been labeled as do-not-report (DNR) should not be used for any purpose. Values with no data qualifier meet all data measurement quality objectives and are acceptable for use.

Data qualifier definitions, reason codes, and validation criteria are included as **Appendix A**. A Qualified Data Summary Table is included in **Appendix B**. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

SAMPLE INDEX
Crownhill Elementary - July 2011 GW Sampling

SDG	Sample ID	Lab ID	VOC	SVOC	SIM	DRO	Metals
107071	MW-1-070711	107071-01	✓	✓	✓	✓	✓
107071	MW-2-070711	107071-02	✓	✓	✓	✓	✓
107071	MW-4-070711	107071-03	✓	✓	✓	✓	✓
107071	MW-5-070711	107071-04	✓	✓	✓	✓	✓
107071	MW-6-070711	107071-05	✓	✓	✓	✓	✓
107071	MW-7-070711	107071-06	✓	✓	✓	✓	✓
107071	MW-8-070711	107071-07	✓	✓	✓	✓	✓

DATA VALIDATION REPORT
Crownhill Elementary – July 2011 Groundwater Sampling
Volatile Organic Compounds by Method SW8260C

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
107071	7 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative, with the exception noted below.

The relinquishing signature and date were not present on the chain-of-custody form. No further action was taken other than noting this anomaly.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted. No QC sample results were included in the EDD; these data were not verified.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times		Matrix Spikes (MS)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reported Results
	Surrogates		Reporting Limits
	Laboratory Control Samples (LCS/LCSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

No field blanks were submitted.

Field Duplicates

One set of field duplicates was submitted: MW-1-070711 and MW-8-070711. No target analytes were detected in either sample. Field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and matrix spike recoveries. Precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD relative percent difference values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – July 2011 Groundwater Sampling
Semivolatile Organic Compounds by Method SW8270D

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
107071	7 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative, with the exception noted below.

The relinquishing signature and date were not present on the chain-of-custody form. No further action was taken other than noting this anomaly.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted. No QC sample results were included in the EDD; these data were not verified.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
1	Laboratory Control Samples (LCS/LCSD)		Reported Results
	Surrogate Compounds		

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

In the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) the relative percent difference (RPD) value for benzoic acid was greater than the 20% control limit. This analyte was not detected in the associated samples; no qualifiers were required.

Matrix Spike/Matrix Spike Duplicates

The laboratory did not analyze matrix spike/matrix spike duplicate (MS/MSD) samples due to insufficient sample volume. Laboratory accuracy and precision were evaluated from the LCS/LCSD percent recovery (%R) and RPD values.

Field Duplicates

One set of field duplicates was submitted: MW-1-070711 and MW-8-070711. No target analytes were detected in either sample. Field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD recovery values. With the exception noted above, precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – July 2011 Groundwater Sampling
Polycyclic Aromatic Hydrocarbons by Method SW8270D SIM

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
107071	7 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative, with the exception noted below.

The relinquishing signature and date were not present on the chain-of-custody form. No further action was taken other than noting this anomaly.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted. No QC sample results were included in the EDD; these data were not verified.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
1	Laboratory Control Samples (LCS)		Reported Results
	Surrogate Compounds		

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

In the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) the relative percent difference (RPD) value for fluoranthene was greater than the 20% control limit. This analyte was not detected in the associated samples; no qualifiers were required.

Matrix Spike/Matrix Spike Duplicates

The laboratory did not analyze matrix spike/matrix spike duplicate (MS/MSD) samples due to insufficient sample volume. Laboratory accuracy and precision were evaluated from the LCS/LCSD percent recovery (%R) and RPD values.

Field Duplicates

One set of field duplicates was submitted: MW-1-070711 and MW-8-070711. All field precision criteria were met.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD recovery values. With the exception noted above, precision was acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – July 2011 Groundwater Sampling
Diesel Range Organic Hydrocarbons by NWTPH-Dx

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
107071	7 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative, with the exception noted below.

The relinquishing signature and date were not present on the chain-of-custody form. No further action was taken other than noting this anomaly.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted. No QC sample results were included in the EDD; these data were not verified.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spike/Matrix Spike Duplicate Samples (MS/MSD)
	Laboratory Blanks		Laboratory Duplicates
1	Field Blanks	1	Field Duplicates
	Surrogates	2	Reported Results
	Laboratory Control Samples (LCS/LCSD)		Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

The laboratory did not analyze matrix spike/matrix spike duplicate (MS/MSD) samples due to insufficient sample volume. Laboratory accuracy and precision were evaluated from the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) percent recovery (%R) and relative percent difference (RPD) values.

Field Duplicates

One set of field duplicates was submitted: MW-1-070711 and MW-8-070711. No target analytes were detected in either sample. Field precision was acceptable.

Reported Results

The result for motor oil range hydrocarbons in Sample MW-5-070711 was flagged by the laboratory with an "x". This "x" flag indicates that the chromatographic pattern in the sample did not match that of the fuel standard used for calibration. This "x" flagged result was estimated (J-2).

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD %R values. Precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values.

One result for motor oil range hydrocarbons was estimated because the chromatographic pattern in the sample did not match the fuel standard.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – July 2011 Groundwater Sampling
Total and Dissolved Metals by Method 200.8

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
107071	7 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative, with the exception noted below.

The relinquishing signature and date were not present on the chain-of-custody form. No further action was taken other than noting this anomaly.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted. No QC sample results were included in the EDD; these data were not verified.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

	Sample Receipt, Preservation, and Holding Times		Laboratory Duplicates
	Method Blanks	2	Field Duplicates
1	Field Blanks	2	ICP-MS Internal Standards
	Laboratory Control Samples (LCS)	2	Reported Results
	Matrix Spike/Matrix Spike Duplicate (MS/MSD)		Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

No field blanks were submitted.

Field Duplicates

One set of field duplicates was submitted: MW-1-070711 and MW-8-070711. The relative percent difference (RPD) value for total lead was greater than the 35% control limit. The results for total lead were estimated (J-9) in both of these samples.

ICP-MS Internal Standards

The percent recovery (%R) value for germanium in total metals Sample MW-4-070711 was greater than the upper control limit, at 236%. This sample was re-analyzed at a 10x dilution with acceptable internal standard recoveries. Results from both analyses were reported. Copper is the only target analyte associated with this internal standard. The result for total copper in the initial analysis was flagged do-not-report (DNR-19) in favor of the dilution result. The results for total arsenic and total lead from the dilution analysis were flagged do-not-report (DNR-11) in favor of the results from the initial analysis.

Reported Results

For Sample MW-6-070711, the result for dissolved arsenic was greater than the result for total arsenic. The two results were less than 5x the reporting limit (RL) and the difference between the results was less than the RL; therefore no action was necessary.

For Sample MW-7-070711, dissolved copper was detected in the sample but total copper was not-detected. The difference between the positive result and the reporting limit was greater than the RL. The total and dissolved copper results for this sample were estimated (J/UJ-14).

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the laboratory control sample (LCS) and matrix spike/matrix spike duplicate (MS/MSD) recoveries. With the exception noted above, precision was acceptable, as demonstrated by the MS/MSD and field duplicate RPD values.

Data were estimated due to a field duplicate RPD outlier and due to a dissolved copper result that was greater than the corresponding total copper result.

Data were flagged as do-not-report (DNR) to indicate which result (from multiple reported analyses) should not be used.

Data that has been flagged DNR should not be used for any purpose. All other data, as qualified, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS, REASON CODES, AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Hold Time	Waters: 14 days preserved 7 Days: unpreserved (for aromatics) Solids: 14 Days	J(+)/UJ(-) if hold times exceeded If exceeded by > 3X HT: J(+)/R(-) (EcoChem PJ)	1
Tuning	BFB Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Storage Blank	One per SDG <CRQL	U(+) the specific analyte(s) results in all assoc.samples using the 5x or 10x rule	7
Trip Blank	Frequency as per project QAPP	Same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned	18
Field Blanks (if required in QAPP)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS *low conc. H2O VOA*	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS *regular VOA (H2O & solid)*	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Added to all samples Within method control limits	J(+) if %R >UCL J(+)/UJ(-) if %R <LCL but >10% (see PJ[1]) J(+)/R(-) if <10%	13
Internal Standard (IS)	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

PJ[1] No action if there are 4+ surrogates and only 1 outlier.

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature & Preservation	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C	1
Holding Time	Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction	J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X (EcoChem PJ)	1
Initial Calibration	5 calibration points (All within 15% of true value) Linear Regression: $R^2 \geq 0.990$ If used, RSD of response factors ≤20%	Narrate if fewer than 5 calibration levels or if %R >15% J(+)/UJ(-) if R^2 <0.990 J(+)/UJ(-) if %RSD > 20%	5A
Mid-range Calibration Check Std.	Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115%	Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R >115%	5B
Method Blank	At least one per batch (≤20 samples) No results >RL	U (at the RL) if sample result is < RL & < 5X blank result.	7
		U (at reported sample value) if sample result is ≥ RL and < 5X blank result	7
Field Blanks (if required by project)	No results > RL	Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned.	6
MS samples (accuracy) (if required by project)	%R within lab control limits	Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. Use PJ if only one %R outlier	8
Precision: MS/MSD or LCS/LCSD or sample/dup	At least one set per batch (≤10 samples) RPD ≤ lab control limit	J(+) if RPD > lab control limits	9
LCS (not required by method)	%R within lab control limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% (EcoChem PJ)	10

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Surrogates	2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150%	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% No action if 2 or more surrogates are used, and only one is outside control limits. (EcoChem PJ)	13
Pattern Identification	Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match.	J(+)	2
Field Duplicates	Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50%	Narrate (Use Professional Judgement to qualify)	9
Two analyses for one sample (dilution)	Report only one result per analyte	"DNR" (or client requested qualifier) all results that should not be reported. (See TM-04)	11

EcoChem Validation Guidelines for Metals Analysis by ICP-MS (Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

QUALIFIED DATA SUMMARY TABLE
Crownhill Elementary - July 2011 GW Sampling

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Reason Code
107071	107071-01	MW-1-070711	EPA200.8	Lead	20.6	ug/L		J	9
107071	107071-03	MW-4-070711	EPA200.8	Copper	159	ug/L	J	DNR	19
107071	107071-03	MW-4-070711	EPA200.8	Lead	83.7	ug/L		DNR	11
107071	107071-03	MW-4-070711	EPA200.8	Arsenic	26.9	ug/L		DNR	11
107071	107071-07	MW-8-070711	EPA200.8	Lead	13.5	ug/L		J	9
107071	107071-06	MW-7-070711	EPA200.8	Copper	4.47	ug/L		J	14
107071	107071-06	MW-7-070711	EPA200.8	Copper	1	ug/L	U	UJ	14
107071	107071-04	MW-5-070711	NWTPH-Dx	Lube Oil Range Hydrocarbons	530	ug/L	x	J	2

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

Crownhill Elementary

October 2011 – January 2012 Groundwater and Soil Sampling

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March 27, 2012

Approved for Release:

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EcoChem, Inc.

PROJECT NARRATIVE

Basis for Data Validation

This report summarizes the results of the compliance review (EPA Stage 2A) performed on soil, groundwater, and quality control (QC) data for Crownhill Elementary. A complete list of samples is provided in the **Sample Index**.

Samples were analyzed by Friedman and Bruya, Inc., Seattle, Washington. The analytical methods and EcoChem project chemists are listed below.

Analysis	Method	Primary Review	Secondary Review
Volatile Organic Compounds	SW8260C	Melissa Swanson	Christine Ransom
Semivolatile Organic Compounds	SW8270D		
Polycyclic Aromatic Hydrocarbons	SW8270D SIM		
Diesel Range Organic Hydrocarbons	NWTPH-Dx		
Metals	200.8, 1311		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the *Sampling and Analysis Plan (SAP) Crownhill Elementary School* (Aspect, March 9, 2011); *National Functional Guidelines for Organic Data Review* (USEPA 1999, 2005); and *National Functional Guidelines for Inorganic Data Review* (USEPA 1994, 2004).

EcoChem's goal in assigning data validation qualifiers is to assist in proper data interpretation. If values are estimated (assigned a J), data may be used for site evaluation purposes; but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been labeled as do-not-report (DNR) should not be used for any purpose. Values with no data qualifier meet all data measurement quality objectives and are acceptable for use.

Data qualifier definitions, reason codes, and validation criteria are included as **Appendix A**. A Qualified Data Summary Table is included in **Appendix B**. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

SAMPLE INDEX
Crownhill Elementary

SDG	Sample ID	Lab ID	VOC	SVOC	PAH	TPH-Dx	Metals	Lead 1311
110366	MW-1-102611	110366-01	√	√	√	√	√	
	MW-2-102611	110366-02	√	√	√	√	√	
	MW-4-102611	110366-03	√	√	√	√	√	
	MW-5-102611	110366-04	√	√	√	√	√	
	MW-6-102611	110366-05	√	√	√	√	√	
	MW-7-102611	110366-06	√	√	√	√	√	
	MW-8-102611	110366-07	√	√	√	√	√	
111177	PCA-SS-1	111177-01				√	√	
	PCA-SS-2	111177-02				√	√	
	PCA-SS-3	111177-03				√	√	
	PCA-SS-4	111177-04				√	√	
	PCA-SS-5	111177-05				√	√	
	PCA-SS-6	111177-06				√	√	
	PCA-SS-7	111177-07				√	√	
	PCA-SS-8	111177-08				√	√	
	PCA-SS-9	111177-09				√	√	
	PCA-SS-10	111177-10				√	√	
	PCA-SS-11	111177-11				√	√	
	PCA-SS-12	111177-12				√	√	
	PCA-SS-13	111177-13				√	√	
	SPL-SS-1	111177-14				√	√	
	SPL-SS-2	111177-15				√	√	
	SPL-SS-3	111177-16				√	√	
	SPL-SS-4	111177-17				√	√	
	SPL-SS-5	111177-18				√	√	
	SPL-SS-14	111177-27			√	√	√	
	SPL-SS-6	111177-19				√	√	
	SPL-SS-15	111177-28				√	√	
	SPL-SS-7	111177-20				√	√	
	SPL-SS-15	111177-28			√	√	√	√
	SPL-SS-16	111177-29				√	√	
	SPL-SS-17	111177-30			√	√	√	√
	SPL-SS-8	111177-21				√	√	
	SPL-SS-17	111177-30				√	√	
	SPL-SS-9	111177-22				√	√	
	SPL-SS-10	111177-23				√	√	
	SPL-SS-11	111177-24				√	√	
	SPL-SS-12	111177-25				√	√	
	SPL-SS-13	111177-26				√	√	
	SPL-SS-18	111177-31			√	√	√	
	SPL-SS-19	111177-32				√	√	
	SPL-SS-20	111177-33				√	√	
	SPL-SS-21	111177-34				√	√	
	SPL-SS-22	111177-35				√	√	

SAMPLE INDEX
Crownhill Elementary

SDG	Sample ID	Lab ID	VOC	SVOC	PAH	TPH-Dx	Metals	Lead 1311
112312	MW-10-5	112312-07	√	√	√	√	√	
	MW-10-70	112312-08	√	√	√	√	√	
	MW-8-110	112312-06	√	√	√	√	√	
	MW-8-20	112312-04	√	√	√	√	√	
	MW-8-80	112312-05	√	√	√	√	√	
	MW-9-120	112312-03	√	√	√	√	√	
	MW-9-15	112312-01	√	√	√	√	√	
	MW-9-75	112312-02	√	√	√	√	√	
112353	MW-10-135	112353-01	√	√	√	√	√	
	MW-11-135	112353-04	√	√	√	√	√	
	MW-11-20	112353-02	√	√	√	√	√	
	MW-11-70	112353-03	√	√	√	√	√	
112368	NG-M4b-1-2.5	112368-01				√	√	
	NG-M4b-12-13.5	112368-03				√	√	
	NG-M4b-6.5-7	112368-02				√	√	
201177	MW-5-011612	201177-02	√	√	√	√	√	
	MW-9-011612	201177-01	√	√	√	√	√	
201193	MW-10-011712	201193-03	√	√	√	√	√	
	MW-1-011712	201193-04	√	√	√	√	√	
	MW-11-011712	201193-07	√	√	√	√	√	
	MW-18-011712	201193-08	√	√	√	√	√	
	MW-2-011712	201193-05	√	√	√	√	√	
	MW-4-011712	201193-02	√	√	√	√	√	
	MW-6-011712	201193-06	√	√	√	√	√	
	MW-7-011712	201193-01	√	√	√	√	√	

DATA VALIDATION REPORT
Crownhill Elementary
Volatile Organic Compounds by Method SW8260C

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
110366	7 Groundwater	EPA Stage 2A
201177	2 Groundwater	EPA Stage 2A
201193	8 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Receipt, Preservation, and Holding Times		Matrix Spikes (MS)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reported Results
	Surrogates		Reporting Limits
	Laboratory Control Samples (LCS/LCSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***

Sample Receipt, Preservation, and Holding Times

SDG 201177: The cooler temperatures were not noted on the sample chain of custody (COC) documentation. The samples were received by the laboratory within eight hours after collection. No action was taken based on the lack of cooler temperature information.

SDG 201193: The cooler temperatures were not noted on the sample COC documentation. No action was taken based on the lack of cooler temperature information.

Field Blanks

No field blanks were submitted.

Field Duplicates

SDG 201193: One set of field duplicates were submitted: MW-1-011712 and MW-18-011712. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and MS recoveries. Precision was also acceptable as demonstrated by the LCS/LCSD and field duplicate relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Semivolatile Organic Compounds by Method SW8270D

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
110366	7 Groundwater	EPA Stage 2A
201177	2 Groundwater	EPA Stage 2A
201193	8 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
1	Laboratory Control Samples (LCS/LCSD)		Reported Results
	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***

Sample Receipt, Preservation, and Holding Times

SDG 201177: The cooler temperatures were not noted on the sample chain of custody (COC) documentation. The samples were received by the laboratory within eight hours after collection. No action was taken based on the lack of cooler temperature information.

SDG 201193: The cooler temperatures were not noted on the sample COC documentation. No action was taken based on the lack of cooler temperature information.

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

SDG 110366: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) relative percent difference (RPD) values for 2,4,5-trichlorophenol and benzoic acid were greater than the 20% control limit. These analytes were not detected in the associated samples; no qualifiers were required. The LCS percent recovery (%R) value for 2,4,5-trichlorophenol was less than the lower control limit. The LCSD recovery was acceptable; therefore no action was taken.

SDGs 201177 & 201193: The RPD values for 2,4-dinitrophenol and benzoic acid were greater than the 20% control limit. These analytes were not detected in the associated samples; no qualifiers were required.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate (MS/MSD) were not analyzed. Accuracy and precision were evaluated using the results of the LCS/LCSD analyses.

Field Duplicates

SDG 201193: One set of field duplicates were submitted: MW-1-011712 and MW-18-011712. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values and precision was acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Polycyclic Aromatic Hydrocarbons by Method SW8270D SIM

This report documents the review of analytical data from the analysis of soil and groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
110366	7 Groundwater	EPA Stage 2A
111177	4 Soil	EPA Stage 2A
201177	2 Groundwater	EPA Stage 2A
201193	8 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
1	Laboratory Control Samples (LCS)		Reported Results
	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***

Sample Receipt, Preservation, and Holding Times

SDG 112312: The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received the sample cooler with a temperature greater than 6°C, at 21°C. This temperature outlier did not impact data quality and no qualifiers were required.

SDG 201177: The cooler temperatures were not noted on the sample chain of custody (COC) documentation. The samples were received by the laboratory within eight hours after collection. No action was taken based on the lack of cooler temperature information.

SDG 201193: The cooler temperatures were not noted on the sample COC documentation. No action was taken based on the lack of cooler temperature information.

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

SDG 110366: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) relative percent difference (RPD) value for dibenz(a,h)anthracene was greater than the 20% control limit. This analyte was not detected in the associated samples; no qualifiers were required.

SDG 201177 & 201193: The LCSD percent recovery (%R) values for acenaphthylene was less than the lower control limit. The LCS %R value was acceptable; therefore no action was taken.

Matrix Spike/Matrix Spike Duplicates

SDG 110366, 201177, & 201193: Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Accuracy and precision were evaluated using the results of the LCS/LCSD analyses.

SDG 111177: The MS %R values for benzo(a)pyrene and pyrene were greater than the upper control limit. No action was taken as the parent sample was not from this SDG.

Field Duplicates

SDG 201193: One set of field duplicates were submitted: MW-1-011712 and MW-18-011712. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, MS, and LCS/LCSD recovery values and precision was acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Diesel Range Organic Hydrocarbons by NWTPH-Dx

This report documents the review of analytical data from the analysis of soil and groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
110366	7 Groundwater	EPA Stage 2A
111177	4 Soil	EPA Stage 2A
112312	8 Soil	EPA Stage 2A
112353	4 Soil	EPA Stage 2A
112368	3 Soil	EPA Stage 2A
201177	2 Groundwater	EPA Stage 2A
201193	8 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Receipt, Preservation, and Holding Times	1	Matrix Spike/Matrix Spike Duplicate Samples (MS/MSD)
	Laboratory Blanks		Laboratory Duplicates
1	Field Blanks	1	Field Duplicates
	Surrogates		Reported Results
1	Laboratory Control Samples (LCS/LCSD)		Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***

Sample Receipt, Preservation, and Holding Times

SDG 112312: The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received the sample cooler with a temperature greater than 6°C, at 21°C. This temperature outlier did not impact data quality and no qualifiers were required.

SDG 201177: The cooler temperatures were not noted on the sample chain of custody (COC) documentation. The samples were received by the laboratory within eight hours after collection. No action was taken based on the lack of cooler temperature information.

SDG 201193: The cooler temperatures were not noted on the sample COC documentation. No action was taken based on the lack of cooler temperature information.

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

The laboratory control sample/laboratory control sample duplicates (LCS/LCSD) were spiked for diesel only. There is no precision and accuracy information for motor oil range organics.

Matrix Spike/Matrix Spike Duplicates

SDG 110366, 201177, & 201193: Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed for the water samples. Accuracy and precision were evaluated using the results of the LCS/LCSD analyses.

Field Duplicates

SDG 201193: One set of field duplicates were submitted: MW-1-011712 and MW-18-011712. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD percent recovery values. Precision was also acceptable as demonstrated by the field duplicate, LCS/LCSD, and MS/MSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary
Metals by Method 200.8
Lead by Method 1311

This report documents the review of analytical data from the analysis of soil and groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
110366	7 Groundwater	EPA Stage 2A
111177	35 Soil	EPA Stage 2A
112312	8 Soil	EPA Stage 2A
112353	4 Soil	EPA Stage 2A
112368	3 Soil	EPA Stage 2A
201177	2 Groundwater	EPA Stage 2A
201193	8 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables, with the exception noted below. The laboratory followed adequate corrective action processes.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

1	Sample Receipt, Preservation, and Holding Times	1	Laboratory Duplicates
	Method Blanks	1	Field Duplicates
1	Field Blanks	1	Reported Results
1	Laboratory Control Samples (LCS)		Reporting Limits
2	Matrix Spike/Matrix Spike Duplicates (MS/MSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Sample Receipt, Preservation, and Holding Times

SDG 112312: The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received the sample cooler

with a temperature greater than 6°C, at 21°C. This temperature outlier did not impact data quality and no qualifiers were required.

SDG 201177: The cooler temperatures were not noted on the sample chain of custody (COC) documentation. The samples were received by the laboratory within eight hours after collection. No action was taken based on the lack of cooler temperature information.

SDG 201193: The cooler temperatures were not noted on the sample COC documentation. No action was taken based on the lack of cooler temperature information.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

SDG 111177: For QC Sample SPL-SS-15 by method 1311, the matrix spike/matrix spike duplicate (MS/MSD) relative percent difference (RPD) value for lead was greater than the control limit of 20%. Both lead results analyzed by this method were estimated (J-9).

For QC Sample SPL-SS-16, the MS/MSD RPD for copper was greater than control limit. All copper results were estimated (J-9). A second batch QC sample was analyzed for arsenic and lead. The lead RPD for this batch QC sample was greater than the control limit; however the RPD value for the other QC sample was acceptable and no action was taken.

SDG 112368: The MS/MSD RPD value for lead was greater than the control limit. All lead results in the associated samples were estimated (J-9).

Laboratory Duplicates

No laboratory duplicates were submitted. Precision was evaluated using the MS/MSD and field duplicate RPD values.

Field Duplicates

The RPD control limit is 35% for results greater than five times the RL. For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG 201193: One set of field duplicates were submitted: MW-1-011712 and MW-18-011712. All field precision criteria were met.

Reported Results

SDG 201193: The dissolved arsenic result for Sample MW-10-011712 was slightly higher than the total arsenic result. The difference between the two value was less than the reporting limit which is within normal analytical precision criteria; therefore no action was taken.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. With the exceptions noted above, accuracy was acceptable as demonstrated by the LCS and MS/MSD recoveries and precision was acceptable as demonstrated by the MS/MSD and field duplicate RPD values.

Data were estimated due to MS/MSD precision outliers.

All data, as qualified, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS, REASON CODES, AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Hold Time	Waters: 14 days preserved 7 Days: unpreserved (for aromatics) Solids: 14 Days	J(+)/UJ(-) if hold times exceeded If exceeded by > 3X HT: J(+)/R(-) (EcoChem PJ)	1
Tuning	BFB Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Storage Blank	One per SDG <CRQL	U(+) the specific analyte(s) results in all assoc.samples using the 5x or 10x rule	7
Trip Blank	Frequency as per project QAPP	Same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned	18
Field Blanks (if required in QAPP)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS *low conc. H2O VOA*	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS *regular VOA (H2O & solid)*	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Added to all samples Within method control limits	J(+) if %R >UCL J(+)/UJ(-) if %R <LCL but >10% (see PJ[1]) J(+)/R(-) if <10%	13
Internal Standard (IS)	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

PJ[1] No action if there are 4+ surrogates and only 1 outlier.

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature & Preservation	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C	1
Holding Time	Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction	J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X (EcoChem PJ)	1
Initial Calibration	5 calibration points (All within 15% of true value) Linear Regression: $R^2 \geq 0.990$ If used, RSD of response factors ≤20%	Narrate if fewer than 5 calibration levels or if %R >15% J(+)/UJ(-) if R^2 <0.990 J(+)/UJ(-) if %RSD > 20%	5A
Mid-range Calibration Check Std.	Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115%	Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R >115%	5B
Method Blank	At least one per batch (≤20 samples) No results >RL	U (at the RL) if sample result is < RL & < 5X blank result.	7
		U (at reported sample value) if sample result is ≥ RL and < 5X blank result	7
Field Blanks (if required by project)	No results > RL	Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned.	6
MS samples (accuracy) (if required by project)	%R within lab control limits	Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. Use PJ if only one %R outlier	8
Precision: MS/MSD or LCS/LCSD or sample/dup	At least one set per batch (≤10 samples) RPD ≤ lab control limit	J(+) if RPD > lab control limits	9
LCS (not required by method)	%R within lab control limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% (EcoChem PJ)	10

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Surrogates	2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150%	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% No action if 2 or more surrogates are used, and only one is outside control limits. (EcoChem PJ)	13
Pattern Identification	Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match.	J(+)	2
Field Duplicates	Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50%	Narrate (Use Professional Judgement to qualify)	9
Two analyses for one sample (dilution)	Report only one result per analyte	"DNR" (or client requested qualifier) all results that should not be reported. (See TM-04)	11

EcoChem Validation Guidelines for Metals Analysis by ICP-MS (Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

QUALIFIED DATA SUMMARY TABLE
Crownhill Elementary

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Reason Code
111177	SPL-SS-15	111177-28	SW1311	Lead	92.2	mg/L		J	9
111177	SPL-SS-17	111177-30	SW1311	Lead	7.33	mg/L		J	9
111177	SPL-SS-14	111177-27	EPA200.8	Copper	370	mg/kg		J	9
111177	SPL-SS-15	111177-28	EPA200.8	Copper	6160	mg/kg		J	9
111177	SPL-SS-17	111177-30	EPA200.8	Copper	2180	mg/kg		J	9
111177	SPL-SS-18	111177-31	EPA200.8	Copper	423	mg/kg		J	9
112368	NG-M4b-1-2.5	112368-01	EPA200.8	Lead	21	mg/kg		J	9
112368	NG-M4b-12-13.5	112368-03	EPA200.8	Lead	2.06	mg/kg		J	9
112368	NG-M4b-6.5-7	112368-02	EPA200.8	Lead	2.87	mg/kg		J	9

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

Crownhill Elementary
2nd Quarter Groundwater Sampling

Prepared for:

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EcoChem Project: C22806-4

July 2, 2012

Approved for Release:

Chris Ransom
Project Manager
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PROJECT NARRATIVE

Basis for Data Validation

This report summarizes the results of the compliance review (EPA Stage 2A) performed on groundwater and quality control (QC) data for Crownhill Elementary. A complete list of samples is provided in the **Sample Index**.

Samples were analyzed by Friedman and Bruya, Inc., Seattle, Washington. The analytical methods and EcoChem project chemists are listed below.

Analysis	Method	Primary Review	Secondary Review
Volatile Organic Compounds	SW8260C	Mary Sam	Christine Ransom
Semivolatile Organic Compounds	SW8270D		
Polycyclic Aromatic Hydrocarbons	SW8270D SIM		
Diesel Range Organic Hydrocarbons	NWTPH-Dx		
Metals	200.8		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the *Sampling and Analysis Plan (SAP) Crownhill Elementary School* (Aspect, March 9, 2011); *National Functional Guidelines for Organic Data Review* (USEPA 1999, 2005); and *National Functional Guidelines for Inorganic Data Review* (USEPA 1994, 2004).

EcoChem's goal in assigning data validation qualifiers is to assist in proper data interpretation. If values are estimated (assigned a J), data may be used for site evaluation purposes; but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been labeled as do-not-report (DNR) should not be used for any purpose. Values with no data qualifier meet all data measurement quality objectives and are acceptable for use.

Data qualifier definitions, reason codes, and validation criteria are included as **Appendix A**. A Qualified Data Summary Table is included in **Appendix B**. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

SAMPLE INDEX
Aspect - Crownhill Elementary 2nd QTR 2012

Sample ID	Lab ID	VOC	SVOC	PAH	TPH-Dx	Metals
MW-9-041212	204214-01	√	√	√	√	√
MW-2-041212	204214-02	√	√	√	√	√
MW-4-041212	204214-03	√	√	√	√	√
MW-5-041212	204214-04	√	√	√	√	√
MW-7-041312	204214-05	√	√	√	√	√
MW-1-041312	204214-06	√	√	√	√	√
MW-6-041312	204214-07	√	√	√	√	√
MW-10-041312	204214-08	√	√	√	√	√
MW-11-041312	204214-09	√	√	√	√	√
MW-18-041312	204214-10	√	√	√	√	√

DATA VALIDATION REPORT
Crownhill Elementary– 2nd Qtr 2012 Groundwater Sampling
Volatile Organic Compounds by Method SW8260C

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
204214	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times		Matrix Spike/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reported Results
	Surrogates		Reporting Limits
	Laboratory Control Samples (LCS/LCSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Field Duplicates

One set of field duplicates were submitted: MW-1-041312 and MW-18-041312. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and matrix spike/matrix spike duplicate (MS/MSD)

recovery values and precision was acceptable as demonstrated by the field duplicate, MS/MSD, and LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary– 2nd Qtr 2012 Groundwater Sampling
Semivolatile Organic Compounds by Method SW8270D

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
204214	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
	Laboratory Control Samples (LCS/LCSD)		Reported Results
	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate (MS/MSD) were not analyzed. Accuracy and precision were evaluated using the results of the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses.

Field Duplicates

One set of field duplicates were submitted: MW-1-041312 and MW-18-041312. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values and precision was acceptable as demonstrated by the field duplicate and LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary– 2nd Qtr 2012 Groundwater Sampling
Semivolatile Organic Compounds by Method SW8270D-SIM

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
204214	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
1	Laboratory Control Samples (LCS/LCSD)		Reported Results
	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) percent recovery (%R) values for benzo(a)pyrene and dibenz(a,h)anthracene were greater than the upper control limit. These analytes were not detected in the associated samples; no qualification of data was necessary. The LCSD %R value for benzo(b)fluoranthene was also greater than the upper control limit. The LCS recovery was acceptable; therefore no action was taken.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate (MS/MSD) were not analyzed. Accuracy and precision were evaluated using the results of the LCS/LCSD analyses.

Field Duplicates

One set of field duplicates were submitted: MW-1-041312 and MW-18-041312. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values. Precision was acceptable as demonstrated by the field duplicate and LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – 2nd Qtr 2012 Groundwater Sampling
Diesel Range Organic Hydrocarbons by NWTPH-Dx

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
204214	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spike/Matrix Spike Duplicate Samples (MS/MSD)
	Laboratory Blanks		Laboratory Duplicates
1	Field Blanks	1	Field Duplicates
	Surrogates	2	Reported Results
1	Laboratory Control Samples (LCS/LCSD)		Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) were spiked for diesel only. There is no precision and accuracy information for motor oil range organics.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Accuracy and precision were evaluated using the results of the LCS/LCSD analyses.

Field Duplicates

One set of field duplicates were submitted: MW-1-041312 and MW-18-041312. No target analytes were detected in either sample; field precision was acceptable.

Reported Results

The results for diesel oil range and motor oil range hydrocarbons in Sample MW-5-041212 were flagged by the laboratory with an "x". This "x" flag indicates that the chromatographic pattern in the sample did not match those of the fuel standards used for calibration. These "x" flagged results were estimated (J-2).

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD recovery values. Precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD relative percent difference values.

Data were estimated because the chromatographic pattern in the sample did not match the fuel standard.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – 2nd Qtr 2012 Groundwater Sampling
Total and Dissolved Metals by Method 200.8

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
204214	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Laboratory Duplicates
	Method Blanks	1	Field Duplicates
1	Field Blanks		ICP-MS Internal Standards
	Laboratory Control Samples (LCS)	1	Reported Results
	Matrix Spike/Matrix Spike Duplicate (MS/MSD)		Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Laboratory Duplicates

No laboratory duplicates were submitted. Precision was evaluated using the matrix spike/matrix spike duplicate (MS/MSD) and field duplicate relative percent difference (RPD) values.

Field Duplicates

The RPD control limit is 35% for results greater than five times the reporting limit (RL). For results less than five times the RL, the difference between the sample and duplicate must be less than 2x the RL.

One set of field duplicates were submitted: MW-1-041312 and MW-18-041312. All field precision criteria were met.

Reported Results

For Sample MW-10-041312, the result for dissolved arsenic was slightly greater than the result for total arsenic. The difference between the results was less than the RL and fell within the analytical precision requirements.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the laboratory control sample and MS/MSD recoveries. Precision was also acceptable, as demonstrated by the MS/MSD and field duplicate RPD values.

No data were qualified for any reason. All data, as qualified, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS, REASON CODES, AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Hold Time	Waters: 14 days preserved 7 Days: unpreserved (for aromatics) Solids: 14 Days	J(+)/UJ(-) if hold times exceeded If exceeded by > 3X HT: J(+)/R(-) (EcoChem PJ)	1
Tuning	BFB Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Storage Blank	One per SDG <CRQL	U(+) the specific analyte(s) results in all assoc.samples using the 5x or 10x rule	7
Trip Blank	Frequency as per project QAPP	Same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned	18
Field Blanks (if required in QAPP)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS *low conc. H2O VOA*	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS *regular VOA (H2O & solid)*	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Added to all samples Within method control limits	J(+) if %R >UCL J(+)/UJ(-) if %R <LCL but >10% (see PJ[1]) J(+)/R(-) if <10%	13
Internal Standard (IS)	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

PJ[1] No action if there are 4+ surrogates and only 1 outlier.

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature & Preservation	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C	1
Holding Time	Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction	J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X (EcoChem PJ)	1
Initial Calibration	5 calibration points (All within 15% of true value) Linear Regression: $R^2 \geq 0.990$ If used, RSD of response factors ≤20%	Narrate if fewer than 5 calibration levels or if %R >15% J(+)/UJ(-) if R^2 <0.990 J(+)/UJ(-) if %RSD > 20%	5A
Mid-range Calibration Check Std.	Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115%	Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R >115%	5B
Method Blank	At least one per batch (≤20 samples) No results >RL	U (at the RL) if sample result is < RL & < 5X blank result.	7
		U (at reported sample value) if sample result is ≥ RL and < 5X blank result	7
Field Blanks (if required by project)	No results > RL	Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned.	6
MS samples (accuracy) (if required by project)	%R within lab control limits	Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. Use PJ if only one %R outlier	8
Precision: MS/MSD or LCS/LCSD or sample/dup	At least one set per batch (≤10 samples) RPD ≤ lab control limit	J(+) if RPD > lab control limits	9
LCS (not required by method)	%R within lab control limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% (EcoChem PJ)	10

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Surrogates	2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150%	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% No action if 2 or more surrogates are used, and only one is outside control limits. (EcoChem PJ)	13
Pattern Identification	Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match.	J(+)	2
Field Duplicates	Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50%	Narrate (Use Professional Judgement to qualify)	9
Two analyses for one sample (dilution)	Report only one result per analyte	"DNR" (or client requested qualifier) all results that should not be reported. (See TM-04)	11

EcoChem Validation Guidelines for Metals Analysis by ICP (Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration Tissues: Frozen	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r > 0.995	J(+)/UJ(-) if r < 0.995 (multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blank (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		(Refer to TM-02 for additional information)
			7

Reporting Limit Standard	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Sb, Pb, Tl)	R(-)/J(+) < 2x RL if %R <50% (< 30% Sb, Pb, Tl) J(+) < 2x RL, UJ(-) if %R 50-69% (30-49% Sb, Pb,Tl) J(+) < 2x RL if %R 130-180% (150-200% Sb, Pb, Tl) R(+) < 2x RL if %R > 180% (200% Sb, Pb, Tl)	14
Interference Check Samples (ICSA/ICSAB)	ICSAB %R 80 - 120% for all spiked elements | ICSA | < MDL for all unspiked elements except: K, Na	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R= 50 to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	

EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Matrix Spikes	One per matrix per batch 75-125% for samples less than 4x spike level	J(+) if %R > 125% J(+)/UJ(-) if %R < 75% J(+)/R(-) if %R < 30% or J(+)/UJ(-) if Post Spike %R 75-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, spike at twice the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples >RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL (2x RL for solids) qualify all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample conc. > 50x MDL	J(+)/UJ(-) if %D >10% qualify all samples in batch	16
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

EcoChem Validation Guidelines for Metals Analysis by ICP-MS (Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

QUALIFIED DATA SUMMARY TABLE
Aspect - Crownhill Elementary 2nd QTR 2012

Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason Code
MW-5-041212	204214-04	NWTPH-Dx	Diesel Range Hydrocarbons	2300	ug/L	x	J	2
MW-5-041212	204214-04	NWTPH-Dx	Lube Oil Range Hydrocarbons	990	ug/L	x	J	2

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

Crownhill Elementary
3rd QTR 2012 Groundwater Sampling

Prepared for:

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EcoChem Project: C22806-5

September 10, 2012

Approved for Release:

Chris Ransom
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PROJECT NARRATIVE

Basis for Data Validation

This report summarizes the results of the compliance review (EPA Stage 2A) performed on groundwater and quality control (QC) data for Crownhill Elementary – 3rd QTR 2012 Groundwater Sampling. A complete list of samples is provided in the **Sample Index**.

Samples were analyzed by Friedman and Bruya, Inc., Seattle, Washington. The analytical methods and EcoChem project chemists are listed below.

Analysis	Method	Primary Review	Secondary Review
Volatile Organic Compounds	SW8260C	Christine Ransom	Dorothy Kerlin
Semivolatile Organic Compounds	SW8270D		
Polycyclic Aromatic Hydrocarbons	SW8270D SIM		
Diesel Range Organic Hydrocarbons	NWTPH-Dx		
Metals	200.8		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the *Sampling and Analysis Plan (SAP) Crownhill Elementary School* (Aspect, March 9, 2011); *National Functional Guidelines for Organic Data Review* (USEPA 1999, 2005); and *National Functional Guidelines for Inorganic Data Review* (USEPA 1994, 2004).

EcoChem's goal in assigning data validation qualifiers is to assist in proper data interpretation. If values are estimated (assigned a J), data may be used for site evaluation purposes; but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been labeled as do-not-report (DNR) should not be used for any purpose. Values with no data qualifier meet all data measurement quality objectives and are acceptable for use.

Data qualifier definitions, reason codes, and validation criteria are included as **Appendix A**. A Qualified Data Summary Table is included in **Appendix B**. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

SAMPLE INDEX
Aspect Consulting - Crownhill Elementary 3Q12

Sample ID	Laboratory ID	VOC	SVOC	PAH	NWTPH-Dx	Total Metals	Dissolved Metals
MW-6-071012	207145-01	√	√	√	√	√	√
MW-9-071012	207145-02	√	√	√	√	√	√
MW-2-071012	207145-03	√	√	√	√	√	√
MW-5-071012	207145-04	√	√	√	√	√	√
MW-4-071012	207145-05	√	√	√	√	√	√
MW-7-071112	207145-06	√	√	√	√	√	√
MW-1-071112	207145-07	√	√	√	√	√	√
MW-10-071112	207145-08	√	√	√	√	√	√
MW-11-071112	207145-09	√	√	√	√	√	√
MW-18-071112	207145-10	√	√	√	√	√	√

DATA VALIDATION REPORT
Crownhill Elementary– 3rd QTR 2012 Groundwater Sampling
Volatile Organic Compounds by Method SW8260C

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
207145	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times		Matrix Spike/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reported Results
	Surrogates		Reporting Limits
	Laboratory Control Samples (LCS/LCSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Field Duplicates

One set of field duplicates were submitted: MW-1-071112 and MW-18-071112. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and matrix spike recovery values. Precision was acceptable as demonstrated by the field duplicate and LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary– 3rd QTR 2012 Groundwater Sampling
Semivolatile Organic Compounds by Method SW8270D

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
207145	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
1	Laboratory Control Samples (LCS/LCSD)		Reported Results
	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

For the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) extracted on 7/12/12, the relative percent difference (RPD) values for benzoic acid (61%) and di-n-butylphthalate (26%) were greater than the control limit of 20%. These analytes were not detected in the associated samples; therefore no data were qualified. In addition the percent recovery (%R) values for 3-nitroaniline (103%, 100%) were greater than the upper control limit

of 89%. This analyte was not detected in the associated samples; no action was necessary based on the potential high bias.

For the LCS/LCSD extracted 7/16/12, the %R values for 4-chloroanailine (94%, 92%) and 3-nitroaniline (100%, 97%) were greater than the upper control limits. These analytes were not detected in the associated sample; no action was necessary based on the potential high bias. In addition, the RPD value for benzoic acid (74%) was greater than the control limit. This analyte was not detected in the associated sample; therefore the result was not qualified.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicates (MS/MSD) were not analyzed. Accuracy and precision were evaluated using the results of the LCS/LCSD analyses.

Field Duplicates

One set of field duplicates were submitted: MW-1-071112 and MW-18-071112. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values and precision was acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary– 3rd QTR 2012 Groundwater Sampling
Semivolatile Organic Compounds by Method SW8270D-SIM

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
207145	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
	Laboratory Control Samples (LCS/LCSD)		Reported Results
	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate (MS/MSD) were not analyzed. Accuracy and precision were evaluated using the results of the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses.

Field Duplicates

One set of field duplicates were submitted: MW-1-071112 and MW-18-071112. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values. Precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – 3rd QTR 2012 Groundwater Sampling
Diesel Range Organic Hydrocarbons by NWTPH-Dx

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
207145	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spike/Matrix Spike Duplicate Samples (MS/MSD)
	Laboratory Blanks		Laboratory Duplicates
1	Field Blanks	1	Field Duplicates
1	Surrogates	2	Reported Results
1	Laboratory Control Samples (LCS/LCSD)		Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Field Blanks

No field blanks were submitted.

Surrogates

The surrogate recoveries were greater than the upper control limit of 134% in several samples. Neither diesel range organics nor motor oil range organics were detected in these samples; no action was necessary based on the potential high bias.

No surrogate recovery was reported for Sample MW5-071012. Very high concentrations of the target analytes prevented accurate quantitation of the surrogate compound. No action was taken on this basis.

Laboratory Control Samples

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) were spiked for diesel only. There is no precision and accuracy information for motor oil range organics.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Accuracy and precision were evaluated using the results of the LCS/LCSD analyses.

Field Duplicates

One set of field duplicates were submitted: MW-1-071112 and MW-18-071112. No target analytes were detected in either sample; field precision was acceptable.

Reported Results

The result for the motor oil range hydrocarbons in Sample MW-5-071012 was flagged by the laboratory with an "x". This "x" flag indicates that the chromatographic pattern in the sample did not match that of the fuel standard used for calibration. This "x" flagged result was estimated (J-2).

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values. Precision was acceptable as demonstrated by the field duplicate and LCS/LCSD relative percent difference values.

One result for motor oil range hydrocarbons was estimated because the chromatographic pattern in the sample did not match the fuel standard.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – 3rd QTR 2012 Groundwater Sampling
Total and Dissolved Metals by Method 200.8

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
207145	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Laboratory Duplicates
	Method Blanks	1	Field Duplicates
1	Field Blanks		ICP-MS Internal Standards
	Laboratory Control Samples (LCS)	1	Reported Results
	Matrix Spike/Matrix Spike Duplicate (MS/MSD)		Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Laboratory Duplicates

No laboratory duplicates were submitted. Precision was evaluated using the matrix spike/matrix spike duplicate (MS/MSD) and field duplicate relative percent difference (RPD) values.

Field Duplicates

One set of field duplicates were submitted: MW-1-071112 and MW-18-071112. No target analytes were detected in either sample; field precision was acceptable.

Reported Results

For Sample MW-10-041312, the result for dissolved arsenic was slightly greater than the result for total arsenic. The difference between the results was less than the reporting limit and fell within the analytical precision requirements.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the laboratory control sample and MS/MSD recoveries. Precision was also acceptable, as demonstrated by the MS/MSD and field duplicate RPD values.

No data were qualified for any reason. All data, as qualified, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS, REASON CODES, AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Hold Time	Waters: 14 days preserved 7 Days: unpreserved (for aromatics) Solids: 14 Days	J(+)/UJ(-) if hold times exceeded If exceeded by > 3X HT: J(+)/R(-) (EcoChem PJ)	1
Tuning	BFB Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Storage Blank	One per SDG <CRQL	U(+) the specific analyte(s) results in all assoc.samples using the 5x or 10x rule	7
Trip Blank	Frequency as per project QAPP	Same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned	18
Field Blanks (if required in QAPP)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS *low conc. H2O VOA*	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS *regular VOA (H2O & solid)*	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Added to all samples Within method control limits	J(+) if %R >UCL J(+)/UJ(-) if %R <LCL but >10% (see PJ[1]) J(+)/R(-) if <10%	13
Internal Standard (IS)	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

PJ[1] No action if there are 4+ surrogates and only 1 outlier.

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature & Preservation	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C	1
Holding Time	Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction	J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X (EcoChem PJ)	1
Initial Calibration	5 calibration points (All within 15% of true value) Linear Regression: $R^2 \geq 0.990$ If used, RSD of response factors ≤20%	Narrate if fewer than 5 calibration levels or if %R >15% J(+)/UJ(-) if R^2 <0.990 J(+)/UJ(-) if %RSD > 20%	5A
Mid-range Calibration Check Std.	Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115%	Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R >115%	5B
Method Blank	At least one per batch (≤20 samples) No results >RL	U (at the RL) if sample result is < RL & < 5X blank result.	7
		U (at reported sample value) if sample result is ≥ RL and < 5X blank result	7
Field Blanks (if required by project)	No results > RL	Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned.	6
MS samples (accuracy) (if required by project)	%R within lab control limits	Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. Use PJ if only one %R outlier	8
Precision: MS/MSD or LCS/LCSD or sample/dup	At least one set per batch (≤10 samples) RPD ≤ lab control limit	J(+) if RPD > lab control limits	9
LCS (not required by method)	%R within lab control limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% (EcoChem PJ)	10

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Surrogates	2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150%	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% No action if 2 or more surrogates are used, and only one is outside control limits. (EcoChem PJ)	13
Pattern Identification	Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match.	J(+)	2
Field Duplicates	Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50%	Narrate (Use Professional Judgement to qualify)	9
Two analyses for one sample (dilution)	Report only one result per analyte	"DNR" (or client requested qualifier) all results that should not be reported. (See TM-04)	11

EcoChem Validation Guidelines for Metals Analysis by ICP-MS (Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

QUALIFIED DATA SUMMARY TABLE
Aspect Consulting - Crownhill Elementary 3Q12

Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Flag	DV Qualifier	DV Reason Codes
MW-5-071012	207145-04	NWTPH-Dx	Lube Oil Range Hydrocarbons	800	ug/L	x	J	2

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

Crownhill Elementary
Fall 2012 Sampling

Prepared for:

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December 11, 2012

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PROJECT NARRATIVE

Basis for Data Validation

This report summarizes the results of the compliance review (EPA Stage 2A) performed on groundwater, soil, and quality control (QC) data for Crownhill Elementary – Fall 2012 Sampling. A complete list of samples is provided in the **Sample Index**.

Samples were analyzed by Friedman and Bruya, Inc., Seattle, Washington. The analytical methods and EcoChem project chemists are listed below.

Analysis	Method	Primary Review	Secondary Review
Volatile Organic Compounds	SW8260C	Yas Hida	Christine Ransom
Semivolatile Organic Compounds	SW8270D		
Polycyclic Aromatic Hydrocarbons	SW8270D SIM		
Diesel Range Organic Hydrocarbons	NWTPH-Dx		
Metals	200.8		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the *Sampling and Analysis Plan (SAP) Crownhill Elementary School* (Aspect, March 9, 2011); *National Functional Guidelines for Organic Data Review* (USEPA 1999, 2005); and *National Functional Guidelines for Inorganic Data Review* (USEPA 1994, 2004).

EcoChem's goal in assigning data validation qualifiers is to assist in proper data interpretation. If values are estimated (assigned a J), data may be used for site evaluation purposes; but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been labeled as do-not-report (DNR) should not be used for any purpose. Values with no data qualifier meet all data measurement quality objectives and are acceptable for use.

Data qualifier definitions, reason codes, and validation criteria are included as **Appendix A**. A Qualified Data Summary Table is included in **Appendix B**. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

SAMPLE INDEX
Crownhill Elementary - Fall 2012 Sampling

SDG	Sample ID	Lab ID	VOC	SVOC	PAH	TPH-Dx	Total Metals	Dissolved Metals	Arsenic
210484	MW-10-102512	210484-01	√	√	√	√	√	√	
210484	MW-1-102612	210484-09	√	√	√	√	√	√	
210484	MW-11-102612	210484-08	√	√	√	√	√	√	
210484	MW-18-102612	210484-10	√	√	√	√	√	√	
210484	MW-2-102512	210484-03	√	√	√	√	√	√	
210484	MW-4-102512	210484-06	√	√	√	√	√	√	
210484	MW-5-102512	210484-04	√	√	√	√	√	√	
210484	MW-6-102512	210484-05	√	√	√	√	√	√	
210484	MW-7-102512	210484-07	√	√	√	√	√	√	
210484	MW-9-102512	210484-02	√	√	√	√	√	√	
211041	MW-12-110112	211041-01	√			√	√		
211041	MW-13-110112	211041-02	√			√	√		
211041	MW-14-110112	211041-03	√			√	√		
211041	MW-15-110112	211041-04	√			√	√		
211041	MW-16-110112	211041-05	√			√	√		
210483	SG-J10-0-1	210483-01							√
210483	SG-J11-0-1	210483-02							√
210483	SG-J11-0-3	210483-03							√
210497	MW-12-105.5	210497-04				√			
210497	MW-12-115.5	210497-05				√			
210497	MW-12-41	210497-01				√			
210497	MW-12-61.5	210497-02				√			
210497	MW-12-81	210497-03				√			
210497	MW-13-105	210497-09				√			
210497	MW-13-45	210497-06				√			
210497	MW-13-65	210497-07				√			
210497	MW-13-85	210497-08				√			
210497	MW-14-100	210497-13				√			
210497	MW-14-40	210497-10				√			
210497	MW-14-60	210497-11				√			
210497	MW-14-80	210497-12				√			
210497	MW-15-110	210497-15				√			
210497	MW-15-45	210497-14				√			
210497	MW-16-110	210497-17				√			
210497	MW-16-20	210497-16				√			

DATA VALIDATION REPORT
Crownhill Elementary– Fall 2012 Sampling
Volatile Organic Compounds by Method SW8260C

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
210484	10 Groundwater	EPA Stage 2A
211041	5 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes (MS)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reported Results
	Surrogates		Reporting Limits
1	Laboratory Control Samples (LCS/LCSD)		Target Compounds

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

SDG 210484: The laboratory control sample (LCS) percent recovery (%R) value for 1,1-dichloroethane was greater than the upper control limit. The laboratory control sample duplicate (LCSD) recovery was acceptable. This analyte was not detected in the associated samples; no action was necessary based on the potential high bias.

Matrix Spikes

SDG 210484: Sample MW1-10-102512 was analyzed as the matrix spike (MS). The %R for 1,2,3-trichlorobenzene was greater than the upper control limit. This analyte was not detected in the parent sample; no action was necessary based on the potential high bias.

Field Duplicates

SDG 210484: One set of field duplicates were submitted: MW-1-102612 and MW-18-102612. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS recovery values. Precision was acceptable as demonstrated by the field duplicate and LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary– Fall 2012 Sampling
Semivolatile Organic Compounds by Method SW8270D

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
210484	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
2	Laboratory Control Samples (LCS/LCSD)		Reported Results
	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

The percent recovery (%R) values for benzoic acid were less than the lower control limit in the laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) and were also less than 10%. Benzoic acid was not detected in the associated samples; results were rejected (R-10) based on the potential extreme low bias.

For the compounds benzoic acid, 4-chloroaniline, and benzidine, the relative percent difference (RPD) were greater than the control limit of 20%. These analytes were not detected in the associated samples; therefore no data were qualified.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicates (MS/MSD) were not analyzed. Accuracy and precision were evaluated using the results of the LCS/LCSD analyses.

Field Duplicates

One set of field duplicates were submitted: MW-1-102612 and MW-18-102612. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values. Precision was acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values.

Data were rejected due to extremely low LCS/LCSD recoveries.

Rejected data should not be used for any purpose. All other data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary– Fall 2012 Sampling
Semivolatile Organic Compounds by Method SW8270D-SIM

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
210484	10 Groundwater	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

	Sample Receipt, Preservation, and Holding Times	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Laboratory Blanks	1	Field Duplicates
1	Field Blanks		Reporting Limits
	Laboratory Control Samples (LCS/LCSD)		Reported Results
	Surrogate Compounds		

[1] ***Quality control results are discussed below, but no data were qualified.***

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Accuracy and precision were evaluated using the results of the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD) and field duplicate analyses.

Field Duplicates

One set of field duplicates were submitted: MW-1-0102612 and MW-18-102612. No target analytes were detected in either sample; field precision was acceptable.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values. Precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – Fall 2012 Sampling
Diesel Range Organic Hydrocarbons by NWTPH-Dx

This report documents the review of analytical data from the analysis of groundwater and soil samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
210484	10 Groundwater	EPA Stage 2A
211041	5 Groundwater	EPA Stage 2A
210497	17 Soil	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and any anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Receipt, Preservation, and Holding Times	1	Matrix Spike/Matrix Spike Duplicate Samples (MS/MSD)
	Laboratory Blanks		Laboratory Duplicates
1	Field Blanks	1	Field Duplicates
	Surrogates	2	Reported Results
1	Laboratory Control Samples (LCS/LCSD)	1	Reporting Limits

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Sample Receipt, Preservation, and Holding Times

SDG 210497: The chain of custody relinquished by fields were not signed and data. No action was taken on this basis.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

SDGs 210484 and 211041: Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Accuracy and precision were evaluated using the results of the surrogate, LCS/LCSD, and field duplicate analyses.

Field Duplicates

One set of field duplicates were submitted: MW-1-102612 and MW-18-102612. No target analytes were detected in either sample; field precision was acceptable.

Reported Results

The laboratory flagged several results with an "x" to indicate that the chromatographic pattern in the sample did not match that of the fuel standard used for calibration. These "x" flagged results were estimated (J-2). The follow results were qualified:

SDG 210484: MW-5-102512 - lube oil range hydrocarbons

SDG 210497: MW-12-110112 - oil range hydrocarbons
MW-15-110112 - diesel range hydrocarbons
MW-16-110112 – oil range hydrocarbons

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values. Precision was acceptable as demonstrated by the field duplicate, LCS/LCSD, and MS/MSD relative percent difference values.

Results were estimated because the chromatographic pattern in the sample did not match the fuel standard.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Crownhill Elementary – Fall 2012 Sampling
Total and Dissolved Metals by Method 200.8

This report documents the review of analytical data from the analysis of groundwater and soil samples and the associated laboratory and field quality control (QC) samples. Friedman and Bruya, Inc., Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
210484	10 Groundwater	EPA Stage 2A
210483	3 Soil	EPA Stage 2A

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes

II. EDD TO HARDCOPY VERIFICATION

All (100%) of the sample results in the laboratory electronic data deliverable (EDD) were verified by comparison to the hardcopy laboratory data package. No errors were noted.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

1	Sample Receipt, Preservation, and Holding Times	1	Laboratory Duplicates
	Method Blanks	1	Field Duplicates
1	Field Blanks	1	Reported Results
	Laboratory Control Samples (LCS)		Reporting Limits
	Matrix Spike/Matrix Spike Duplicate (MS/MSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***

Sample Receipt, Preservation, and Holding Times

SDG 210484: The laboratory did not indicate the pH values of the samples submitted for metals analysis. No action was taken on this basis.

Field Blanks

No field blanks were submitted.

Laboratory Duplicates

No laboratory duplicates were submitted. Precision was evaluated using the matrix spike/matrix spike duplicate (MS/MSD) and field duplicate relative percent difference (RPD) values.

Field Duplicates

One set of field duplicates were submitted: MW-1-102612 and MW-18-102612. Total arsenic was the only analyte detected in these samples. The field duplicate RPD was less than the control limit of 35%. Field precision was acceptable.

Reported Results

For Sample MW-2-102512, the result for dissolved arsenic was slightly greater than the result for total arsenic. The difference between the results was less than the reporting limit and fell within the analytical precision requirements.

The laboratory noted that both bottles for Sample MW-4-102512 were labeled as "total metals". The samples were field filtered; therefore the lower results were reported as the dissolved results. Arsenic was the only analyte detected.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the laboratory control sample and MS/MSD recoveries. Precision was also acceptable, as demonstrated by the MS/MSD and field duplicate RPD values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS, REASON CODES, AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Hold Time	Waters: 14 days preserved 7 Days: unpreserved (for aromatics) Solids: 14 Days	J(+)/UJ(-) if hold times exceeded If exceeded by > 3X HT: J(+)/R(-) (EcoChem PJ)	1
Tuning	BFB Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Storage Blank	One per SDG <CRQL	U(+) the specific analyte(s) results in all assoc.samples using the 5x or 10x rule	7
Trip Blank	Frequency as per project QAPP	Same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned	18
Field Blanks (if required in QAPP)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS *low conc. H2O VOA*	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS *regular VOA (H2O & solid)*	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Added to all samples Within method control limits	J(+) if %R >UCL J(+)/UJ(-) if %R <LCL but >10% (see PJ[1]) J(+)/R(-) if <10%	13
Internal Standard (IS)	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

PJ[1] No action if there are 4+ surrogates and only 1 outlier.

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS CLP low conc. H2O only	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature & Preservation	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C	1
Holding Time	Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction	J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X (EcoChem PJ)	1
Initial Calibration	5 calibration points (All within 15% of true value) Linear Regression: $R^2 \geq 0.990$ If used, RSD of response factors ≤20%	Narrate if fewer than 5 calibration levels or if %R >15% J(+)/UJ(-) if R^2 <0.990 J(+)/UJ(-) if %RSD > 20%	5A
Mid-range Calibration Check Std.	Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115%	Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R >115%	5B
Method Blank	At least one per batch (≤20 samples) No results >RL	U (at the RL) if sample result is < RL & < 5X blank result.	7
		U (at reported sample value) if sample result is ≥ RL and < 5X blank result	7
Field Blanks (if required by project)	No results > RL	Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned.	6
MS samples (accuracy) (if required by project)	%R within lab control limits	Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. Use PJ if only one %R outlier	8
Precision: MS/MSD or LCS/LCSD or sample/dup	At least one set per batch (≤10 samples) RPD ≤ lab control limit	J(+) if RPD > lab control limits	9
LCS (not required by method)	%R within lab control limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% (EcoChem PJ)	10

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Surrogates	2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150%	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% No action if 2 or more surrogates are used, and only one is outside control limits. (EcoChem PJ)	13
Pattern Identification	Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match.	J(+)	2
Field Duplicates	Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50%	Narrate (Use Professional Judgement to qualify)	9
Two analyses for one sample (dilution)	Report only one result per analyte	"DNR" (or client requested qualifier) all results that should not be reported. (See TM-04)	11

EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

QUALIFIED DATA SUMMARY TABLE
Crownhill Elementary - Fall 2012 Sampling

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Flag	DV Quallfier	DV Reason Code
210484	MW-10-102512	210484-01	SW8270D	Benzoic acid	50	ug/L	U	R	10
210484	MW-1-102612	210484-09	SW8270D	Benzoic acid	50	ug/L	U	R	10
210484	MW-11-102612	210484-08	SW8270D	Benzoic acid	50	ug/L	U	R	10
210484	MW-18-102612	210484-10	SW8270D	Benzoic acid	50	ug/L	U	R	10
210484	MW-2-102512	210484-03	SW8270D	Benzoic acid	50	ug/L	U	R	10
210484	MW-4-102512	210484-06	SW8270D	Benzoic acid	50	ug/L	U	R	10
210484	MW-5-102512	210484-04	SW8270D	Benzoic acid	50	ug/L	U	R	10
210484	MW-6-102512	210484-05	SW8270D	Benzoic acid	50	ug/L	U	R	10
210484	MW-7-102512	210484-07	SW8270D	Benzoic acid	50	ug/L	U	R	10
210484	MW-9-102512	210484-02	SW8270D	Benzoic acid	50	ug/L	U	R	10
211041	MW-15-110112	211041-04	NWTPH-Dx	Diesel Range Hydrocarbons	70	ug/L	x	J	2
210484	MW-5-102512	210484-04	NWTPH-Dx	Lube Oil Range Hydrocarbons	700	ug/L	x	J	2
211041	MW-12-110112	211041-01	NWTPH-Dx	Oil Range Hydrocarbons	750	ug/L	x	J	2
211041	MW-16-110112	211041-05	NWTPH-Dx	Oil Range Hydrocarbons	420	ug/L	x	J	2

APPENDIX D

Soil and Groundwater Quality Data

Table D-1 - Groundwater Quality Data

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

	MW-1													
Chemical Name	MW-1 4/9/11	MW-1 4/9/11 FD	MW-1 7/7/11	MW-1 7/7/11 FD	MW-1 10/26/11	MW-1 10/26/11 FD	MW-1 1/17/12	MW-1 1/17/12 FD	MW-1 4/13/12	MW-1 4/13/12 FD	MW-1 7/11/12	MW-1 7/11/12 FD	MW-1 10/26/12	MW-1 10/26/12 FD
Total Petroleum Hydrocarbons (TPH)														
Diesel Range Hydrocarbons in ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	55 U
Oil Range Hydrocarbons in ug/L	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	280 U
Metals														
Dissolved Arsenic in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dissolved Copper in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
Dissolved Lead in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Arsenic in ug/L	1 U	1 U	**3.63**	**2.6**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Copper in ug/L	**4.24**	**6.08**	**59.6**	**41.9**	**5.66**	**5.43**	**5.38**	**7.57**	**1.54**	**1.46**	1 U	1 U	**2.02**	**1.95**
Total Lead in ug/L	**1.17**	**3.47**	**20.6 J**	**13.5 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Polycyclic Aromatic Hydrocarbons (PAHs)														
Naphthalene in ug/L	0.12	0.11	0.14	0.15	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Volatile Organic Compounds (VOC)														
Chlorobenzene in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene (DCE) in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE) in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Field Parameters														
Dissolved Oxygen in mg/L	4.39		5.16		6.05		7.74		6.01		8.56		6.88	
ORP in mVolts	140.5		55.6		147.2		142		2,464		193		297.7	
pH in pH Units	6.53		6.48		6.47		6.63		6.47		6.47		6.63	
Specific Conductance in us/cm	369		418.7		347.3		369		422.6		300.3		229	
Temperature in deg C	13.02		15.8		13.5		12.34		13		15.1		13.6	
Turbidity in NTU	47.9		1,000				88.7		18.3		10.9		52.2	

Notes

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x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table D-1 - Groundwater Quality Data

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

	MW-2							MW-4									
Chemical Name	MW-2 4/9/11	MW-2 7/7/11	MW-2 10/26/11	MW-2 1/17/12	MW-2 4/12/12	MW-2 7/10/12	MW-2 10/25/12	MW-4 4/9/11	MW-4 7/7/11	MW-4 10/26/11	MW-4 1/17/12	MW-4 4/12/12	MW-4 7/10/12	MW-4 10/25/12	MW-4 2/1/13	MW-4 5/3/13	MW-4 8/7/13
Total Petroleum Hydrocarbons (TPH)																	
Diesel Range Hydrocarbons in ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Oil Range Hydrocarbons in ug/L	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Metals																	
Dissolved Arsenic in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	**1.46**	**3.8 J**	**3.28**	**3.37**	**3.09**	**2.7**	**2.88**	**3.09**			
Dissolved Copper in ug/L	**1.41**	1 U	1 U	5 U	1 U	1 U	1 U	**1.58**	**1.16**	1 U	5 U	1 U	1 U	1 U			
Dissolved Lead in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U			
Total Arsenic in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	**1.23**	**4.74**	**24.9**	**7.82**	**3.47**	**2.76**	**2.76**	**3.38**	**3.4**	**4.05**	**2.83**
Total Copper in ug/L	**1.18**	1 U	**2.96**	5 U	1 U	1 U	**3.09**	**17.7**	**464**	**35.6**	**6.33**	1 U	1 U	1 U			
Total Lead in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**2.24**	**53.1**	**5.58**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Polycyclic Aromatic Hydrocarbons (PAHs)																	
Naphthalene in ug/L	**0.12**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.16**	**0.17**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U			
Volatile Organic Compounds (VOC)																	
Chlorobenzene in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U			
cis-1,2-Dichloroethene (DCE) in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE) in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Field Parameters																	
Dissolved Oxygen in mg/L	4.77	3.76	10.62	5.28	8.66	8.82	7.44	4.32	4.2	6	1.19	2.8	3.12	2.89	2.91	4.03	6.25
ORP in mVolts	90.7	192.2	252.5	16.2	166.5	137	65	55.2	-71.9	164	57.2	112.2	79.1	149.1	-12.6	-190.3	190.0
pH in pH Units	6.8	6.56		6.82	7.05	7.01	7.5	8.12	7.22		6.61	6.57	6.55	6.73	6.53	6.83	6.51
Specific Conductance in us/cm	480	535.1	0.444	472.1	495	368.9	284	430	373.8	0.319	375.9	389.6	271.8	221.9	345.4	344.1	264.8
Temperature in deg C	12.07	12.2	11.72	11.5	12.13	12.3	12.17	15.65	16.4	12.75	12.3	12.7	14.8	13	12.3	13.0	14.1
Turbidity in NTU	7.02	6.97		21.1	10.4	7.19	260	354			47.5	8.3	3	1.1	3.68	14.3	0.96

Notes

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Table D-1 - Groundwater Quality Data

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

	MW-5										MW-6									
Chemical Name	MW-5 4/9/11	MW-5 7/7/11	MW-5 10/26/11	MW-5 1/16/12	MW-5 4/12/12	MW-5 7/10/12	MW-5 10/25/12	MW-5 2/1/13	MW-5 5/3/13	MW-5 8/7/13	MW-6 4/9/11	MW-6 7/7/11	MW-6 10/26/11	MW-6 1/17/12	MW-6 4/13/12	MW-6 7/10/12	MW-6 10/25/12	MW-6 2/1/13	MW-6 5/3/13	MW-6 8/7/13
Total Petroleum Hydrocarbons (TPH)																				
Diesel Range Hydrocarbons in ug/L	**2,100 J**	**1,900**	**2,600 x**	**2,100**	**2,300 J**	**2,900**	**2,300**	**1,800 x**	**1,900 x**	**2,200 x**	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	55 U	50 U
Oil Range Hydrocarbons in ug/L	**310 J**	**530 J**	**730 x**	**610**	**990 J**	**800 J**	**700 J**	**530 x**	**590 x**	**780 x**	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	280 U	250 U
Metals																				
Dissolved Arsenic in ug/L	**1.38 J**	1 U	1 U	1 U	1 U	1 U	1 U				**6.33 J**	**3.32**	**4.7**	**7.57**	**9.15**	10	**10.6**			
Dissolved Copper in ug/L	**9.5**	**6.53**	**6.49**	5 U	**4.96**	**4.27**	**4.47**				**1.24**	1 U	1 U	5 U	1 U	1 U	1 U			
Dissolved Lead in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U				1 U	1 U	1 U	1 U	1 U	1 U	1 U			
Total Arsenic in ug/L	1 U	**1.6**	**1.3**	1 U	1 U	1 U	1 U	1 U	**1.08**	1 U	**4.93 J**	**2.45**	**5.8**	**7.67**	**9.93**	**10.2**	**12.2**	**10.7**	**11.9**	**13.5**
Total Copper in ug/L	**8.41**	**19.9**	**19.2**	**13.8**	**8.78**	**6.55**	**7.5**				**3.91**	**3.07**	**1.47**	5 U	1 U	1 U	1 U			
Total Lead in ug/L	1 U	**4.89**	**3.87**	**1.35**	1 U	1 U	1 U	1 U	**1.11**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Polycyclic Aromatic Hydrocarbons (PAHs)																				
Naphthalene in ug/L	0.1 U	0.1 U	0.17	0.1 U	0.1 U	0.1 U	0.1 U				0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U			
Volatile Organic Compounds (VOC)																				
Chlorobenzene in ug/L	**1**	**1.3**	**1.7**	**1.8**	**2.2**	**2.1**	**2.3**				1 U	1 U	1 U	1 U	1 U	1 U	1 U			
cis-1,2-Dichloroethene (DCE) in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE) in ug/L	**1.3**	**1.7**	**2**	**2.3**	**2.2**	**2.2**	**2.4**	**1.5**	**1.3**	**1.7**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Field Parameters																				
Dissolved Oxygen in mg/L	0.32	4.65	2.17	0.92	1.32	1.2	1.35	0.23	1.89	2.31	0.86	0.69	3.94	4.6	3.48	3.55	2.83	1.99	2.88	2.10
ORP in mVolts	86.9	201.2	136.2	94.5	115.1	49	155.5	12.0	22.7	-14.5	-1.3	-54.9	12.1	60.3	45.7	18.8	30.3	20.7	-3.1	41.6
pH in pH Units	7.04	6.87		6.95	6.85	6.78	6.96	6.83	6.91	6.94	7.13	6.88	6.74	6.71	6.64	6.43	6.94	6.40	6.58	6.62
Specific Conductance in us/cm	1,503	1,671	1.461	1,591	1,671	1,239	1,032	1,590	1,478	1,247	453	420.4	533.8	616	643	477.6	0.41	647.2	595.1	512.6
Temperature in deg C	13.94	13.8	13.13	12.22	13.45	14.4	13.5	12.9	13.4	15.0	12.55	13.7	12.8	11.66	12.54	13.4	12.32	12.2	12.9	20.2
Turbidity in NTU	21.8	172		60.7	27.34	13.9	36	13.7	35.7	4.25	75.5	34.9		7.39	5.59	2.72	6.5	21.8	1.90	17.1

Notes

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Table D-1 - Groundwater Quality Data

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

	MW-7							MW-9						
Chemical Name	MW-7 4/9/11	MW-7 7/7/11	MW-7 10/26/11	MW-7 1/17/12	MW-7 4/13/12	MW-7 7/11/12	MW-7 10/25/12	MW-9 1/16/12	MW-9 4/12/12	MW-9 7/10/12	MW-9 10/25/12	MW-9 2/1/13	MW-9 5/3/13	MW-9 8/7/13
Total Petroleum Hydrocarbons (TPH)														
Diesel Range Hydrocarbons in ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	**110**	50 U	50 U	**96 x**
Oil Range Hydrocarbons in ug/L	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
Metals														
Dissolved Arsenic in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U			
Dissolved Copper in ug/L	**1.15**	**4.47 J**	1 U	5 U	1 U	1 U	1 U	5 U	**1.31**	1 U	1 U			
Dissolved Lead in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U			
Total Arsenic in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Copper in ug/L	1 U	1 UJ	**1.05**	5 U	1 U	1 U	1 U	5 U	**1.63**	1 U	1 U			
Total Lead in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Polycyclic Aromatic Hydrocarbons (PAHs)														
Naphthalene in ug/L	0.11	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U			
Volatile Organic Compounds (VOC)														
Chlorobenzene in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U			
cis-1,2-Dichloroethene (DCE) in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**1.2**	**1.6**	**2**	**1.1**	**1.8**	**1.9**	**1.6**
Trichloroethene (TCE) in ug/L	**3.1**	**3.7**	**1.3**	**1.1**	**1.8**	**1.7**	1 U	**11**	**11**	**8.5**	**11**	**9.7**	**9.6**	**11**
Field Parameters														
Dissolved Oxygen in mg/L	5.32	8.03	5.02	6.51	6	5.9	5.45	8.46	1.91	3.26	1.83	1.68	2.30	3.08
ORP in mVolts	159.9	146.9	28.4	136.9	185	211.2	111.1	61.4	216.7	86.8	123.6	37.4	123.3	79.8
pH in pH Units	7.64	6.38	6.18	6.3	6.17	6.11	7.1	6.37	6.18	5.94	6.32	6.02	6.31	6.3
Specific Conductance in us/cm	322	289.4	213.3	220	265	199.8	132	439.5	391.1	186.3	296.7	365.0	211.7	332.1
Temperature in deg C	11.67	12.4	12.4	11	11.62	12.7	11.8	11.6	11.9	13	12.1	11.9	12.3	12.5
Turbidity in NTU	9.65	37.1		13	8.28	8.62	24.9		0.99	3.76	8.82	4.38	2.80	1.11

Notes

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Table D-1 - Groundwater Quality Data

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

	MW-10							MW-11				MW-12			
Chemical Name	MW-10 1/17/12	MW-10 4/13/12	MW-10 7/11/12	MW-10 10/25/12	MW-10 2/1/13	MW-10 5/3/13	MW-10 8/7/13	MW-11 1/17/12	MW-11 4/13/12	MW-11 7/11/12	MW-11 10/26/12	MW-12 11/1/12	MW-12 2/1/13	MW-12 5/3/13	MW-12 8/8/13
Total Petroleum Hydrocarbons (TPH)															
Diesel Range Hydrocarbons in ug/L	50 U	50 U	50 U	**58**	50 U	50 U	50 U	50 U	50 U	50 U	50 U	**2,500**	**2,100 x**	**1,900 x**	**2,200 x**
Oil Range Hydrocarbons in ug/L	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	**750 J**	**610 x**	**550 x**	**820 x**
Metals															
Dissolved Arsenic in ug/L	**6.17**	**5.2**	**3.91**	**3.6**				1 U	1 U	1 U	1 U				
Dissolved Copper in ug/L	5 U	1 U	1 U	1 U				5 U	1 U	1 U	1 U				
Dissolved Lead in ug/L	1 U	1 U	1 U	1 U				1 U	1 U	1 U	1 U				
Total Arsenic in ug/L	**6.12**	**5.1**	**3.71**	**3.63**	**3.59**	**3.83**	**3**	1 U	1 U	1 U	1 U		**1.93**	**2.51**	**1.81**
Total Copper in ug/L	5 U	1 U	1 U	1 U				5 U	1 U	1 U	1 U				
Total Lead in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U		**1.1**	1 U	1 U
Polycyclic Aromatic Hydrocarbons (PAHs)															
Naphthalene in ug/L	0.18	**0.21**	0.1 U	0.1 U				0.1 U	**0.3**	0.1 U	0.1 U				
Volatile Organic Compounds (VOC)															
Chlorobenzene in ug/L	1 U	1 U	1 U	1 U				1 U	1 U	1 U	1 U				
cis-1,2-Dichloroethene (DCE) in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE) in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Field Parameters															
Dissolved Oxygen in mg/L	0.44	0.69	0.85	0.2	0.25	0.21	1.62	3.95	6.59	7.15	6.82	0.36	0.73	0.97	0.80
ORP in mVolts	97.1	-87.2	-57.4	-70.4	-16.4	-51.7	-48.1	77.7	104.4	31.1	290	-340.1	36.5	38.9	-0.9
pH in pH Units	7.12	7.1	6.94	7.28	6.98	7.23	7.16	6.37	6.26	6.2	6.29	7	6.89	6.87	6.86
Specific Conductance in us/cm	499.5	529.3	373.1	313.8	492.5	515.7	382.3	278.6	253.2	168.4	129	1,039	1,565	1,540	1,260
Temperature in deg C	11.5	11.5	14.5	12	11.3	12.2	15.8	12.1	13	14.6	12.5	13.6	13.0	13.4	13.7
Turbidity in NTU	24.3	2.66	2.74	2.31	7.51	2.23	1.82	11	1.36	2.53	8.82	202	21.3	12.3	4.37

Notes

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x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table D-1 - Groundwater Quality Data

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

	MW-13	MW-14			MW-15				MW-16
Chemical Name	MW-13 11/1/12	MW-14 11/1/12	MW-14 2/1/13	MW-14 5/3/13	MW-15 11/1/12	MW-15 2/1/13	MW-15 5/3/13	MW-15 8/8/13	MW-16 11/1/12
Total Petroleum Hydrocarbons (TPH)									
Diesel Range Hydrocarbons in ug/L	**43,000**	**1,600**	**2,900 x**	**2,900 x**	**70 J**	50 U	50 U	50 U	**2,100**
Oil Range Hydrocarbons in ug/L	**39,000**	**680**	**740 x**	**770 x**	280 U	250 U	250 U	250 U	**420 J**
Metals									
Dissolved Arsenic in ug/L									
Dissolved Copper in ug/L									
Dissolved Lead in ug/L									
Total Arsenic in ug/L			**2.61**	**3.04**		**1.25**	**1.59**	1 U	
Total Copper in ug/L									
Total Lead in ug/L			1 U	1 U		1 U	1 U	1 U	
Polycyclic Aromatic Hydrocarbons (PAHs)									
Naphthalene in ug/L									
Volatile Organic Compounds (VOC)									
Chlorobenzene in ug/L									
cis-1,2-Dichloroethene (DCE) in ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE) in ug/L	1 U	**2.3**	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Field Parameters									
Dissolved Oxygen in mg/L		0.34	0.32	0.39	1.22	1.68	2.77	3.44	3.69
ORP in mVolts		-395.1	52.7	75.1	190.4	185.9	168.1	4.1	-49.8
pH in pH Units		7.02	6.77	6.79	7.16	6.97	7.08	6.88	7.1
Specific Conductance in us/cm		787	1,503	1,576	602.4	789	786	574.0	828
Temperature in deg C		13.5	12.7	13.2	12.9	12.4	12.8	13.1	13.5
Turbidity in NTU		154	3.97	1.93	125	53.0	5.12	1.52	5.62

Notes

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Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
CS-1	(0 - 1 ft.)	3/29/12	2.21	53	50 U	670
CS-2	(0 - 1 ft.)	3/29/12	2.04	11.7	120 x	1300
CS-3*	(0 - 1 ft.)	3/29/12	2.18	583	50 U	250 U
CS-3* (Dup)	(0 - 1 ft.)	3/29/12	2.59	1130	50 U	250 U
CS-4*	(0 - 1 ft.)	3/29/12	15	3200	76 x	720
CS-5*	(0 - 1 ft.)	3/29/12	27.7	5590	270 x	1400
CS-6	(0 - 1 ft.)	3/29/12	1.6	6.49	50 U	250 U
CS-7*	(0 - 1 ft.)	3/29/12	8.01	658	50 U	250 U
CS-8	(0 - 1 ft.)	3/29/12	1.48	93.6	50 U	250 U
CS-9	(0 - 1 ft.)	3/29/12	2.43	42.9	50 U	250 U
CS-10	(0 - 1 ft.)	3/29/12	1.99	38.4	50 U	250 U
CS-11	(0 - 1 ft.)	3/29/12	1.36	20.7	50 U	250 U
CS-12*	(0 - 1 ft.)	3/29/12	2.53	300	50 U	250 U
CS-13	(0 - 1 ft.)	4/2/12	2.1	64.8	160 x	490
CS-14*	(0 - 1 ft.)	4/2/12	2.19	361	50 U	250 U
CS-14* (Dup)	(0 - 1 ft.)	4/2/12	1.89	218	50 U	250 U
CS-15*	(0 - 1 ft.)	4/2/12	2.54	174	50 U	250 U
CS-16*	(0 - 1 ft.)	4/2/12	3.37	123	50 U	250 U
CS-17	(0 - 1 ft.)	4/2/12	1.83	47.8	50 U	250 U
CS-18	(0 - 1 ft.)	4/2/12	2.26	28	110 x	1700
CS-19	(0 - 1 ft.)	4/2/12	3.69	6.18	50 U	250 U
CS-20	(0 - 1 ft.)	4/2/12	2.85	40.2	50 U	280
CS-21	(0 - 1 ft.)	4/2/12	2.6	93	85 x	420
CS-22	(0 - 1 ft.)	4/2/12	4.72	153	180 x	470
CS-23	(0 - 1 ft.)	4/2/12	2.24	47	50 U	380
CS-24	(0 - 1 ft.)	4/2/12	1.86	58.5	50 U	430
CS-25	(0 - 1 ft.)	4/2/12	2.15	64.6	66 x	500
CS-26*	(0 - 1 ft.)	4/2/12	3.96	808	530 x	1000
CS-27	(0 - 1 ft.)	4/2/12	1.68	59.2	50 U	250 U
CS-28*	(0 - 1 ft.)	4/2/12	3.63	252	140 x	820
CS-29	(0 - 1 ft.)	4/2/12	1.5	14.3	50 U	250 U
CS-30*	(0 - 1 ft.)	4/2/12	3.88	310	50 U	410
CS-31	(0 - 1 ft.)	4/4/12	2.93	52.3	50 U	250 U
MW-8	(20 ft.)	12/20/11	1.49	37	50 U	250 U
MW-8	(80 ft.)	12/20/11	1 U	1.06	50 U	250 U
MW-8	(110 ft.)	12/20/11	1.03	6.89	5900	4900
MW-9	(15 ft.)	12/19/11	4.73	7.52	70 x	250 U
MW-9	(75 ft.)	12/19/11	1 U	1 U	50 U	250 U
MW-9	(120 ft.)	12/19/11	1 U	1.24	62 x	250 U
MW-10	(5 ft.)	12/21/11	1.08	1.36	50 U	250 U
MW-10	(70 ft.)	12/21/11	1 U	1.24	50 U	250 U
MW-10	(135 ft.)	12/21/11	1 U	1 U	50 U	250 U
MW-11	(20 ft.)	12/22/11	2.72	4.43	50 U	250 U
MW-11	(70 ft.)	12/22/11	1.03	3.29	50 U	250 U
MW-11	(135 ft.)	12/22/11	1 U	1.44	50 U	250 U
MW-12	(41 ft.)	10/25/12			3700	4400
MW-12	(61.5 ft.)	10/25/12			50 U	250 U
MW-12	(81 ft.)	10/25/12			50 U	250 U
MW-12	(105.5 ft.)	10/25/12			50 U	250 U
MW-12	(115.5 ft.)	10/25/12			50 U	250 U
MW-13	(45 ft.)	10/25/12			14000	15000
MW-13	(65 ft.)	10/25/12			9300	7500
MW-13	(85 ft.)	10/25/12			3000	3500
MW-13	(105 ft.)	10/25/12			6400	6200
MW-14	(40 ft.)	10/26/12			21000	40000
MW-14	(60 ft.)	10/26/12			7300	6900
MW-14	(80 ft.)	10/26/12			10000	12000
MW-14	(100 ft.)	10/26/12			330	350

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
MW-15	(45 ft.)	10/26/12			50 U	250 U
MW-15	(110 ft.)	10/26/12			50 U	250 U
MW-16	(20 ft.)	10/26/12			50 U	250 U
MW-16	(110 ft.)	10/26/12			15000	14000
NG-A4	(0 - 3 ft.)	3/28/11	2.06	16.1	50 U	250 U
NG-A4	(6 - 9 ft.)	3/28/11	1.4	2.3	50 U	250 U
NG-A4	(12 - 15 ft.)	3/28/11	1.15	1.82	50 U	250 U
NG-A5	(0 - 3 ft.)	3/28/11	2.76	6.83	50 U	250 U
NG-A5	(6 - 9 ft.)	3/28/11	1.18	1.72	50 U	250 U
NG-A5	(12 - 15 ft.)	3/28/11	1.1	1.29	50 U	250 U
NG-A6	(0 - 3 ft.)	3/28/11	1.62	2.9	50 U	250 U
NG-A6	(6 - 9 ft.)	3/28/11	1.03	1.81	50 U	250 U
NG-A6	(12 - 15 ft.)	3/28/11	1.66	4.78	50 U	250 U
NG-A8	(0 - 3 ft.)	3/28/11	1.78	11.3	50 U	250 U
NG-A8	(6 - 9 ft.)	3/28/11	1.75	4.93	50 U	250 U
NG-A8	(12 - 15 ft.)	3/28/11	2.06	4.25	50 U	250 U
NG-B2	(0 - 3 ft.)	3/31/11	1.69	7.81	50 U	250 U
NG-B2	(6 - 9 ft.)	3/31/11	2.43	2.49	50 U	250 U
NG-B2	(12 - 15 ft.)	3/31/11	1.05	1.31	50 U	250 U
NG-B3	(0 - 3 ft.)	3/28/11	1.43	11.7	50 U	250 U
NG-B3 (Dup)	(0 - 3 ft.)	3/28/11	1.66	12	50 U	250 U
NG-B3	(6 - 9 ft.)	3/28/11	1.09	1.52	50 U	250 U
NG-B3 (Dup)	(6 - 9 ft.)	3/28/11	1.13	1.44	50 U	250 U
NG-B3	(12 - 15 ft.)	3/28/11	2.24	1.79	50 U	250 U
NG-B3 (Dup)	(12 - 15 ft.)	3/28/11	1.01	1.35	50 U	250 U
NG-B4	(0 - 3 ft.)	3/28/11	1.63	4.07	50 U	250 U
NG-B4	(6 - 9 ft.)	3/28/11	30.2	2880	50 U	250 U
NG-B4	(12 - 15 ft.)	3/28/11	31.7	921	50 U	250 U
NG-B5	(0 - 3 ft.)	3/28/11	1.74	7.25	50 U	250 U
NG-B5	(6 - 9 ft.)	3/28/11	1.53	12.7	50 U	250 U
NG-B5	(12 - 15 ft.)	3/28/11	25.3	1720	50 U	250 U
NG-B6	(0 - 3 ft.)	3/28/11	2.26	8.36	50 U	250 U
NG-B6	(6 - 9 ft.)	3/28/11	1.59	1.96	50 U	250 U
NG-B6	(12 - 15 ft.)	3/28/11	2.11	105	50 U	250 U
NG-B7	(0 - 3 ft.)	3/28/11	1.35	3.5	50 U	250 U
NG-B7	(6 - 9 ft.)	3/28/11	1.67	2.31	50 U	250 U
NG-B7	(12 - 15 ft.)	3/28/11	1.66	3.29	50 U	250 U
NG-B8	(0 - 3 ft.)	3/28/11	2.3	8.59	50 U	250 U
NG-B8	(6 - 9 ft.)	3/28/11	1.68	2.67	50 U	250 U
NG-B8	(12 - 15 ft.)	3/28/11	3.6	5.52	50 U	250 U
NG-B9	(0 - 3 ft.)	3/28/11	1.15	2.7	50 U	250 U
NG-B9	(6 - 9 ft.)	3/28/11	1 U	1.31	50 U	250 U
NG-B9	(12 - 15 ft.)	3/28/11	1.09	1.33	50 U	250 U
NG-C2	(0 - 3 ft.)	3/31/11	2.23	72	50 U	250 U
NG-C2	(6 - 9 ft.)	3/31/11	1.06	1.3	50 U	250 U
NG-C2	(12 - 15 ft.)	3/31/11	1 U	1.08	50 U	250 U
NG-C3	(0 - 3 ft.)	3/31/11	2.53	20.1	50 U	250 U
NG-C3	(6 - 9 ft.)	3/31/11	1.04	1.21	50 U	250 U
NG-C3	(12 - 15 ft.)	3/31/11	1 U	1.24	50 U	250 U
NG-C4	(0 - 3 ft.)	3/28/11	5.69	390	50 U	250 U
NG-C4	(6 - 9 ft.)	3/28/11	26.9	4190	50 U	250 U
NG-C4	(12 - 15 ft.)	3/28/11	47.4	4390	50 U	250 U
NG-C5	(0 - 3 ft.)	3/28/11	1.63	42.7	50 U	250 U
NG-C5	(6 - 9 ft.)	3/28/11	33.7	1620	50 U	250 U
NG-C5	(12 - 15 ft.)	3/28/11	15.3	1370	50 U	250 U
NG-C6	(0 - 3 ft.)	3/28/11	2.02	35.4	50 U	250 U
NG-C6	(6 - 9 ft.)	3/28/11	2.17	12.7	50 U	250 U
NG-C6	(12 - 15 ft.)	3/28/11	23.8	3130	50 U	250 U

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
NG-C7	(0 - 3 ft.)	3/24/11	1.84	10.4	50 U	250 U
NG-C7	(6 - 9 ft.)	3/24/11	1.78	2.72 J	50 U	250 U
NG-C7 (Dup)	(6 - 9 ft.)	3/24/11	2.15	5.56 J	50 U	250 U
NG-C7	(12 - 15 ft.)	3/24/11	1.52	3.12	50 U	250 U
NG-C7	(17 - 20 ft.)	3/24/11	1.63	2.4	50 U	250 U
NG-C8	(0 - 3 ft.)	3/28/11	2.28	6.5	50 U	250 U
NG-C8	(6 - 9 ft.)	3/28/11	2	3.47	50 U	250 U
NG-C8	(12 - 15 ft.)	3/28/11	1.59	2.68	50 U	250 U
NG-C9	(0 - 3 ft.)	3/28/11	1.9	5.18	50 U	250 U
NG-C9	(6 - 9 ft.)	3/28/11	1.03	1.77	50 U	250 U
NG-C9	(12 - 15 ft.)	3/28/11	1 U	1.42	50 U	250 U
NG-C10	(0 - 3 ft.)	3/28/11	1.14	1.61	50 U	250 U
NG-C10	(6 - 9 ft.)	3/28/11	1 U	1.51	50 U	250 U
NG-C10	(12 - 15 ft.)	3/28/11	1 U	1.65	50 U	250 U
NG-D1	(0 - 3 ft.)	3/31/11	1 U	16	50 U	270
NG-D1	(6 - 9 ft.)	3/31/11	1 U	1.26	50 U	250 U
NG-D1	(12 - 15 ft.)	3/31/11	1 U	1.57	50 U	250 U
NG-D2	(0 - 3 ft.)	3/31/11	1.94	12.3	50 U	280
NG-D2	(6 - 9 ft.)	3/31/11	1.3	1.78	50 U	250 U
NG-D2	(12 - 15 ft.)	3/31/11	1.12	1.58	50 U	250 U
NG-D3	(0 - 3 ft.)	3/28/11	1.55	7.33	50 U	250 U
NG-D3	(6 - 9 ft.)	3/28/11	6.17	2000	27000	72000
NG-D3	(12 - 15 ft.)	3/28/11	1.52	16.5	1300	2300
NG-D4	(0 - 3 ft.)	3/28/11	4.4	436	50 U	250 U
NG-D4	(6 - 9 ft.)	3/28/11	25.2	5940	50 U	250 U
NG-D4	(12 - 15 ft.)	3/28/11	1 U	2.2	50 U	250 U
NG-D5	(0 - 3 ft.)	3/28/11	1.45	17.6	50 U	250 U
NG-D5	(6 - 9 ft.)	3/28/11	25.6	4700	860	490
NG-D5	(12 - 15 ft.)	3/28/11	26.8	2960	210	390
NG-D6	(0 - 3 ft.)	3/28/11	2.09	45.9	50 U	250 U
NG-D6	(6 - 9 ft.)	3/28/11	1.12	7	50 U	250 U
NG-D6	(12 - 15 ft.)	3/28/11	31.6	4740	50 U	250 U
NG-D7	(0 - 3 ft.)	3/28/11	2.57	20.2	50 U	250 U
NG-D7	(6 - 9 ft.)	3/28/11	2.57	106	50 U	250 U
NG-D7	(12 - 15 ft.)	3/28/11	24.3	2730	50 U	250 U
NG-D8	(0 - 3 ft.)	3/28/11	2.85	8.2	50 U	250 U
NG-D8	(6 - 9 ft.)	3/28/11	1.81	3.23	50 U	250 U
NG-D8	(12 - 15 ft.)	3/28/11	3.36	7.4	50 U	250 U
NG-D9	(0 - 3 ft.)	3/25/11	2.93	8.54	50 U	250 U
NG-D9	(6 - 9 ft.)	3/25/11	7.88	9.62	50 U	250 U
NG-D9	(12 - 15 ft.)	3/25/11	3.75	6.61	50 U	250 U
NG-D10	(0 - 3 ft.)	3/25/11	3.25	5.21	50 U	250 U
NG-D10	(6 - 9 ft.)	3/25/11	6.99	35.4	50 U	250 U
NG-D10	(12 - 15 ft.)	3/25/11	3.98	5.49	50 U	250 U
NG-E1	(0 - 3 ft.)	3/31/11	2.79	26.8	50 U	820
NG-E1	(6 - 9 ft.)	3/31/11	1.37	1.93	50 U	250 U
NG-E1	(12 - 15 ft.)	3/31/11	1.15	1.91	50 U	250 U
NG-E2	(0 - 3 ft.)	3/31/11	1.74	73.6	140 J	440
NG-E2	(6 - 9 ft.)	3/31/11	1.06	1.47	50 U	250 U
NG-E2	(12 - 15 ft.)	3/31/11	1.71	2.28	50 U	250 U
NG-E3	(0 - 3 ft.)	3/28/11	2.27	90.5	50 U	250 U
NG-E3	(6 - 9 ft.)	3/28/11	2.7	114	50 U	250 U
NG-E3	(12 - 15 ft.)	3/28/11	1.37	1.88	50 U	250 U
NG-E4	(0 - 3 ft.)	3/28/11	1.5	33.9	50 U	250 U
NG-E4	(6 - 9 ft.)	3/28/11	29.1	4570	50 U	250 U
NG-E4	(12 - 15 ft.)	3/28/11	3.85	66.1	50 U	250 U
NG-E5	(0 - 3 ft.)	3/28/11	2.05	77.6	50 U	250 U
NG-E5	(6 - 9 ft.)	3/28/11	63.1	17500	350	2200

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
NG-E5	(12 - 15 ft.)	3/28/11	45.1	7560	50 U	250 U
NG-E6	(0 - 3 ft.)	3/24/11	3.37	12.3	50 U	250 U
NG-E6	(6 - 9 ft.)	3/24/11	33.7	2680	50 U	250 U
NG-E6	(12 - 15 ft.)	3/24/11	23.2	2420	50 U	250 U
NG-E6	(46.2 - 46.5 ft.)	3/25/11			5500	5000
NG-E6	(70 - 71.5 ft.)	3/25/11			3800	3600
NG-E6	(95 - 96 ft.)	3/25/11			4000	3600
NG-E7	(0 - 3 ft.)	3/28/11	1.73	11.5	50 U	250 U
NG-E7	(6 - 9 ft.)	3/28/11	1.81	25	50 U	250 U
NG-E7	(12 - 15 ft.)	3/28/11	13.8	1060	50 U	250 U
NG-E8	(0 - 2 ft.)	3/28/11	2.33	10.8	50 U	300
NG-E8	(6 - 9 ft.)	3/28/11	1.62	13.6	50 U	250 U
NG-E8	(12 - 15 ft.)	3/28/11	2.14	9.5	50 U	250 U
NG-E9	(0 - 3 ft.)	3/25/11	3.42	18.8	50 U	250 U
NG-E9	(6 - 9 ft.)	3/25/11	2.62	9.73	50 U	250 U
NG-E9	(12 - 15 ft.)	3/25/11	4.9	646	4000	7300
NG-E10	(0 - 3 ft.)	3/25/11	5.43	7.34	50 U	250 U
NG-E10	(6 - 9 ft.)	3/25/11	6.44	9.24	50 U	250 U
NG-E10	(12 - 15 ft.)	3/25/11	6.47	9.16	50 U	250 U
NG-F1	(0 - 3 ft.)	3/31/11	1.51	29.6	550	1600
NG-F1	(6 - 9 ft.)	3/31/11	1.15	1.57	50 U	250 U
NG-F1	(12 - 15 ft.)	3/31/11	1 U	1.51	50 U	250 U
NG-F2	(0 - 3 ft.)	3/31/11	1.63	117	50 U	250 U
NG-F2	(6 - 9 ft.)	3/31/11	1.17	1.84	50 U	250 U
NG-F2	(12 - 15 ft.)	3/31/11	1.13	1.35	50 U	250 U
NG-F3	(0 - 3 ft.)	4/1/11	1.6	82	50 U	250 U
NG-F3	(6 - 9 ft.)	4/1/11	2.14	703	230	340
NG-F3	(12 - 15 ft.)	4/1/11	1.34	1.89	50 U	250 U
NG-F4	(0 - 3 ft.)	3/24/11	10.6	25.8	50 U	250 U
NG-F4	(6 - 9 ft.)	3/24/11	38.9	2580	50 U	250 U
NG-F4	(12 - 15 ft.)	3/24/11	1.84	34.3	50 U	250 U
NG-F5	(0 - 3 ft.)	3/24/11	1.54	52.3	50 U	250 U
NG-F5	(8 - 10 ft.)	3/24/11	49.6	3700	2200	1700
NG-F5	(12 - 15 ft.)	3/24/11	57.9	26300	50 U	250 U
NG-F6	(0 - 3 ft.)	3/25/11	2.4	44.7	50 U	360
NG-F6	(6 - 9 ft.)	3/25/11	21.4	2230	50 U	250 U
NG-F6	(12 - 15 ft.)	3/25/11	44.6	7320	50 U	250 U
NG-F7	(0 - 3 ft.)	3/25/11	2.74	22.1	50 U	500
NG-F7	(6 - 9 ft.)	3/25/11	2.1	65.4	50 U	250 U
NG-F7	(12 - 15 ft.)	3/25/11	1.97	36.6	50 U	250 U
NG-F8	(0 - 3 ft.)	3/25/11	2.27	10.7	50 U	250 U
NG-F8	(6 - 9 ft.)	3/25/11	1.91	44.2	50 U	250 U
NG-F8	(12 - 15 ft.)	3/25/11	4.91	854	50 U	250 U
NG-F9	(0 - 3 ft.)	3/25/11	2.87	4.6	50 U	250 U
NG-F9	(6 - 9 ft.)	3/25/11	5.72	273	1000 J	3900
NG-F9	(12 - 15 ft.)	3/25/11	4.71	7.41	310 J	770
NG-F10	(0 - 3 ft.)	3/25/11	2.67	6.07	50 U	250 U
NG-F10	(6 - 9 ft.)	3/25/11	4.64	5.22	50 U	250 U
NG-F10	(12 - 15 ft.)	3/25/11	1.59	1.73	50 U	250 U
NG-G1	(0 - 3 ft.)	3/31/11	2.08	9.75	50 U	250 U
NG-G1	(6 - 9 ft.)	3/31/11	2.74	4.27	50 U	250 U
NG-G1	(12 - 15 ft.)	3/31/11	1.09	1.43	50 U	250 U
NG-G2	(0 - 3 ft.)	3/31/11	1.55	34.7	50 U	270
NG-G2	(6 - 9 ft.)	3/31/11	1.1	1.56	50 U	250 U
NG-G2	(12 - 15 ft.)	3/31/11	1 U	1.14	50 U	250 U
NG-G5	(0 - 3 ft.)	3/25/11	1.99	15	50 U	250 U
NG-G5	(6 - 9 ft.)	3/25/11	31.4	5170	50 U	250 U
NG-G5	(13.5 - 15 ft.)	3/25/11	42	6160	50 U	250 U

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
NG-G6	(0 - 3 ft.)	3/25/11	2.01	30.1	50 U	250 U
NG-G6	(6 - 9 ft.)	3/25/11	2.71	411	50 U	250 U
NG-G6	(13.5 - 15 ft.)	3/25/11	4.47	319	50 U	250 U
NG-G7	(0 - 3 ft.)	3/25/11	1.96	42.3	50 U	350
NG-G7	(6 - 9 ft.)	3/25/11	3.19	183	140 J	380
NG-G7	(12 - 15 ft.)	3/25/11	1.29	20.2	50 U	250 U
NG-G8	(0 - 3 ft.)	3/24/11	1.33	8.17	50 U	250 U
NG-G8	(6 - 9 ft.)	3/24/11	2.87	7.72	50 U	250 U
NG-G8	(12 - 15 ft.)	3/24/11	1.61	43.9	50 U	250 U
NG-G9	(0 - 3 ft.)	3/25/11	1.63	3.11	50 U	250 U
NG-G9	(6 - 9 ft.)	3/25/11	6.71	277	200 J	1600
NG-G9	(12 - 15 ft.)	3/25/11	1.67	2.51	50 U	250 U
NG-G10	(0 - 3 ft.)	3/25/11	2.38	4.04	50 U	250 U
NG-G10	(6 - 9 ft.)	3/25/11	3.75	3.99	50 U	250 U
NG-G10	(12 - 15 ft.)	3/25/11	2.56	3.16	50 U	250 U
NG-H5	(0 - 3 ft.)	3/25/11	1.88	35.8	50 U	250 U
NG-H5	(6 - 9 ft.)	3/25/11	27.7	9840	83 J	510
NG-H5	(12 - 15 ft.)	3/25/11	29.6	12800	210 J	630
NG-H6	(0 - 3 ft.)	3/25/11	2.74	66.6	50 U	250 U
NG-H6	(6 - 9 ft.)	3/25/11	25.3	4800	410 J	1700
NG-H6	(12 - 15 ft.)	3/25/11	30	8120	180 J	1000
NG-H7	(0 - 3 ft.)	3/25/11	1.66	2.98	50 U	250 U
NG-H7	(6 - 9 ft.)	3/25/11	2.55	114	50 U	250 U
NG-H7	(12 - 15 ft.)	3/25/11	5.26	226	50 U	250 U
NG-H8	(0 - 3 ft.)	3/25/11	1.49	3.28	50 U	250 U
NG-H8	(6 - 9 ft.)	3/25/11	1.29	3.19	50 U	250 U
NG-H8	(12 - 15 ft.)	3/25/11	1.08	4.23	50 U	250 U
NG-H9	(0 - 3 ft.)	3/24/11	1.84	5.33	50 U	250 U
NG-H9	(6 - 9 ft.)	3/24/11	1.53	2.49	50 U	250 U
NG-H9	(12 - 15 ft.)	3/24/11	1.11	1.47	50 U	250 U
NG-H10	(0 - 3 ft.)	3/25/11	2.03	1.85	50 U	250 U
NG-H10	(6 - 9 ft.)	3/25/11	2.42	2.86	50 U	250 U
NG-H10	(12 - 14 ft.)	3/25/11	5.06	3.99	50 U	250 U
NG-I4	(0 - 3 ft.)	3/25/11	2.04	32.2	50 U	250 U
NG-I4	(6 - 9 ft.)	3/25/11	1.41	1.64	50 U	250 U
NG-I4	(12 - 15 ft.)	3/25/11	1.21	1.12	50 U	250 U
NG-I5	(0 - 3 ft.)	3/25/11	1.79	6.2	50 U	250 U
NG-I5	(6 - 9 ft.)	3/25/11	1.26	1.43	50 U	250 U
NG-I5	(12 - 15 ft.)	3/25/11	1.62	1.86	50 U	250 U
NG-I6	(0 - 3 ft.)	3/25/11	1.81	18.2	50 U	250 U
NG-I6	(6 - 9 ft.)	3/25/11	1.56	2.07	50 U	250 U
NG-I6	(12 - 15 ft.)	3/25/11	1 U	1.57	50 U	250 U
NG-I7	(0 - 3 ft.)	3/25/11	1.46	1.98	50 U	250 U
NG-I7	(6 - 9 ft.)	3/25/11	1.3	1.77	50 U	300
NG-I7	(12 - 15 ft.)	3/25/11	1 U	1.61	50 U	250 U
NG-I8	(0 - 3 ft.)	3/25/11	1.6	3.41	50 U	250 U
NG-I8	(6 - 9 ft.)	3/25/11	1.26	1.31	50 U	250 U
NG-I8	(12 - 15 ft.)	3/25/11	1.06	1.52	50 U	250 U
NG-I9	(0 - 3 ft.)	3/24/11	7.68	76.9	50 U	250 U
NG-I9	(6 - 9 ft.)	3/24/11	1.91	2.02	50 U	250 U
NG-I9	(12 - 15 ft.)	3/24/11	1.36	1.55	50 U	250 U
NG-J4	(0 - 3 ft.)	3/29/11	1.11	41.5	50 U	250 U
NG-J4	(6 - 9 ft.)	3/29/11	3.97	6.83	50 U	250 U
NG-J4	(12 - 15 ft.)	3/29/11	2.05	2.4	50 U	250 U
NG-J5	(0 - 3 ft.)	3/29/11	2.24	27.2	50 U	250 U
NG-J5	(6 - 9 ft.)	3/29/11	1.7	2.97	50 U	250 U
NG-J5	(12 - 15 ft.)	3/29/11	1.13	1.43	50 U	250 U
NG-J6	(0 - 3 ft.)	3/29/11	2.8	26.1	50 U	250 U

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
NG-J6	(6 - 9 ft.)	3/29/11	4.89	8.42	50 U	250 U
NG-J6	(12 - 15 ft.)	3/29/11	1.7	3.42	50 U	250 U
NG-K1	(0 - 3 ft.)	3/29/11	2.1	28.2	50 U	250 U
NG-K1	(6 - 9 ft.)	3/29/11	1.32	1.58	50 U	250 U
NG-K1	(12 - 15 ft.)	3/29/11	1.03	1.29	50 U	250 U
NG-K2	(0 - 3 ft.)	3/29/11	1.51	30.9	50 U	250 U
NG-K2	(6 - 9 ft.)	3/29/11	1.04	5	50 U	250 U
NG-K2	(12 - 15 ft.)	3/29/11	1 U	1.37	50 U	250 U
NG-K3	(0 - 3 ft.)	3/24/11	1.82	89.4	50 U	250 U
NG-K3	(6 - 9 ft.)	3/24/11	15.1	762	50 U	250 U
NG-K3	(12 - 15 ft.)	3/24/11	1.75	2.18	50 U	250 U
NG-K4	(0 - 3 ft.)	3/29/11	2.21	41.2	50 U	250 U
NG-K4	(6 - 9 ft.)	3/29/11	15.3	5490	50 U	400
NG-K4	(12 - 15 ft.)	3/29/11	49.6	12200	50 U	250 U
NG-K5	(0 - 3 ft.)	3/29/11	2.99	37.9	50 U	250 U
NG-K5	(6 - 9 ft.)	3/29/11	1.33	16.8	50 U	960
NG-K5	(12 - 15 ft.)	3/29/11	5.38	75.8	50 U	430
NG-L1	(0 - 3 ft.)	3/30/11	1.41	23.8	50 U	250 U
NG-L1	(6 - 9 ft.)	3/30/11	1 U	1.19	50 U	250 U
NG-L1	(12 - 15 ft.)	3/30/11	1.03	1.22	50 U	250 U
NG-L2	(0 - 3 ft.)	3/30/11	1.67	13.3	50 U	250 U
NG-L2	(6 - 9 ft.)	3/30/11	1 U	1.02	50 U	250 U
NG-L2	(12 - 15 ft.)	3/30/11	1 U	1.24	50 U	250 U
NG-L3	(0 - 3 ft.)	3/30/11	1 U	1.42	50 U	250 U
NG-L3 (Dup)	(0 - 3 ft.)	3/30/11	1.12	1.69	50 U	250 U
NG-L3	(6 - 9 ft.)	3/30/11	1 U	1.11	50 U	250 U
NG-L3	(12 - 15 ft.)	3/30/11	1.09	1.95	50 U	250 U
NG-L4	(0 - 3 ft.)	3/30/11	1.37	6.66	50 U	250 U
NG-L4	(6 - 9 ft.)	3/30/11	1.55	1.39	50 U	250 U
NG-L4	(12 - 15 ft.)	3/30/11	1.11	1.74	50 U	250 U
NG-L5	(0 - 3 ft.)	3/30/11	1.83	13.3	50 U	250 U
NG-L5	(6 - 9 ft.)	3/30/11	1.09	1.35	50 U	250 U
NG-L5	(12 - 15 ft.)	3/30/11	3.32	1.98	50 U	250 U
NG-M1	(0 - 3 ft.)	3/29/11	1.65	5.24	50 U	250 U
NG-M1	(6 - 9 ft.)	3/29/11	2.68	4.99	50 U	250 U
NG-M1	(12 - 15 ft.)	3/29/11	1.41	2.56	50 U	250 U
NG-M3	(0 - 3 ft.)	3/29/11	2.28	71.4	50 U	250 U
NG-M3	(6 - 9 ft.)	3/29/11	1.93	3.97	50 U	250 U
NG-M3	(12 - 15 ft.)	3/29/11	2.2	2.81	50 U	250 U
NG-M4	(0 - 3 ft.)	3/29/11	1.68	666	50 U	250 U
NG-M4	(6 - 9 ft.)	3/29/11	2.63	6.86	50 U	250 U
NG-M4	(12 - 15 ft.)	3/29/11	2.2	2.13	50 U	250 U
NG-M4b	(1 - 2.5 ft.)	12/27/11	1.72	21 J	290	1200
NG-M4b	(6.5 - 7 ft.)	12/27/11	1.85	2.87 J	50 U	250 U
NG-M4b	(12 - 13.5 ft.)	12/27/11	2.88	2.06 J	50 U	250 U
OG-1	(0 - 3 ft.)	4/1/11	1.16	2.76	50 U	250 U
OG-1	(6 - 9 ft.)	4/1/11	1.7	3.39	50 U	250 U
OG-1	(12 - 15 ft.)	4/1/11	1.35	2.1	50 U	250 U
OG-2	(0 - 3 ft.)	4/1/11	1.65	7.84	50 U	250 U
OG-2	(6 - 9 ft.)	4/1/11	1.15	1.6	50 U	250 U
OG-2	(12 - 15 ft.)	4/1/11	1.04	1.55	50 U	250 U
OG-3	(0 - 3 ft.)	4/1/11	1.33	2.74	50 U	250 U
OG-3	(6 - 9 ft.)	4/1/11	1.68	1.99	50 U	250 U
OG-3	(12 - 15 ft.)	4/1/11	1.37	1.63	50 U	250 U
OG-5	(0 - 3 ft.)	4/1/11	2	12.4	50 U	250 U
OG-5	(6 - 9 ft.)	4/1/11	1.83	1.84	50 U	250 U
OG-5	(12 - 15 ft.)	4/1/11	2.05	2.01	50 U	250 U
OG-6	(0 - 3 ft.)	4/1/11	1.02	1.62	50 U	250 U

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
OG-6 (Dup)	(0 - 3 ft.)	4/1/11	1.04	1.44	50 U	250 U
OG-6	(6 - 9 ft.)	4/1/11	1.01	1.88	50 U	250 U
OG-6 (Dup)	(6 - 9 ft.)	4/1/11	1.37	2.39	50 U	250 U
OG-6	(12 - 15 ft.)	4/1/11	1.02	1.51	50 U	250 U
OG-6 (Dup)	(12 - 15 ft.)	4/1/11	1.29	1.93	50 U	250 U
OG-7	(0 - 3 ft.)	4/1/11	1.35	2.99	50 U	250 U
OG-7 (Dup)	(0 - 3 ft.)	4/1/11	1.28	2.78	50 U	250 U
OG-7	(6 - 9 ft.)	4/1/11	1.18	1.93	50 U	250 U
OG-7 (Dup)	(6 - 9 ft.)	4/1/11	1.11	1.58	50 U	250 U
OG-7	(12 - 15 ft.)	4/1/11	1 U	1.32	50 U	250 U
OG-7 (Dup)	(12 - 15 ft.)	4/1/11	1.26	1.55	50 U	250 U
OG-8	(0 - 3 ft.)	4/1/11	1.65	3.27	50 U	250 U
OG-8 (Dup)	(0 - 3 ft.)	4/1/11	1.58	3	50 U	250 U
OG-8	(6 - 9 ft.)	4/1/11	1.46	1.54	50 U	250 U
OG-8 (Dup)	(6 - 9 ft.)	4/1/11	1.33	1.48	50 U	250 U
OG-8	(12 - 15 ft.)	4/1/11	1.21	1.57	50 U	250 U
OG-8 (Dup)	(12 - 15 ft.)	4/1/11	1.57	1.52	50 U	250 U
OG-9	(0 - 3 ft.)	4/1/11	1 U	1.26	50 U	250 U
OG-9 (Dup)	(0 - 3 ft.)	4/1/11	1 U	1.24	50 U	250 U
OG-9	(6 - 9 ft.)	4/1/11	1.03	1.09	50 U	250 U
OG-9 (Dup)	(6 - 9 ft.)	4/1/11	1 U	1.21	50 U	250 U
OG-9	(12 - 15 ft.)	4/1/11	1.03	1.1	50 U	250 U
OG-9 (Dup)	(12 - 15 ft.)	4/1/11	1 U	1.19	50 U	250 U
OG-10	(0 - 3 ft.)	3/31/11	1.06	2.16	50 U	250 U
OG-10 (Dup)	(0 - 3 ft.)	4/1/11	1.18	2	50 U	250 U
OG-10	(6 - 9 ft.)	3/31/11	1 U	1.34	50 U	250 U
OG-10	(12 - 15 ft.)	3/31/11	1 U	1.32	50 U	250 U
PCA-SS-1	(0 - 1 ft.)	11/11/11	1.32	6.55		
PCA-SS-2	(0 - 1 ft.)	11/11/11	1.86	7.56		
PCA-SS-3	(0 - 1 ft.)	11/11/11	2.06	8.49		
PCA-SS-4	(0 - 1 ft.)	11/11/11	1.64	10.7		
PCA-SS-5	(0 - 1 ft.)	11/11/11	2.2	19.6		
PCA-SS-6	(0 - 1 ft.)	11/11/11	1.71	8.14		
PCA-SS-7	(0 - 1 ft.)	11/11/11	1.78	17.2		
PCA-SS-8	(0 - 1 ft.)	11/11/11	1.53	16.5		
PCA-SS-9	(0 - 1 ft.)	11/11/11	1.89	15		
PCA-SS-10	(0 - 1 ft.)	11/11/11	1.97	25.9		
PCA-SS-11	(0 - 1 ft.)	11/11/11	1.63	9.25		
PCA-SS-12	(0 - 1 ft.)	11/11/11	1.84	20.6		
PCA-SS-13	(0 - 1 ft.)	11/11/11	2.87	127		
SG-E1	(0 - 3 ft.)	3/29/11	1.69	27.3 J	50 U	250 U
SG-E1 (Dup)	(0 - 3 ft.)	3/29/11	1.62	14.4 J	50 U	250 U
SG-E1	(6 - 9 ft.)	3/29/11	1 U	1.59	50 U	250 U
SG-E1 (Dup)	(6 - 9 ft.)	3/29/11	1.11	1.69	50 U	250 U
SG-E1	(12 - 15 ft.)	3/29/11	1.47	1.39	50 U	250 U
SG-E1 (Dup)	(12 - 15 ft.)	3/29/11	1.35	1.7	50 U	250 U
SG-E2	(0 - 3 ft.)	3/29/11	1.74	5.25	50 U	250 U
SG-E2	(6 - 9 ft.)	3/29/11	1.15	1.59	50 U	250 U
SG-E2	(12 - 15 ft.)	3/29/11	1.08	1.46	50 U	250 U
SG-E3	(0 - 3 ft.)	3/29/11	1.15	2.49	50 U	250 U
SG-E3	(6 - 9 ft.)	3/29/11	1.2	1.46	50 U	250 U
SG-E3	(12 - 15 ft.)	3/29/11	1.18	1.76	50 U	250 U
SG-E4	(0 - 3 ft.)	3/29/11	2.4	35.7	50 U	330
SG-E4	(6 - 9 ft.)	3/29/11	1.22	1.91	50 U	250 U
SG-E4	(12 - 15 ft.)	3/29/11	1 U	1.59	50 U	250 U
SG-E5	(0 - 3 ft.)	3/29/11	2.3	67.8	50 U	250 U
SG-E5	(6 - 9 ft.)	3/29/11	1.55	2.89	50 U	250 U
SG-E5	(12 - 15 ft.)	3/29/11	1.88	2.34	50 U	250 U

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
SG-E6	(0 - 3 ft.)	3/29/11	3.12	15.2	50 U	250 U
SG-E6	(6 - 9 ft.)	3/29/11	2.12	4.23	50 U	250 U
SG-E6	(12 - 15 ft.)	3/29/11	1.37	1.65	50 U	250 U
SG-F1	(0 - 3 ft.)	3/31/11	1 U	2.51	50 U	250 U
SG-F1	(6 - 9 ft.)	3/31/11	1.13	1.55	50 U	250 U
SG-F1	(12 - 15 ft.)	3/31/11	1 U	1.46	50 U	250 U
SG-F2	(0 - 3 ft.)	3/29/11	1 U	1.78	50 U	250 U
SG-F2	(6 - 9 ft.)	3/29/11	1 U	1.82	50 U	250 U
SG-F2	(12 - 15 ft.)	3/29/11	1.04	1.86	50 U	250 U
SG-F3	(0 - 3 ft.)	3/24/11	2.15	27.2	930	1200
SG-F3	(6 - 9 ft.)	3/24/11	1.47	2.86	50 U	250 U
SG-F3	(12 - 15 ft.)	3/24/11	2.81	2.55	50 U	250 U
SG-F4	(0 - 3 ft.)	3/31/11	2.87	102	50 U	250 U
SG-F4	(6 - 9 ft.)	3/31/11	1.92	25.9	50 U	250 U
SG-F4	(12 - 15 ft.)	3/31/11	1.11	2.14	50 U	250 U
SG-F5	(0 - 3 ft.)	3/30/11	2.83	96.6	50 U	250 U
SG-F5	(6 - 9 ft.)	3/30/11	1 U	3.02	190	280
SG-F5	(12 - 15 ft.)	3/30/11	1.34	11.4	170 J	490 J
SG-F6	(0 - 3 ft.)	3/29/11	2.35	51.5	110 J	470
SG-F6	(6 - 9 ft.)	3/29/11	1.52	2.28	50 U	250 U
SG-F6	(12 - 15 ft.)	3/29/11	2.42	1090	260 J	830
SG-G1	(0 - 3 ft.)	3/30/11	1 U	12.6	50 U	250 U
SG-G1	(6 - 9 ft.)	3/30/11	1 U	1.82	50 U	250 U
SG-G1	(12 - 15 ft.)	3/30/11	1.27	1.64	50 U	250 U
SG-G2	(0 - 3 ft.)	3/24/11	1.09	9.42	61 J	420
SG-G2	(6 - 9 ft.)	3/24/11	1.32	1.51	50 U	250 U
SG-G2	(12 - 15 ft.)	3/24/11	1.04	1.46	50 U	250 U
SG-G3	(0 - 3 ft.)	3/31/11	2.81	126	50 U	250 U
SG-G3	(6 - 9 ft.)	3/31/11	1 U	1.49	50 U	250 U
SG-G3	(12 - 15 ft.)	3/31/11	1 U	1.41	50 U	250 U
SG-G4	(0 - 3 ft.)	3/31/11	1.95	105	50 U	250 U
SG-G4	(6 - 9 ft.)	3/31/11	1.56	3.3	50 U	250 U
SG-G4	(12 - 15 ft.)	3/31/11	1 U	1.3	50 U	250 U
SG-G5	(0 - 3 ft.)	3/30/11	2.01	71.4	50 U	310
SG-G5	(6 - 9 ft.)	3/30/11	4.41	9.55	50 U	250 U
SG-G5	(12 - 15 ft.)	3/30/11	3.31	138	50 U	250 U
SG-G6	(0 - 3 ft.)	3/30/11	2.1	43	50 U	250 U
SG-G6	(6 - 9 ft.)	3/30/11	1.02	87.5	50 U	250 U
SG-G6	(12 - 15 ft.)	3/30/11	1.49	17.6	50 U	250 U
SG-H1	(0 - 3 ft.)	3/30/11	1.76	43.3	50 U	250 U
SG-H1	(6 - 9 ft.)	3/30/11	1 U	1.24	50 U	250 U
SG-H1	(12 - 15 ft.)	3/30/11	1.17	1.39	50 U	250 U
SG-H2	(0 - 3 ft.)	3/30/11	1.34	56.1	160 J	1400
SG-H2	(6 - 9 ft.)	3/30/11	1 U	6.5	50 U	330
SG-H2	(12 - 15 ft.)	3/30/11	1.24	1.48	50 U	250 U
SG-H3	(0 - 3 ft.)	3/24/11	3.22	46.3	50 U	250 U
SG-H3	(6 - 9 ft.)	3/24/11	1 U	1.21	50 U	250 U
SG-H3	(12 - 15 ft.)	3/24/11	1.34	1.84	50 U	250 U
SG-H4	(0 - 3 ft.)	3/31/11	2.64	51.3	50 U	250 U
SG-H4	(6 - 9 ft.)	3/31/11	1 U	1.18	50 U	250 U
SG-H4	(12 - 15 ft.)	3/31/11	1 U	1.28	50 U	250 U
SG-H5	(0 - 3 ft.)	3/30/11	3.17	60.5	50 U	250 U
SG-H5	(6 - 9 ft.)	3/30/11	1.44	4.76	50 U	250 U
SG-H5	(12 - 15 ft.)	3/30/11	1.24	1.29	50 U	250 U
SG-H6	(0 - 3 ft.)	3/30/11	2.1	26.2	50 U	650
SG-H6	(6 - 9 ft.)	3/30/11	1.45	2.28	50 U	250 U
SG-H6	(12 - 15 ft.)	3/30/11	1.21	2.04	50 U	250 U
SG-I2	(0 - 3 ft.)	3/30/11	3.32	13	50 U	250 U

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
SG-I2	(6 - 9 ft.)	3/30/11	1.31	1.44	50 U	250 U
SG-I2	(12 - 15 ft.)	3/30/11	1 U	1.45	50 U	250 U
SG-I3	(0 - 3 ft.)	3/30/11	3.97	15.1	50 U	250 U
SG-I3	(6 - 9 ft.)	3/30/11	1.49	1.42	50 U	250 U
SG-I3	(12 - 15 ft.)	3/30/11	1.28	1.28	50 U	250 U
SG-I4	(0 - 3 ft.)	3/31/11	4.09	109	50 U	250 U
SG-I4	(6 - 9 ft.)	3/31/11	1 U	1.12	50 U	250 U
SG-I4	(12 - 15 ft.)	3/31/11	1 U	1 U	50 U	250 U
SG-I5	(0 - 3 ft.)	3/30/11	1.73	27.8	50 U	250 U
SG-I5	(6 - 9 ft.)	3/30/11	1 U	1.47	50 U	250 U
SG-I5 (Dup)	(6 - 9 ft.)	3/30/11	1 U	1.47	50 U	250 U
SG-I5	(12 - 15 ft.)	3/30/11	1.05	1.65	50 U	250 U
SG-I6	(0 - 3 ft.)	3/30/11	1.78	32	50 U	400
SG-I6	(6 - 9 ft.)	3/30/11	1 U	1.6	50 U	250 U
SG-I6	(12 - 15 ft.)	3/30/11	1 U	3.05	50 U	250 U
SG-I7	(0 - 3 ft.)	3/24/11	1.29	5.95	50 U	250 U
SG-I7	(8.5 - 10 ft.)	3/24/11	1.09	2	50 U	250 U
SG-I7	(12 - 15 ft.)	3/24/11	1.06	1.34	50 U	250 U
SG-I8	(0 - 3 ft.)	3/31/11	1 U	1.52	50 U	250 U
SG-I8 (Dup)	(0 - 3 ft.)	4/1/11	1.03	1.79	50 U	250 U
SG-I8	(6 - 9 ft.)	3/31/11	1.12	1.6	50 U	250 U
SG-I8 (Dup)	(6 - 9 ft.)	4/1/11	1 U	1.47	50 U	250 U
SG-I8	(12 - 15 ft.)	3/31/11	1.1	1.81	50 U	250 U
SG-I8 (Dup)	(12 - 15 ft.)	4/1/11	1 U	1.49	50 U	250 U
SG-I9	(0 - 3 ft.)	4/1/11	1.74	18.2	50 U	250 U
SG-I9 (Dup)	(0 - 3 ft.)	4/1/11	1.58	16.7	50 U	250 U
SG-I9	(6 - 9 ft.)	4/1/11	1 U	1.37	50 U	250 U
SG-I9 (Dup)	(6 - 9 ft.)	4/1/11	1 U	1.41	50 U	250 U
SG-I9	(12 - 15 ft.)	4/1/11	1.07	1.38	50 U	250 U
SG-I9 (Dup)	(12 - 15 ft.)	4/1/11	1.11	1.37	50 U	250 U
SG-I10	(0 - 3 ft.)	4/1/11	1.3	6.8	50 U	250 U
SG-I10	(6 - 9 ft.)	4/1/11	1 U	1.82	50 U	250 U
SG-I10	(12 - 15 ft.)	4/1/11	1.32	1.83	50 U	250 U
SG-J3	(0 - 3 ft.)	3/30/11	1 U	4.78	50 U	680
SG-J3	(6 - 9 ft.)	3/30/11	1.95	52.3	50 U	250 U
SG-J3	(12 - 15 ft.)	3/30/11	15	710	50 U	350
SG-J4	(0 - 3 ft.)	3/30/11	2.45	92.3	50 U	250 U
SG-J4	(6 - 9 ft.)	3/30/11	3.51	106	50 U	250 U
SG-J4	(12 - 15 ft.)	3/30/11	1 U	1.31	50 U	250 U
SG-J5	(0 - 3 ft.)	3/30/11	2.32	46.3	50 U	250 U
SG-J5	(6 - 9 ft.)	3/30/11	6.38	258	50 U	250 U
SG-J5	(12 - 15 ft.)	3/30/11	1 U	1.26	50 U	250 U
SG-J7	(0 - 3 ft.)	3/24/11	25.6	3450	940 J	3500
SG-J7	(6 - 9 ft.)	3/24/11	35.1	1950	50 U	250 U
SG-J7	(12 - 15 ft.)	3/24/11	1 U	1.25	50 U	250 U
SG-J8	(0 - 3 ft.)	3/31/11	2.06	25.5	50 U	250 U
SG-J8	(6 - 9 ft.)	3/31/11	19.5	7360	50 U	250 U
SG-J8	(12 - 15 ft.)	3/31/11	1 U	2.26	50 U	250 U
SG-J9	(0 - 3 ft.)	3/31/11	1.32	65.8	50 U	250 U
SG-J9	(6 - 9 ft.)	3/31/11	26.3	3800	50 U	250 U
SG-J9	(12 - 15 ft.)	3/31/11	2.37	323	50 U	250 U
SG-J10	(0 - 1 ft.)	10/26/12	8.84			
SG-J10	(0 - 3 ft.)	3/31/11	21.8	98.8	50 U	250 U
SG-J10	(6 - 9 ft.)	3/31/11	2.05	42.5	50 U	250 U
SG-J10	(12 - 15 ft.)	3/31/11	1.33	3.64	50 U	250 U
SG-J11	(0 - 1 ft.)	10/26/12	1.56			
SG-J11	(0 - 3 ft.)	10/26/12	1.31			
SG-J6	(0 - 3 ft.)	3/24/11	11.8	2260	50 U	380

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
SG-J6	(6 - 9 ft.)	3/24/11	1.34	5.73	50 U	250 U
SG-J6	(12 - 15 ft.)	3/24/11	2.04	4.57	50 U	250 U
SG-K3	(0 - 3 ft.)	3/30/11	5.84	88.8	50 U	520
SG-K3	(6 - 9 ft.)	3/30/11	24	1420	150	530
SG-K3	(12 - 15 ft.)	3/30/11	48.6	1960	97 J	980
SG-K4	(0 - 3 ft.)	3/30/11	2.65	82.4	50 U	380
SG-K4	(6 - 9 ft.)	3/30/11	1.75	25.2	50 U	250 U
SG-K4	(12 - 15 ft.)	3/30/11	48.2	1530	50 U	250 U
SG-K5	(0 - 3 ft.)	3/30/11	15.1	498	50 U	250 U
SG-K5	(6 - 9 ft.)	3/30/11	12	215	50 U	250 U
SG-K5	(12 - 15 ft.)	3/30/11	1 U	1.28	50 U	250 U
SG-K6	(0 - 3 ft.)	3/30/11	2.73	59.9	50 U	580
SG-K6	(6 - 9 ft.)	3/30/11	1.86	9.22	50 U	250 U
SG-K6	(12 - 15 ft.)	3/30/11	1.22	1.75	50 U	250 U
SG-K7	(0 - 3 ft.)	3/31/11	1.43	12.5	58 J	1700
SG-K7	(6 - 9 ft.)	3/31/11	1.9	16.7	50 U	250 U
SG-K7	(12 - 15 ft.)	3/31/11	37.9	2140	50 U	310
SG-K8	(0 - 3 ft.)	3/31/11	1.59	8.49	50 U	250 U
SG-K8	(6 - 9 ft.)	3/31/11	1.03	8.85	50 U	250 U
SG-K8	(12 - 15 ft.)	3/31/11	2.33	14.5	50 U	250 U
SG-K9	(0 - 3 ft.)	3/31/11	2.69	30.6	50 U	250 U
SG-K9	(6 - 9 ft.)	3/31/11	1.68	8.13	50 U	250 U
SG-K9	(12 - 15 ft.)	3/31/11	1 U	1.25	50 U	250 U
SG-K10	(0 - 3 ft.)	3/31/11	1.24	10.9	50 U	250 U
SG-K10	(6 - 9 ft.)	3/31/11	1.05	1.67	50 U	250 U
SG-K10	(12 - 15 ft.)	3/31/11	1.11	1.36	50 U	250 U
SG-L1	(0 - 3 ft.)	3/30/11	2.71	83.4	50 U	250 U
SG-L1	(6 - 9 ft.)	3/30/11	1 U	3.08	50 U	250 U
SG-L1	(12 - 15 ft.)	3/30/11	1 U	1.37	50 U	250 U
SG-L1 (Dup)	(12 - 15 ft.)	3/30/11	1 U	1.31	50 U	250 U
SG-L2	(0 - 3 ft.)	3/30/11	2.42	26.3	50 U	250 U
SG-L2	(6 - 9 ft.)	3/30/11	1.07	5.37	50 U	250 U
SG-L2	(12 - 15 ft.)	3/30/11	1 U	1.23	50 U	250 U
SG-L3	(0 - 3 ft.)	3/30/11	7.52	229	50 U	250 U
SG-L3	(6 - 9 ft.)	3/30/11	1 U	1.38	50 U	250 U
SG-L3	(12 - 15 ft.)	3/30/11	1.2	1.73	50 U	250 U
SG-L4	(0 - 3 ft.)	3/30/11	5.64	158	50 U	360
SG-L4	(6 - 9 ft.)	3/30/11	1 U	2.45	50 U	250 U
SG-L4	(12 - 15 ft.)	3/30/11	1 U	1 U	50 U	250 U
SG-L5	(0 - 3 ft.)	3/30/11	1.51	16	50 U	250 U
SG-L5	(6 - 9 ft.)	3/30/11	1 U	1.27	50 U	250 U
SG-L5	(12 - 15 ft.)	3/30/11	1.1	1.49	50 U	250 U
SG-L6	(0 - 3 ft.)	3/30/11	2.19	28.3	50 U	250 U
SG-L6	(6 - 9 ft.)	3/30/11	1.69	24.3	970 J	780 J
SG-L6	(12 - 15 ft.)	3/30/11	1.11	1.27	50 U	250 U
SG-L7	(0 - 3 ft.)	3/31/11	6.42	13.4	50 U	250 U
SG-L7	(6 - 9 ft.)	3/31/11	1.1	1.87	50 U	250 U
SG-L7	(12 - 15 ft.)	3/31/11	1.01	2.18	50 U	250 U
SG-L8	(0 - 3 ft.)	3/31/11	1.21	2.73	50 U	250 U
SG-L8	(6 - 9 ft.)	3/31/11	1 U	1.33	50 U	250 U
SG-L8	(12 - 15 ft.)	3/31/11	1.47	1.86	50 U	250 U
SG-L9	(0 - 3 ft.)	3/31/11	2.03	17.2	50 U	250 U
SG-L9	(6 - 9 ft.)	3/31/11	1 U	1.25	50 U	250 U
SG-L9	(12 - 15 ft.)	3/31/11	1.31	1.5	50 U	250 U
SG-L10	(0 - 3 ft.)	3/31/11	1.24	9.4	50 U	250 U
SG-L10	(6 - 9 ft.)	3/31/11	1.33	1.7	50 U	250 U
SG-L10	(12 - 15 ft.)	3/31/11	1 U	1.58	50 U	250 U
SG-M1	(0 - 3 ft.)	3/29/11	1.18	1.61	50 U	250 U

Table D-2 - TPH, Arsenic, and Lead in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

			METALS		*TOTAL PETROLEUM HYDROCARBONS*	
Sample Location	Sample Depth	Sample Date	Arsenic (in mg/kg)	Lead (in mg/kg)	Diesel Range (in mg/kg)	Motor Oil Range (in mg/kg)
Most Restrictive Direct Contact Soil Screening Level (exceedances in red shaded cells)			*20*	*250*	*2000*	*2000*
SG-M1	(6 - 9 ft.)	3/29/11	1 U	1.92	50 U	250 U
SG-M1	(12 - 15 ft.)	3/29/11	1 U	1.2	50 U	250 U
SG-M2	(0 - 3 ft.)	3/29/11	1.52	1.79	50 U	250 U
SG-M2	(6 - 9 ft.)	3/29/11	1.44	1.8	50 U	250 U
SG-M2	(12 - 15 ft.)	3/29/11	1.09	1.29	50 U	250 U
SG-M3	(0 - 3 ft.)	3/29/11	1.02	1.48	50 U	250 U
SG-M3	(6 - 9 ft.)	3/29/11	1.36	1.67	50 U	250 U
SG-M3	(12 - 15 ft.)	3/29/11	1.46	1.9	50 U	250 U
SG-M4	(0 - 3 ft.)	3/29/11	1.34	5.4	50 U	250 U
SG-M4	(6 - 9 ft.)	3/29/11	1.05	2.86	50 U	250 U
SG-M4	(12 - 15 ft.)	3/29/11	1.16	6.11	50 U	250 U
SG-M5	(0 - 3 ft.)	3/29/11	2.12	26.4	50 U	250 U
SG-M5	(6 - 9 ft.)	3/29/11	1.27	2.22	50 U	250 U
SG-M5	(12 - 15 ft.)	3/29/11	1.18	1.67	50 U	250 U
SG-M6	(0 - 3 ft.)	3/29/11	2.21	5.53	50 U	250 U
SG-M6	(6 - 9 ft.)	3/29/11	1.95	3.37	50 U	250 U
SG-M6	(12 - 15 ft.)	3/29/11	1 U	1.49	50 U	250 U
SG-M7	(0 - 3 ft.)	3/29/11	1 U	6.75	50 U	250 U
SG-M7	(6 - 9 ft.)	3/29/11	1.17	1.78	50 U	250 U
SG-M7	(12 - 15 ft.)	3/29/11	1 U	1.66	50 U	250 U
SG-M8	(0 - 3 ft.)	3/29/11	3.34	5.38	50 U	250 U
SG-M8	(6 - 9 ft.)	3/29/11	3.96	5.27	50 U	250 U
SG-M8	(12 - 15 ft.)	3/29/11	4.01	5.03	50 U	250 U
SG-M9	(0 - 3 ft.)	3/29/11	1.91	14.8	50 U	250 U
SG-M9	(6 - 9 ft.)	3/29/11	1.57	1.9	50 U	250 U
SG-M9	(12 - 15 ft.)	3/29/11	2.94	4.28	50 U	250 U
SG-M10	(0 - 3 ft.)	3/29/11	1.68	5.63	50 U	250 U
SG-M10	(6 - 9 ft.)	3/29/11	1 U	1.49	50 U	250 U
SG-M10	(12 - 15 ft.)	3/29/11	1.17	1.41	50 U	250 U
SPL-SS-1	(0 - 1 ft.)	11/11/11	2.42	41.2		
SPL-SS-2	(0 - 1 ft.)	11/11/11	2.3	21.4		
SPL-SS-3	(0 - 1 ft.)	11/11/11	4.07	59.4		
SPL-SS-4	(0 - 1 ft.)	11/11/11	3.02	52.7		
SPL-SS-5	(0 - 1 ft.)	11/11/11	3.05	53		
SPL-SS-6	(0 - 1 ft.)	11/11/11	6.15	143		
SPL-SS-7	(0 - 1 ft.)	11/11/11	2.78	22.6		
SPL-SS-8	(0 - 1 ft.)	11/11/11	2.44	63.8		
SPL-SS-9	(0 - 1 ft.)	11/11/11	2.96	66.1		
SPL-SS-10	(0 - 1 ft.)	11/11/11	2.49	26.7		
SPL-SS-11*	(0 - 1 ft.)	11/11/11	3.6	254		
SPL-SS-12*	(0 - 1 ft.)	11/11/11	3.02	54.3		
SPL-SS-13*	(0 - 1 ft.)	11/11/11	2.76	67.8		
SPL-SS-14*	(0 - 1 ft.)	11/11/11	5.26	725	50 U	250 U
SPL-SS-15*	(0 - 1 ft.)	11/11/11	24.7	92.2 J	50 U	250 U
SPL-SS-16*	(0 - 1 ft.)	11/11/11	2.43	34.3		
SPL-SS-17*	(0 - 1 ft.)	11/11/11	7	7.33 J	50 U	250 U
SPL-SS-18*	(0 - 1 ft.)	11/11/11	3.11	152	60 x	690
SPL-SS-19*	(0 - 1 ft.)	11/11/11	1.52	3.45		
SPL-SS-20*	(0 - 1 ft.)	11/11/11	3.38	477		
SPL-SS-21*	(0 - 1 ft.)	11/11/11	15.5	146		
SPL-SS-22	(0 - 1 ft.)	11/11/11	4.28	25.7		

Table D-3 - Other Analytes in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Chemical Name	Most Restrictive Direct Contact Soil Screening Level (mg/kg)	CS-01 3/29/2012 (0-1 ft.)	CS-02 3/29/2012 (0-1 ft.)	CS-03 FD* 3/29/2012 (0-1 ft.)	CS-03* 3/29/2012 (0-1 ft.)	CS-04* 3/29/2012 (0-1 ft.)	CS-05* 3/29/2012 (0-1 ft.)	CS-06 3/29/2012 (0-1 ft.)	CS-07* 3/29/2012 (0-1 ft.)	CS-08 3/29/2012 (0-1 ft.)	CS-09 3/29/2012 (0-1 ft.)	CS-10 3/29/2012 (0-1 ft.)	CS-11 3/29/2012 (0-1 ft.)	CS-12* 3/29/2012 (0-1 ft.)	CS-13 4/2/2012 (0-1 ft.)	CS-14 FD* 4/2/2012 (0-1 ft.)	CS-14* 4/2/2012 (0-1 ft.)	CS-15* 4/2/2012 (0-1 ft.)
Metals																		
Antimony in mg/kg	32	1.07	1 U	15.2	29.5	247	2,000	13.3	64.9	20.9	3.78	2.02	1.5	13.4	2.15	15.9	20.7	6.95
Chromium in mg/kg	240																	
Copper in mg/kg	3,000	39.2	22.4	446	181	7,010	5,290	11.3	663	166	18	18	14	391	38.7	149	1,010	138
Vanadium in mg/kg	560																	
Zinc in mg/kg	24,000																	
Conventional Chemistry Parameters																		
Total Organic Carbon in %																		
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene in mg/kg																		
Acenaphthylene in mg/kg																		
Anthracene in mg/kg	24,000																	
Benzo(g,h,i)perylene in mg/kg																		
Fluoranthene in mg/kg	3,200																	
Fluorene in mg/kg	3,200																	
Phenanthrene in mg/kg																		
Pyrene in mg/kg	2,400																	
2-Methylnaphthalene in mg/kg	320																	
Naphthalene in mg/kg	1,600																	
Benz(a)anthracene in mg/kg																		
Benzo(a)pyrene in mg/kg	0.14																	
Benzo(b)fluoranthene in mg/kg																		
Benzo(k)fluoranthene in mg/kg																		
Chrysene in mg/kg																		
Dibenzo(a,h)anthracene in mg/kg																		
Indeno(1,2,3-cd)pyrene in mg/kg																		
Other Semivolatiles																		
1,3-Dichlorobenzene in mg/kg																		
Benzyl butyl phthalate in mg/kg	16,000																	
Di-n-butyl phthalate in mg/kg	8,000																	
Hexachlorobenzene in mg/kg	0.63																	
Volatile Organic Compounds																		
Toluene in mg/kg	6,400																	
Trichloroethene (TCE) in mg/kg	11																	
Naphthalene in mg/kg	1,600																	
Polychlorinated Biphenyls (PCBs)																		
Aroclor 1254 in mg/kg																		
Aroclor 1260 in mg/kg																		

Notes

Concentrations in shaded cells indicate that the value exceeds the given Most Restrictive Direct Contact Soil Screening Level

An asterisk (*) after a sample location indicates that that sample has been over-excavated and is no longer representative of site conditions.

J - Analyte was positively identified. The reported result is an estimate.
U - Analyte was not detected at or above the reported result.
UJ - Analyte was not detected at or above the reported estimate

This report includes only analytes that were detected in one or more samples.

Table D-3 - Other Analytes in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Chemical Name	Most Restrictive Direct Contact Soil Screening Level (mg/kg)	CS-16* 4/2/2012 (0-1 ft.)	CS-17 4/2/2012 (0-1 ft.)	CS-18 4/2/2012 (0-1 ft.)	CS-19 4/2/2012 (0-1 ft.)	CS-20 4/2/2012 (0-1 ft.)	CS-21 4/2/2012 (0-1 ft.)	CS-22 4/2/2012 (0-1 ft.)	CS-23 4/2/2012 (0-1 ft.)	CS-24 4/2/2012 (0-1 ft.)	CS-25 4/2/2012 (0-1 ft.)	CS-26* 4/2/2012 (0-1 ft.)	CS-27 4/2/2012 (0-1 ft.)	CS-28* 4/2/2012 (0-1 ft.)	CS-29 4/2/2012 (0-1 ft.)	CS-30* 4/2/2012 (0-1 ft.)	CS-31 4/4/2012 (0-1 ft.)	NG-A2 3/28/2011 (5-6.5 ft.)
Metals																		
Antimony in mg/kg	32	3.16	1.92	1 U	1 U	3.16	2.24	5.95	1.27	1.26	1.27	20.6	4	11.9	1 U	33.4	2.41	
Chromium in mg/kg	240																	
Copper in mg/kg	3,000	36.2	26.3	15.7	16	32.4	41.7	99.8	31.2	47	71.6	329	46	122	15.1	313	26.6	
Vanadium in mg/kg	560																	
Zinc in mg/kg	24,000																	
Conventional Chemistry Parameters																		
Total Organic Carbon in %																		0.10
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene in mg/kg																		
Acenaphthylene in mg/kg																		
Anthracene in mg/kg	24,000																	
Benzo(g,h,i)perylene in mg/kg																		
Fluoranthene in mg/kg	3,200																	
Fluorene in mg/kg	3,200																	
Phenanthrene in mg/kg																		
Pyrene in mg/kg	2,400																	
2-Methylnaphthalene in mg/kg	320																	
Naphthalene in mg/kg	1,600																	
Benz(a)anthracene in mg/kg																		
Benzo(a)pyrene in mg/kg	0.14																	
Benzo(b)fluoranthene in mg/kg																		
Benzo(k)fluoranthene in mg/kg																		
Chrysene in mg/kg																		
Dibenzo(a,h)anthracene in mg/kg																		
Indeno(1,2,3-cd)pyrene in mg/kg																		
Other Semivolatiles																		
1,3-Dichlorobenzene in mg/kg																		
Benzyl butyl phthalate in mg/kg	16,000																	
Di-n-butyl phthalate in mg/kg	8,000																	
Hexachlorobenzene in mg/kg	0.63																	
Volatile Organic Compounds																		
Toluene in mg/kg	6,400																	
Trichloroethene (TCE) in mg/kg	11																	
Naphthalene in mg/kg	1,600																	
Polychlorinated Biphenyls (PCBs)																		
Aroclor 1254 in mg/kg																		
Aroclor 1260 in mg/kg																		

Notes

Concentrations in shaded cells indicate value exceeds Soil, Direct Contact, Most Restrictive (mg/kg)

An asterisk (*) after a sample location indicates that that sample has been over-excavated and is no longer representative of site conditions.

J - Analyte was positively identified. The reported result is an estimate.
U - Analyte was not detected at or above the reported result.
UJ - Analyte was not detected at or above the reported estimate

This report includes only analytes that were detected in one or more samples.

Table D-3 - Other Analytes in Soil

PUBLIC REVIEW DRAFT

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Chemical Name	Most Restrictive Direct Contact Soil Screening Level (mg/kg)	NG-A2 3/28/2011 (20-21 ft.)	NG-A2 3/28/2011 (40-41.5 ft.)	NG-C07 3/24/2011 (0-3 ft.)	NG-C07 3/24/2011 (2 ft.)	NG-C07 3/24/2011 (6-9 ft.)	NG-C07 FD 3/24/2011 (6-9 ft.)	NG-C07 3/24/2011 (7 ft.)	NG-C07 FD 3/24/2011 (7 ft.)	NG-C07 3/24/2011 (12-15 ft.)	NG-C07 3/24/2011 (13 ft.)	NG-C07 3/24/2011 (17-20 ft.)	NG-C07 3/24/2011 (18 ft.)	NG-E06 3/24/2011 (0-3 ft.)	NG-E06 3/24/2011 (2 ft.)	NG-E06 3/25/2011 (5-6.5 ft.)	NG-E06 3/24/2011 (6-9 ft.)	NG-E06 3/24/2011 (7 ft.)
Metals																		
Antimony in mg/kg	32			1.13		1.17	1 U			1 U		1 U						
Chromium in mg/kg	240			13.7		18.5	16.7			13.9		14.1						
Copper in mg/kg	3,000			18.9		16.2	13.6			12.3		10.6						
Vanadium in mg/kg	560			21.5		28.6	25.8			19.9		22						
Zinc in mg/kg	24,000			58.1		28	22.1			23.2		16.9						
Conventional Chemistry Parameters																		
Total Organic Carbon in %		0.05	0.07													0.75		
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene in mg/kg				0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.01 U	
Acenaphthylene in mg/kg				0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.01 U	
Anthracene in mg/kg	24,000			0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.01 U	
Benzo(g,h,i)perylene in mg/kg				0.025		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.85	
Fluoranthene in mg/kg	3,200			0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.027	
Fluorene in mg/kg	3,200			0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.01 U	
Phenanthrene in mg/kg				0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.03	
Pyrene in mg/kg	2,400			0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.068	
2-Methylnaphthalene in mg/kg	320			0.03 U		0.03 U				0.03 U		0.03 U		0.03 U			1.5 U	
Naphthalene in mg/kg	1,600			0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.021	
Benz(a)anthracene in mg/kg				0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.03	
Benzo(a)pyrene in mg/kg	0.14			0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.072	
Benzo(b)fluoranthene in mg/kg				0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.06	
Benzo(k)fluoranthene in mg/kg				0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.01 U	
Chrysene in mg/kg				0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.1	
Dibenzo(a,h)anthracene in mg/kg				0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.033	
Indeno(1,2,3-cd)pyrene in mg/kg				0.01 U		0.01 U	0.01 U			0.01 U		0.01 U		0.01 U			0.14	
Other Semivolatiles																		
1,3-Dichlorobenzene in mg/kg				0.03 U		0.03 U				0.03 U		0.03 U		0.03 U			1.5 U	
Benzyl butyl phthalate in mg/kg	16,000			0.03 U		0.03 U				0.03 U		0.03 U		0.03 U			1.5 U	
Di-n-butyl phthalate in mg/kg	8,000			0.03 U		0.03 U				0.03 U		0.03 U		0.03 U			1.5 U	
Hexachlorobenzene in mg/kg	0.63			0.03 U		0.03 U				0.03 U		0.03 U		0.03 U			1.5 U	
Volatile Organic Compounds																		
Toluene in mg/kg	6,400				0.05 U			0.05 U	0.05 U		0.05 U		0.05 U		0.05 U			0.05 U
Trichloroethene (TCE) in mg/kg	11				0.03 U			0.03 U	0.03 U		0.03 U		0.03 U		0.03 U			0.03 U
Naphthalene in mg/kg	1,600				0.05 U			0.05 U	0.05 U		0.05 U		0.05 U		0.05 U			0.05 U
Polychlorinated Biphenyls (PCBs)																		
Aroclor 1254 in mg/kg				0.1 U		0.1 U	0.1 U			0.1 U		0.1 U		0.1 U			0.5	
Aroclor 1260 in mg/kg				0.1 U		0.1 U	0.1 U			0.1 U		0.1 U		0.1 U			0.4	

Notes

Concentrations in shaded cells indicate value exceeds Soil, Direct Contact, Most Restrictive (mg/kg)

An asterisk (*) after a sample location indicates that that sample has been over-excavated and is no longer representative of site conditions.

J - Analyte was positively identified. The reported result is an estimate.
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This report includes only analytes that were detected in one or more samples.

Table D-3 - Other Analytes in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Chemical Name	Most Restrictive Direct Contact Soil Screening Level (mg/kg)	NG-E06 3/24/2011 (12-15 ft.)	NG-E06 3/24/2011 (13 ft.)	NG-E06 3/25/2011 (20-21.5 ft.)	NG-E06 3/25/2011 (40-41.5 ft.)	NG-F04 3/24/2011 (0-3 ft.)	NG-F04 3/24/2011 (6-9 ft.)	NG-F04 3/24/2011 (12-15 ft.)	NG-F05 3/24/2011 (0-3 ft.)	NG-F05 3/30/2011 (5-6.5 ft.)	NG-F05 3/24/2011 (8-10 ft.)	NG-F05 3/24/2011 (12-15 ft.)	NG-F05 3/30/2011 (20-21.5 ft.)	NG-F05 3/30/2011 (40-41.5 ft.)	NG-G08 3/24/2011 (0-3 ft.)	NG-G08 3/24/2011 (2 ft.)	NG-G08 3/24/2011 (6-9 ft.)	NG-G08 3/24/2011 (8 ft.)
Metals																		
Antimony in mg/kg	32					1 U	82.7	1 U	1.83		544	98.1						
Chromium in mg/kg	240					12.5	206	9.75	12.4		159	576						
Copper in mg/kg	3,000					34.2	6,820	33.2	39.9		4,360	3,010						
Vanadium in mg/kg	560					20.5	41.1	18.8	23.9		382	87.1						
Zinc in mg/kg	24,000					77.4	8,800	30	77.4		6,520	14,600						
Conventional Chemistry Parameters																		
Total Organic Carbon in %				32.8	0.73					2.61			1.08	2.13				
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene in mg/kg		0.01 U													0.01 U		0.01 U	
Acenaphthylene in mg/kg		0.01 U													0.01 U		0.01 U	
Anthracene in mg/kg	24,000	0.01 U													0.01 U		0.01 U	
Benzo(g,h,i)perylene in mg/kg		0.01 U													0.11		0.01 U	
Fluoranthene in mg/kg	3,200	0.01 U													0.01 U		0.01 U	
Fluorene in mg/kg	3,200	0.01 U													0.01 U		0.01 U	
Phenanthrene in mg/kg		0.01 U													0.01 U		0.01 U	
Pyrene in mg/kg	2,400	0.01 U													0.019		0.01 U	
2-Methylnaphthalene in mg/kg	320	0.03 U													0.03 U		0.03 U	
Naphthalene in mg/kg	1,600	0.01 U													0.01 U		0.01 U	
Benz(a)anthracene in mg/kg		0.01 U													0.01 U		0.01 U	
Benzo(a)pyrene in mg/kg	0.14	0.01 U													0.01 U		0.01 U	
Benzo(b)fluoranthene in mg/kg		0.01 U													0.012		0.01 U	
Benzo(k)fluoranthene in mg/kg		0.01 U													0.01 U		0.01 U	
Chrysene in mg/kg		0.01 U													0.018		0.01 U	
Dibenzo(a,h)anthracene in mg/kg		0.01 U													0.01 U		0.01 U	
Indeno(1,2,3-cd)pyrene in mg/kg		0.01 U													0.018		0.01 U	
Other Semivolatiles																		
1,3-Dichlorobenzene in mg/kg		0.03													0.03 U		0.03 U	
Benzyl butyl phthalate in mg/kg	16,000	0.03 U													0.03 U		0.03 U	
Di-n-butyl phthalate in mg/kg	8,000	0.03 U													0.03 U		0.03 U	
Hexachlorobenzene in mg/kg	0.63	0.03 U													0.03 U		0.03 U	
Volatile Organic Compounds																		
Toluene in mg/kg	6,400		0.05 U													0.05 U		0.05 U
Trichloroethene (TCE) in mg/kg	11		0.03 U													0.03 U		0.03 U
Naphthalene in mg/kg	1,600		0.05 U													0.05 U		0.05 U
Polychlorinated Biphenyls (PCBs)																		
Aroclor 1254 in mg/kg		0.1 U													0.1 U		0.1 U	
Aroclor 1260 in mg/kg		0.1 U													0.1 U		0.1 U	

Notes

Concentrations in shaded cells indicate value exceeds Soil, Direct Contact, Most Restrictive (mg/kg)

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This report includes only analytes that were detected in one or more samples.

Table D-3 - Other Analytes in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Chemical Name	Most Restrictive Direct Contact Soil Screening Level (mg/kg)	NG-G08 3/24/2011 (12-15 ft.)	NG-G08 3/24/2011 (13 ft.)	NG-H09 3/24/2011 (0-3 ft.)	NG-H09 3/24/2011 (2 ft.)	NG-H09 3/24/2011 (6-9 ft.)	NG-H09 3/24/2011 (8 ft.)	NG-H09 3/24/2011 (12-15 ft.)	NG-H09 3/24/2011 (13 ft.)	NG-K03 3/29/2011 (5-6.5 ft.)	NG-K03 3/29/2011 (20-21.5 ft.)	NG-K03 3/29/2011 (40-41.5 ft.)	SG-F03 3/24/2011 (0-3 ft.)	SG-F03 3/24/2011 (2 ft.)	SG-F03 3/24/2011 (6-9 ft.)	SG-F03 3/24/2011 (7 ft.)	SG-F03 3/24/2011 (12-15 ft.)	SG-F03 3/24/2011 (13 ft.)
Metals																		
Antimony in mg/kg	32																	
Chromium in mg/kg	240																	
Copper in mg/kg	3,000																	
Vanadium in mg/kg	560																	
Zinc in mg/kg	24,000																	
Conventional Chemistry Parameters																		
Total Organic Carbon in %										1.57	0.10	0.18						
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene in mg/kg		0.01 U		0.01 U		0.01 U		0.01 U					0.056		0.01 U		0.01 U	
Acenaphthylene in mg/kg		0.01 U		0.01 U		0.01 U		0.01 U					0.12		0.01 U		0.01 U	
Anthracene in mg/kg	24,000	0.01 U		0.01 U		0.01 U		0.01 U					0.07		0.01 U		0.01 U	
Benzo(g,h,i)perylene in mg/kg		0.011		0.01 U		0.01 U		0.01 U					0.12		0.01 U		0.01 U	
Fluoranthene in mg/kg	3,200	0.025		0.01 U		0.01 U		0.01 U					0.17		0.01 U		0.01 U	
Fluorene in mg/kg	3,200	0.01 U		0.01 U		0.01 U		0.01 U					0.42		0.01 U		0.01 U	
Phenanthrene in mg/kg		0.016		0.01 U		0.01 U		0.01 U					0.48		0.01 U		0.01 U	
Pyrene in mg/kg	2,400	0.028		0.01 U		0.01 U		0.01 U					0.27		0.01 U		0.01 U	
2-Methylnaphthalene in mg/kg	320	0.03 U		0.03 U		0.03 U		0.03 U					2.3		0.03 U		0.03 U	
Naphthalene in mg/kg	1,600	0.01 U		0.01 U		0.01 U		0.01 U					0.96		0.01 U		0.01 U	
Benz(a)anthracene in mg/kg		0.01 U		0.01 U		0.01 U		0.01 U					0.11		0.01 U		0.01 U	
Benzo(a)pyrene in mg/kg	0.14	0.013		0.01 U		0.01 U		0.01 U					0.097		0.01 U		0.01 U	
Benzo(b)fluoranthene in mg/kg		0.014		0.01 U		0.01 U		0.01 U					0.13		0.01 U		0.01 U	
Benzo(k)fluoranthene in mg/kg		0.01 U		0.01 U		0.01 U		0.01 U					0.01 U		0.01 U		0.01 U	
Chrysene in mg/kg		0.013		0.01 U		0.01 U		0.01 U					0.2		0.01 U		0.01 U	
Dibenzo(a,h)anthracene in mg/kg		0.01 U		0.01 U		0.01 U		0.01 U					0.034		0.01 U		0.01 U	
Indeno(1,2,3-cd)pyrene in mg/kg		0.011		0.01 U		0.01 U		0.01 U					0.094		0.01 U		0.01 U	
Other Semivolatiles																		
1,3-Dichlorobenzene in mg/kg		0.03 U		0.03 U		0.03 U		0.03 U					1.5 U		0.03 U		0.03 U	
Benzyl butyl phthalate in mg/kg	16,000	0.03 U		0.03 U		0.03 U		0.03 U					1.5 U		0.03 U		0.03 U	
Di-n-butyl phthalate in mg/kg	8,000	0.03 U		0.22		0.03 U		0.03 U					1.5 U		0.03 U		0.03 U	
Hexachlorobenzene in mg/kg	0.63	0.03 U		0.03 U		0.03 U		0.03 U					1.5 U		0.03 U		0.03 U	
Volatile Organic Compounds																		
Toluene in mg/kg	6,400		0.05 U		0.05 U		0.05 U		0.05 U					0.05 U		0.05 U		0.05 U
Trichloroethene (TCE) in mg/kg	11		0.03 U		0.03 U		0.03 U		0.03 U					0.03 U		0.03 U		0.03 U
Naphthalene in mg/kg	1,600		0.05 U		0.05 U		0.05 U		0.05 U					0.05 U		0.05 U		0.05 U
Polychlorinated Biphenyls (PCBs)																		
Aroclor 1254 in mg/kg		0.1 U		0.1 U		0.1 U		0.1 U					0.1 U		0.1 U		0.1 U	
Aroclor 1260 in mg/kg		0.1 U		0.1 U		0.1 U		0.1 U					0.1 U		0.1 U		0.1 U	

Notes

Concentrations in shaded cells indicate value exceeds Soil, Direct Contact, Most Restrictive (mg/kg)

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Table D-3 - Other Analytes in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Chemical Name	Most Restrictive Direct Contact Soil Screening Level (mg/kg)	SG-G02 3/24/2011 (0-3 ft.)	SG-G02 3/24/2011 (3 ft.)	SG-G02 3/24/2011 (6-9 ft.)	SG-G02 3/24/2011 (9 ft.)	SG-G02 3/24/2011 (12-15 ft.)	SG-G02 3/24/2011 (14 ft.)	SG-H03 3/24/2011 (0-3 ft.)	SG-H03 3/24/2011 (2 ft.)	SG-H03 3/24/2011 (6-9 ft.)	SG-H03 3/24/2011 (8 ft.)	SG-H03 3/24/2011 (12-15 ft.)	SG-H03 3/24/2011 (13.5 ft.)	SG-I07 3/24/2011 (0-3 ft.)	SG-I07 3/24/2011 (8.5-10 ft.)	SG-I07 3/24/2011 (12-15 ft.)	SG-J07 3/24/2011 (0-3 ft.)	SG-J07 3/24/2011 (3 ft.)
Metals																		
Antimony in mg/kg	32													1.75	1 U	1 U	195	
Chromium in mg/kg	240													9.41	14.1	11.7	146	
Copper in mg/kg	3,000													13.3	14.5	13.1	5,720	
Vanadium in mg/kg	560													18.9	16.3	17.2	77.8	
Zinc in mg/kg	24,000													17.2	14.6	15.5	6,380	
Conventional Chemistry Parameters																		
Total Organic Carbon in %																		
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene in mg/kg		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U					1 U	
Acenaphthylene in mg/kg		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U					1 U	
Anthracene in mg/kg	24,000	0.01 U		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U					2.7	
Benzo(g,h,i)perylene in mg/kg		0.043		0.01 U		0.01 U		0.037		0.01 U		0.01 U					20	
Fluoranthene in mg/kg	3,200	0.018		0.01 U		0.01 U		0.024		0.01 U		0.01 U					46	
Fluorene in mg/kg	3,200	0.01 U		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U					1 U	
Phenanthrene in mg/kg		0.04		0.01 U		0.01 U		0.012		0.01 U		0.01 U					27	
Pyrene in mg/kg	2,400	0.034		0.01 U		0.01 U		0.03		0.01 U		0.01 U					54	
2-Methylnaphthalene in mg/kg	320	1.5 U		0.03 U		0.03 U		0.03 U		0.03 U		0.03 U					15 U	
Naphthalene in mg/kg	1,600	0.01 U		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U					1 U	
Benz(a)anthracene in mg/kg		0.018		0.01 U		0.01 U		0.013		0.01 U		0.01 U					15	
Benzo(a)pyrene in mg/kg	0.14	0.012		0.01 U		0.01 U		0.024		0.01 U		0.01 U					18	
Benzo(b)fluoranthene in mg/kg		0.031		0.01 U		0.01 U		0.031		0.01 U		0.01 U					29	
Benzo(k)fluoranthene in mg/kg		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U					8.8	
Chrysene in mg/kg		0.066		0.01 U		0.01 U		0.023		0.01 U		0.01 U					22	
Dibenzo(a,h)anthracene in mg/kg		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U		0.01 U					3.8	
Indeno(1,2,3-cd)pyrene in mg/kg		0.015		0.01 U		0.01 U		0.026		0.01 U		0.01 U					21	
Other Semivolatiles																		
1,3-Dichlorobenzene in mg/kg		1.5 U		0.03 U		0.03 U		0.03 U		0.03 U		0.03 U					15 U	
Benzyl butyl phthalate in mg/kg	16,000	1.5 U		0.03 U		0.03 U		0.060 J		0.03 U		0.03 U					15 UJ	
Di-n-butyl phthalate in mg/kg	8,000	1.5 U		0.03 U		0.03 U		0.03 U		0.03 U		0.03 U					15 U	
Hexachlorobenzene in mg/kg	0.63	1.5 U		0.03 U		0.03 U		0.03 U		0.03 U		0.03 U					15 U	
Volatile Organic Compounds																		
Toluene in mg/kg	6,400		0.05 U		0.05 U		0.05 U		0.06		0.05 U		0.05 U					0.05 U
Trichloroethene (TCE) in mg/kg	11		0.03 U		0.03 U		0.03 U		0.03 U		0.03 U		0.03 U					0.1
Naphthalene in mg/kg	1,600		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U		0.05 U					0.11
Polychlorinated Biphenyls (PCBs)																		
Aroclor 1254 in mg/kg		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U					0.1 U	
Aroclor 1260 in mg/kg		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U					0.1 U	

Notes

Concentrations in shaded cells indicate value exceeds Soil, Direct Contact, Most Restrictive (mg/kg)

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Table D-3 - Other Analytes in Soil

Remedial Investigation, Crownhill Elementary, Bremerton, Washington

Chemical Name	Most Restrictive Direct Contact Soil Screening Level (mg/kg)	SG-J07 3/24/2011 (6-9 ft.)	SG-J07 3/24/2011 (9 ft.)	SG-J07 3/24/2011 (12-15 ft.)	SG-J07 3/24/2011 (14 ft.)	SG-J6 3/24/2011 (0-3 ft.)	SG-J6 3/24/2011 (3 ft.)	SG-J6 3/24/2011 (5 ft.)	SG-J6 3/24/2011 (6-9 ft.)	SG-J6 3/24/2011 (8 ft.)	SG-J6 3/24/2011 (12-15 ft.)	SG-J6 3/24/2011 (14 ft.)	SG-J6 3/24/2011 (20 ft.)	SG-J6 3/24/2011 (40 ft.)	SPL-SS-14* 11/11/2011 (0-1 ft.)	SPL-SS-15* 11/11/2011 (0-1 ft.)	SPL-SS-17* 11/11/2011 (0-1 ft.)	SPL-SS-18* 11/11/2011 (0-1 ft.)
Metals																		
Antimony in mg/kg	32	544		1 U											29.6	729	114	48.4
Chromium in mg/kg	240	1,710		7.07														
Copper in mg/kg	3,000	5,730		11.3											370 J	6,160 J	2,180 J	423 J
Vanadium in mg/kg	560	15.8		11.9														
Zinc in mg/kg	24,000	5,810		10.2														
Conventional Chemistry Parameters																		
Total Organic Carbon in %								2.56					0.11	0.08				
Polycyclic Aromatic Hydrocarbons (PAHs)																		
Acenaphthene in mg/kg		0.01 U		0.01 U		0.01 U			0.01 U		0.01 U				0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene in mg/kg		0.01 U		0.01 U		0.01 U			0.01 U		0.01 U				0.01 U	0.01 U	0.01 U	0.011
Anthracene in mg/kg	24,000	0.01 U		0.01 U		0.01 U			0.01 U		0.01 U				0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene in mg/kg		0.087		0.01 U		0.25			0.01 U		0.01 U				0.1	0.057	0.13	0.058
Fluoranthene in mg/kg	3,200	0.095		0.01 U		0.046			0.01 U		0.01 U				0.11	0.061	0.03	0.043
Fluorene in mg/kg	3,200	0.01 U		0.01 U		0.01 U			0.01 U		0.01 U				0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene in mg/kg		0.054		0.01 U		0.013			0.01 U		0.01 U				0.033	0.029	0.016	0.027
Pyrene in mg/kg	2,400	0.15		0.01 U		0.096			0.01 U		0.01 U				0.19	0.096	0.036	0.091
2-Methylnaphthalene in mg/kg	320	0.03 U		0.03 U		0.03 U			0.03 U		0.03 U							
Naphthalene in mg/kg	1,600	0.01 U		0.01 U		0.01 U			0.01 U		0.01 U				0.01 U	0.011	0.01 U	0.01 U
Benz(a)anthracene in mg/kg		0.032		0.01 U		0.035			0.01 U		0.01 U				0.059	0.033	0.024	0.034
Benzo(a)pyrene in mg/kg	0.14	0.071		0.01 U		0.08			0.01 U		0.01 U				0.1	0.054	0.063	0.051
Benzo(b)fluoranthene in mg/kg		0.093		0.01 U		0.083			0.01 U		0.01 U				0.13	0.07	0.11	0.06
Benzo(k)fluoranthene in mg/kg		0.037		0.01 U		0.01 U			0.01 U		0.01 U				0.033	0.018	0.034	0.015
Chrysene in mg/kg		0.061		0.01 U		0.09			0.01 U		0.01 U				0.094	0.052	0.057	0.079
Dibenzo(a,h)anthracene in mg/kg		0.015		0.01 U		0.026			0.01 U		0.01 U				0.016	0.01 U	0.022	0.015
Indeno(1,2,3-cd)pyrene in mg/kg		0.093		0.01 U		0.067			0.01 U		0.01 U				0.093	0.05	0.1	0.041
Other Semivolatiles																		
1,3-Dichlorobenzene in mg/kg		0.03 U		0.03 U		0.03 U			0.03 U		0.03 U							
Benzyl butyl phthalate in mg/kg	16,000	0.03 UJ		0.03 U		0.03 UJ			0.03 U		0.03 U							
Di-n-butyl phthalate in mg/kg	8,000	0.03 U		0.03 U		0.03 U			0.03 U		0.03 U							
Hexachlorobenzene in mg/kg	0.63	0.03 UJ		0.03 U		0.034			0.03 U		0.03 U							
Volatile Organic Compounds																		
Toluene in mg/kg	6,400		0.05 U		0.05 U		0.05 U			0.05 U		0.05 U						
Trichloroethene (TCE) in mg/kg	11		0.03 U		0.03 U		0.03 U			0.03 U		0.03 U						
Naphthalene in mg/kg	1,600		0.05 U		0.05 U		0.05 U			0.05 U		0.05 U						
Polychlorinated Biphenyls (PCBs)																		
Aroclor 1254 in mg/kg		0.2		0.1 U		0.1 U			0.1 U		0.1 U							
Aroclor 1260 in mg/kg		0.1 U		0.1 U		0.1 U			0.1 U		0.1 U							

Notes

Concentrations in shaded cells indicate value exceeds Soil, Direct Contact, Most Restrictive (mg/kg)

An asterisk (*) after a sample location indicates that that sample has been over-excavated and is no longer representative of site conditions.

J - Analyte was positively identified. The reported result is an estimate.
U - Analyte was not detected at or above the reported result.
UJ - Analyte was not detected at or above the reported estimate

This report includes only analytes that were detected in one or more samples.

APPENDIX E

Field Report, LNAPL Bailing Test

DAILY REPORT

350 Madison Avenue North
Bainbridge Island, Washington 98110
(206) 780-9370

401 Second Avenue S, Suite 201
Seattle, Washington 98104
(206) 328-7443

DATE: 11/21/2012	**PROJECT NO.** 100094	**WEATHER:** RAINY 50'S
PROJECT NAME: Crownhill Elementary	**CLIENT: BREMERTON SCHOOL DISTRICT**	
EQUIPMENT USED: PPE, VISQUEEN, BAILERS, TRUCKS (F150 AND RANGER) AND PERSONAL VEHICLE (MAR), 300' INTERFACE PROBE, BUCKETS, SUMP PUMP AND HOSE, AND SANDBAGS.	**PROJECT LOCATION: BREMERTON, WASHINGTON**	

THE FOLLOWING WAS NOTED:

Aspect Consulting, LLC (Aspect) was on Site at Crownhill Elementary as part of the investigation of deep petroleum hydrocarbon impacts documented as part of the site remedial investigation. Three Aspect personnel, Molly Ravits (MAR), Gus Leger (GL), and Jared Bean (JRB) were on Site with the following objectives:

- Conduct a "bailing test" in MW-13 of the Light Non-aqueous Phase Liquid (LNAPL) by removing LNAPL with a bottom-filling disposable bailer and monitoring the rate that the LNAPL layer regenerates.
- Collect samples of the LNAPL for lab identification and characterization from MW-13 and MW-8 using bailers.

After Aspect obtained an LNAPL thickness and interface with water, the bailing test was conducted by lowering a 1L bottom-filling disposable bailer into the LNAPL layer, pulling out the bailer, and emptying the retrieved LNAPL and water into a graduated cylinder to measure the volumes of the two liquid phases. The bailer was lowered into the well repeatedly until no further LNAPL was retrieved (only water in bailer). The LNAPL layer in the well was then allowed to recover (0.5 to 1 hour), and the process was repeated.

During previous Site visits, the LNAPL thickness and interface with water at MW-13 had been very difficult to determine due to the LNAPL's thick, sticky texture. That was also the case today. Every time the interface probe or a bailer was pulled out of the well, the equipment emerged completely coated in LNAPL (see attached photographs). Today, the initial LNAPL layer thickness in MW-13 was estimated at 0.99 ft. (from 113.08 ft. below top of casing (BTOC) to 114.07 ft BTOC). Aspect commenced the first round of bailing at 1145 (Table1), the second round at 1245 (Table 2), and the third and final round at 1345 (Table 3).

Bailer No.	Volume of LNAPL Removed (mL)	Volume of Water Removed (mL)	Cumulative Volume of LNAPL Removed (mL)
First (1145) round of bailing			
1	250	150	250
2	450	200	700
3	0	1000	700
Second (1245) round of bailing			
1	150	800	850
2	0	1000	850
Final (1345) round of bailing			
1	50	0	900
2	0	1000	900

Due to the buildup of LNAPL residue on the inside of the well casing, the interface probe started to give false readings at approximately 20 ft. BTOC, so no measurements of the LNAPL layer thickness could be conducted in MW-13 after the initial measurement. The bailing test produced sufficient LNAPL sample volume for the requested lab analyses.
.
Aspect was unable to determine an LNAPL thickness in well MW-8 due to false interface probe readings, apparently caused by LNAPL coating the well casing. However, a thickness of approximately 0.2 feet had been measured on 10/26/12. An attempt was made to bail LNAPL from MW-8, but the volume of LNAPL recovered (<5 mL) was insufficient for submitting for lab analysis. Aspect left the site at 1600.

The LNAPL sample from well MW-13 was submitted to the lab for analysis/determination of:

- TPH in the diesel and heavy oil ranges (NWTPH-Dx);
- Chlorinated solvents (EPA 8260B);
- Specific gravity (ASTM D-1298)
- Pensky-Martin closed cup flash point (ASTM D-93); and
- Kinematic viscosity (ASTM D-445) at 20°C.

APPENDIX F

Soil Vapor Intrusion Assessment

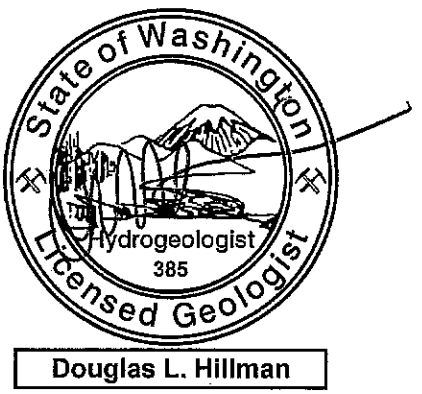
SOIL VAPOR INTRUSION ASSESSMENT
NOVEMBER 2010 SUB-SLAB SAMPLING

Crownhill Elementary School
Bremerton, Washington

Prepared for: Bremerton School District

Project No. 100067-001-02 • December 22, 2010

Aspect Consulting, LLC



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1 Introduction

This report documents the results of sub-slab soil vapor sampling conducted in November 2010 at the Crownhill Elementary School located at 1500 Rocky Point Road in Bremerton, Washington (Figure 1). The 10.4-acre school property, which was acquired by the Bremerton School District in 1954, was historically used as a landfill. The original Crownhill Elementary School building was constructed on the property in 1958. That building was partially destroyed by fire in 1993, and remaining portions of the building were demolished that same year. Uncontrolled fill and soils containing petroleum hydrocarbons and possibly other regulated compounds were encountered during construction of the new (existing) two-story slab-on-grade school building in the mid-1990s. As a result, the School District, in consultation with Ecology, modified the grading design to include clean imported cover soils, and added a sub-slab vapor barrier (thick plastic sheeting) to reduce the potential for direct contact exposure to the fill materials and impacted soils. The School District has entered into an Agreed Order (No. DE 7916) with the Washington State Department of Ecology (Ecology) for further investigation of site conditions.

Several investigations of soil vapor and indoor air quality were previously conducted at the site. Most recently (August 2010), Aspect Consulting, LLC (Aspect) installed permanent vapor points in the floor slab at six locations throughout the school building (SSV-1 through SSV-6; see Figure 2), and collected sub-slab soil vapor samples for analysis of hydrogen sulfide (a common landfill gas) and selected volatile organic compounds (VOCs). The November 17, 2010, sampling event documented in this report represents the second round of sampling using those vapor points. The purpose of sub-slab vapor sampling is to further evaluate whether the potential exists for the school's indoor air to be unacceptably impacted by vapor intrusion (VI). Results of the November sampling event do not indicate any potential for unacceptable indoor air impacts due to VI.

2 Summary of August 2010 Sampling Event

Both the August and the November sampling events were conducted in accordance with the site-specific *Soil Vapor Intrusion Assessment Work Plan* dated July 21, 2010 (Aspect, 2010a). The *Work Plan* identifies hydrogen sulfide and 15 VOCs as potential contaminants of concern (PCOCs), and sets a "screening level" for each PCOC at ten times the most stringent Method B air cleanup level established under the Washington State Model Toxics Control Act (MTCA). This factor conservatively accounts for soil vapor attenuation across the floor slab in accordance with the Tier I methodology specified in Ecology's draft *Guidance for Evaluating Soil Vapor Intrusion in Washington State* (Ecology, 2009). A major reason for choosing to sample sub-slab vapor rather than sampling indoor air directly is that, for many of the PCOCs, the analytical laboratory's

reporting limit is considerably higher than the corresponding Method B air cleanup level. Sampling sub-slab vapor allows us to apply a cross-slab attenuation factor, which effectively raises the target concentrations against which the sampling results are compared. As a result, only hydrogen sulfide has a higher reporting limit than its screening level, and that by only a small margin (see Table 2).

Results of the initial sub-slab vapor sampling event are documented in the *Soil Vapor Intrusion Assessment* report dated October 18, 2010 (Aspect, 2010b). Those results indicate a potential for impacts to indoor air as follows:

- hydrogen sulfide detections at SSV-1 and SSV-6 (beneath the northwestern portion of the building) exceeded the hydrogen sulfide screening level by factors of 3.7 and 1.5, respectively; and
- a chloroform detection at SSV-5 (beneath Classroom 105) exceeded the chloroform screening level by a factor of less than 1.4.

No other PCOC detections exceeded their screening levels.

3 Pressure Gradient Impacts

In order for VI to occur, there must be a pathway through which soil vapor can migrate into the building, such as cracks in the floor slab or utility penetrations. Soil vapor pathways are present to some extent in virtually all buildings, and are assumed to be present at the school. In addition, the air pressure inside the building must be lower than the pressure beneath the building. This cross-slab pressure differential is primarily influenced by the following:

1) The status of the building's heating, ventilation, and air conditioning (HVAC) system. When the HVAC system is running, it normally brings in at least 20 percent outside air, and excess air is forced out through exhaust louvers and open windows (if any). Thus, the school building is "positively pressurized" with respect to ambient (outdoor) air when the HVAC system is running. The indoor/outdoor pressure differential is expected to be greatest when the windows are closed, since all excess air must then exit the building via the exhaust louvers. Therefore, VI is likely to be most pronounced when the HVAC system is <u>not</u> running, and is least likely to occur when the system is running and the windows are closed.
2) Changes in barometric pressure. A period of decreasing barometric pressure (e.g., when a storm-generated low moves into the area) is conducive to VI, since soil vapor is "exhaled" from the subsurface to maintain pressure equilibrium.

The HVAC system was turned "off" during the August sampling event in an attempt to capture "worst-case" VI conditions, although the system normally runs throughout the school day, regardless of weather conditions. During warmer weather, windows are sometimes opened during the school day. For the November sampling event, therefore, it

was decided to leave the HVAC system running, and to open a window during the sample collection period in rooms with exterior windows (all sampling locations except SSV-4 and SSV-6). This was expected to more closely represent "worst-case" conditions to which the students are exposed.

The August sampling event did not capture "worst-case" VI conditions with respect to changes in barometric pressure. Scheduling sample collection to occur immediately following a period of decreasing barometric pressure was a primary goal for the November sampling event.

4 November 2010 Sampling Event

Laboratory-supplied evacuated 6-liter Summa canisters were used to collect 1-hour time-integrated samples for VOC analysis, and samples for hydrogen sulfide analysis were collected in 1-liter Tedlar® bags. During the August sampling event, it was observed that the self-leveling concrete used to install the vapor points had not completely hardened, and screwing the hose barb adapter into the top of the vapor probe assembly apparently created a pathway for vapor leakage. In response, additional hydrated bentonite was applied around the hose barb adapter at each probe location, to enhance the seal during sampling. (The bentonite was removed at the conclusion of the sampling period.) This procedure was repeated during the November sampling event.

As in the August sampling event, one of the six sampling locations (SSV-4) was "leak tested" to ensure integrity of the vapor point seal and rule out the possibility of cross-contamination from indoor air. This was done by placing a shroud over the canister sampling train and maintaining a helium-enriched atmosphere inside the shroud for the duration of the sampling event. Real-time testing was conducted prior to the start of sampling using a hand-held helium meter along with a peristaltic pump to collect a vapor "grab" sample. In addition, the SSV-4 canister sample was analyzed for helium as well as VOCs. During the November sampling event, a helium concentration of approximately 60 percent by volume was maintained inside the shroud. Leak testing using the hand-held meter indicated a helium concentration of 0.57 percent by volume, and subsequent analysis of the SSV-4 canister sample yielded 1.0 percent helium. These results indicate negligible leakage in the vapor point seal and sampling apparatus. Refer to the *Work Plan* (Section 3 and Appendix B) for additional detail regarding leak testing and sampling methodology.

November 17th was targeted for sampling based on the weather forecast, and sample collection occurred between 8:00 am and 1:35 pm on that day. Weather conditions recorded at the Bridletree Station in Bremerton (KWABREME21) are provided in Appendix A. Barometric pressure had been falling in the seven hours leading up to start of sampling. As noted above, this weather pattern is conducive of "worst-case" VI conditions.

A digital micro-manometer was used to measure the following differential pressure conditions:

- Across the floor slab at all 6 sampling locations; and
- At the 4 sampling locations with exterior windows, indoor/outdoor differential pressure was measured: 1) with one window cracked open just enough to allow the micro-manometer's plastic tubing to pass through (this measurement was made before the window was opened for sample collection); and 2) after the window had been fully open for at least 15 minutes.

Differential pressure measurements are provided in Table 1. As expected, only very small pressure differences were measured (i.e., non exceeding 0.05 inches of water column). Indoor/outdoor differential pressures were slightly negative (except for a "zero" measurement at SSV-5 after the Classroom 105 window was opened), indicating positively pressurized conditions in the building caused by operation of the HVAC system. Cross-slab differential pressures ranged from slightly negative to slightly positive. Pressures were slightly higher beneath the slab at SSV-1 and SSV-5, where measurements were made after the classroom window had been open for at least 15 minutes. At SSV-2, the cross-slab differential pressure was measured before the Classroom 103 window was opened, and the pressure was found to be slightly higher above the floor slab than below it. At the other three locations, there was no measurable difference in pressures above and below the floor slab.

Upon completion of sampling, the canisters and Tedlar® bags were packed in their original shipping containers and returned via an overnight delivery service to Air Toxics, Limited (ATL), in Folsom, California. Overnight delivery was necessary so that the laboratory could analyze the Tedlar® bag samples within the recommended hold time of 24-hours for hydrogen sulfide.

ATL analyzed the canister samples for VOCs using modified EPA Method TO-15-LL (Sp). The SSV-4 canister sample was also analyzed for helium using modified ASTM Method D-1946. The Tedlar® bag samples were analyzed for hydrogen sulfide using ASTM Method D-5504 (Sh). Laboratory reports are provided as Appendix B. As noted in the laboratory narrative for the hydrogen sulfide analyses, all Tedlar® bag samples except the one collected first (9 am, at location SSV-1) were analyzed within the recommended hold time.

5 Evaluation of Results

Analytical results for the PCOCs are summarized in Table 2 along with corresponding screening levels. Only six of the 16 PCOCs (Freon 12, benzene, tetrachloroethene, ethylbenzene, xylenes, and 1,2,4-trimethylbenzene) were detected in one or more of the current-round samples, and none of the detected concentrations exceeded the corresponding screening levels. As discussed in Section 2, the hydrogen sulfide detection limit of 5.7 micrograms per cubic meter ($\mu g/m^3$) marginally exceeds the hydrogen sulfide screening level of 4.6 $\mu g/m^3$. It was noted in the *Work Plan* that this would be case, and that 5.7 $\mu g/m^3$ is the lowest achievable reporting limit for hydrogen sulfide cited by ATL.

Table 3 summarizes the analytical results for the August sampling event, for purposes of comparison. Laboratory detection limits were similar in the two events. It is not clear whether the August event (when the HVAC system was off, but barometric conditions were not optimal for VI) or the November event (when the HVAC system was running and barometric conditions were optimal) represents the more pronounced VI conditions. Screening level exceedences were measured in the August event for chloroform and hydrogen sulfide, and these compounds were not detected in any sample in November. On the other hand, xylenes, which were detected in every sample during both sampling events, were present at considerably higher concentrations in November (average detection of 13.6 $\mu g/m^3$ total xylenes in November versus only 2.8 $\mu g/m^3$ in August). In addition, 1,2,4-trimethylbenzene was detected only in November (in three of the six samples), but those detections were only marginally above the laboratory detection limit.

It is clear, however, that the November results more likely represent actual student exposures (because the HVAC system was running), and that the November event was conducted during a weather pattern conducive of VI.

6 Conclusions and Recommendations

Two rounds of sub-slab vapor sampling have now been completed in accordance with the *Work Plan* at six locations inside the Crownhill Elementary School. The November sampling event was conducted during the school day, with the building's HVAC system running continuously. (It was not running during the August sampling event.) Since it is standard practice for the HVAC system to be run continuously during the school day, the November event better represented conditions to which students are actually exposed. In addition, the November event was conducted during a weather pattern conducive of VI.

In the August sampling event, screening level exceedences were measured for hydrogen sulfide (at two locations) and chloroform (at one location). However, results of the November sampling event do not indicate any exceedences of the PCOC screening levels, and hydrogen sulfide and chloroform were not detected in any sample. Since the November event better represented student exposure conditions under a weather pattern conducive of VI, these two compounds are not considered to be a VI concern.

The screening levels were established in the *Work Plan* at 10 times the most stringent MTCA Method B air cleanup levels, which conservatively accounts for soil vapor attenuation across a floor slab in accordance with Ecology guidance. As noted in our VI assessment report for the August sampling event (Aspect, 2010b), cross-slab attenuation factors are usually much higher than 10 [typically on the order of 1,000 according to a study of 218 U.S. homes (Sager, et.al., 1997)]. This suggests that indoor air concentrations of PCOCs would not be a concern at the school even if sub-slab vapor concentrations were much higher than those detected in either the August or November sampling events.

Operation of the school's HVAC system appears to provide some positive pressurization in the building (relative to outdoor air), and this decreases VI potential. We recommend

that the standard practice of running the HVAC system throughout the school day be continued. As long as this is done, indoor air PCOC concentrations due to VI are expected to remain below levels of concern, and we do not see a need for further assessment.

7 References

Aspect Consulting, 2010a, Soil Vapor Intrusion Assessment Work Plan, Crownhill Elementary School, Bremerton, Washington, July 21, 2010.

Aspect Consulting, 2010b, Soil Vapor Intrusion Assessment, August 2010 Sub-Slab Sampling, Crownhill Elementary School, Bremerton, Washington, October 18, 2010.

Ecology, 2009, Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Washington State Department of Ecology, Toxics Cleanup Program, Review DRAFT, October 2009.

Sager, S.L., Braddy, L.D., and Day, C.H., 1997, The Infiltration Ratio in Vapor Intrusion Calculations, Proceedings of the Society for Risk Analysis Annual Meeting, Washington, D.C., December 9, 1997.

8 Limitations

Work for this project was performed and this report prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of Bremerton School District for specific application to the referenced property. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

Table 1 - Differential Pressure Measurements
November 17, 2010 Sampling Event
Crownhill Elementary School, Bremerton, Washington

Sampling Location[2]	Sample Collection Start Time	Cross-Slab Differential Pressure[3]	Indoor/Outdoor Differential Pressure[4]	
			Prior to Opening Window for Sample Collection[5]	After Opening Window[5]
SSV-1	8:00am	0.040[6]	-0.016	-0.020
SSV-2	12:15pm	-0.050[7]	-0.010	-0.005
SSV-3	11:00am	-0.020 to 0.020[8]	-0.040	-0.012
SSV-4	10:20am	0.000	(no exterior windows at this location)	
SSV-5	12:35pm	0.010[6]	-0.001[9]	0.000[9]
SSV-6	11:25am	0.000	(no exterior windows at this location)	

1) All differential pressure measurements are in units of inches of water column (in wc).
2) See Figure 2 for sampling locations.
3) A positive value indicates the pressure beneath the floor slab was higher than the indoor air pressure, and vice versa.
4) A positive value indicates the air pressure was higher outdoors than indoors, and vice versa.
5) In rooms with exterior windows, initial measurements were made with one window cracked open just enough to allow the micro-manometer's tubing to pass through. Then the window was fully opened during the sample collection period. A second measurement was made after the window had been open for at least 15 minutes.
6) Measurement made after window was open for at least 15 minutes.
7) Measurement made before opening window.
8) Variability may be due to exterior door to this room being opened and closed repeatedly (by others) during measurement.
9) When we entered Classroom 105 prior to sampling, we found several windows already open.

Table 2 - Sub-Slab Sampling Results
November 17, 2010 Sampling Event

Crownhill Elementary School, Bremerton, Washington

Potential Compound of Concern (PCOC)	Screening Level [(2)]	Sub-Slab Soil Vapor Samples Collected on November 17, 2010					
		SSV-1	SSV-2	SSV-3	SSV-4	SSV-5	SSV-6
Freon 12	800	**3.5**	**2.9**	**2.3**	**2.9**	**3.2**	**3.3**
Vinyl chloride	2.8	0.47 U	0.46 U	0.47 U	0.47 U	0.47 U	0.43 U
1,1-Dichloroethene	910	0.72 U	0.71 U	0.72 U	0.72 U	0.72 U	0.67 U
trans-1,2-Dichloroethene	320	0.72 U	0.71 U	0.72 U	0.72 U	0.72 U	0.67 U
1,1-Dichloroethane	3,200	0.74 U	0.72 U	0.74 U	0.74 U	0.74 U	0.68 U
cis-1,2-Dichloroethene	160	0.72 U	0.71 U	0.72 U	0.72 U	0.72 U	0.67 U
Chloroform	1.1	0.89 U	0.87 U	0.89 U	0.89 U	0.89 U	0.82 U
Benzene	3.2	0.58 U	0.57 U	0.58 U	0.58 U	0.58 U	**0.86**
1,2-Dichloroethane	22	0.74 U	0.72 U	0.74 U	0.74 U	0.74 U	0.68 U
Trichloroethene	1.0	0.98 U	0.96 U	0.98 U	0.98 U	0.98 U	0.90 U
Tetrachloroethene	4.2	1.2 U	**2.5**	1.2 U	**3.0**	**1.4**	**1.5**
Ethylbenzene	4,600	**0.93**	**1.4**	**2.6**	**0.89**	**11**	**1.2**
Xylenes (total)	460	**3.5**	**6.2**	**9.2**	**4.7**	**52**	**5.8**
1,2,4-Trimethylbenzene	27	0.90 U	**1.6**	0.90 U	0.90 U	**1.5**	**1.7**
Naphthalene	14	4.8 U	4.7 U	4.8 U	4.8 U	4.8 U	4.4 U
Hydrogen sulfide	4.6	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U

U Analyte was not detected at the indicated detection limit.

Notes:

1) All concentrations are in units of micrograms per cubic meter (ug/m^3). Analyte detections are bolded.

2) Values in this column were obtained by multiplying the most stringent MTCA Method B air cleanup level by 10, to conservatively account for soil vapor attenuation across the floor slab in accordance with Ecology's *Guidance for Evaluating Soil Vapor Instrusion in Washington State.*

3) Leak testing using helium as a tracer gas was conducted at one sampling location (SSV-4) in accordance with the Standard Operating Procedure (SOP) provided in Appendix B of the Work Plan. The laboratory detected a helium concentration of only 1.0 percent in sample SSV-4, compared to a concentration of approximately 60 percent maintained inside the sampling shroud. This amount of leakage is considered to be negligible.

Table 3 - Sub-Slab Sampling Results
August 19, 2010 Sampling Event

Crownhill Elementary School, Bremerton, Washington

Potential Compound of Concern (PCOC)	Screening Level [(2)]	Sub-Slab Soil Vapor Samples Collected on August 19, 2010					
		SSV-1	SSV-2	SSV-3	SSV-4	SSV-5	SSV-6
Freon 12	800	**2.8**	**3.0**	**2.4**	**2.8**	**3.6**	**2.4**
Vinyl chloride	2.8	0.42 U	0.40 U	0.39 U	0.39 U	0.48 U	0.43 U
1,1-Dichloroethene	910	0.65 U	0.61 U	0.60 U	0.60 U	0.74 U	0.67 U
trans-1,2-Dichloroethene	320	0.65 U	0.61 U	0.60 U	0.60 U	0.74 U	0.67 U
1,1-Dichloroethane	3,200	0.66 U	0.63 U	0.62 U	0.62 U	0.76 U	0.68 U
cis-1,2-Dichloroethene	160	0.65 U	0.61 U	0.60 U	0.60 U	0.74 U	0.67 U
Chloroform	1.1	0.80 U	**1.1**	0.74 U	0.74 U	**1.5**	**0.97**
Benzene	3.2	0.52 U	0.50 U	0.48 U	**0.56**	**0.76**	0.54 U
1,2-Dichloroethane	22	0.66 U	0.63 U	0.62 U	0.62 U	0.76 U	0.68 U
Trichloroethene	1.0	0.88 U	0.83 U	0.82 U	0.82 U	1.0 U	0.90 U
Tetrachloroethene	4.2	1.1 U	**1.5**	1.0 U	**1.5**	1.3 U	1.1 U
Ethylbenzene	4,600	0.71 U	0.67 U	0.66 U	**0.71**	0.81 U	0.73 U
Xylenes (total)	460	**1.4**	**1.2**	**1.3**	**2.7**	**3.7**	**2.2**
1,2,4-Trimethylbenzene	27	0.81 U	0.76 U	0.75 U	0.75 U	0.92 U	0.82 U
Naphthalene	14	4.3 U	4.1 U	4.0 U	4.0 U	4.9 U	4.4 U
Hydrogen sulfide	4.6	**17**	5.7 U	5.7 U	5.7 U	5.7 U	**6.7**

U Analyte was not detected at the indicated detection limit.

Notes:

1) All concentrations are in units of micrograms per cubic meter (ug/m^3).

2) Values in this column were obtained by multiplying the most stringent MTCA Method B air cleanup level by 10, to conservatively account for soil vapor attenuation across the floor slab in accordance with Ecology's *Guidance for Evaluating Soil Vapor Instrusion in Washington State.*

3) Analyte detections are bolded; detections that exceed the screening level are back-shaded.

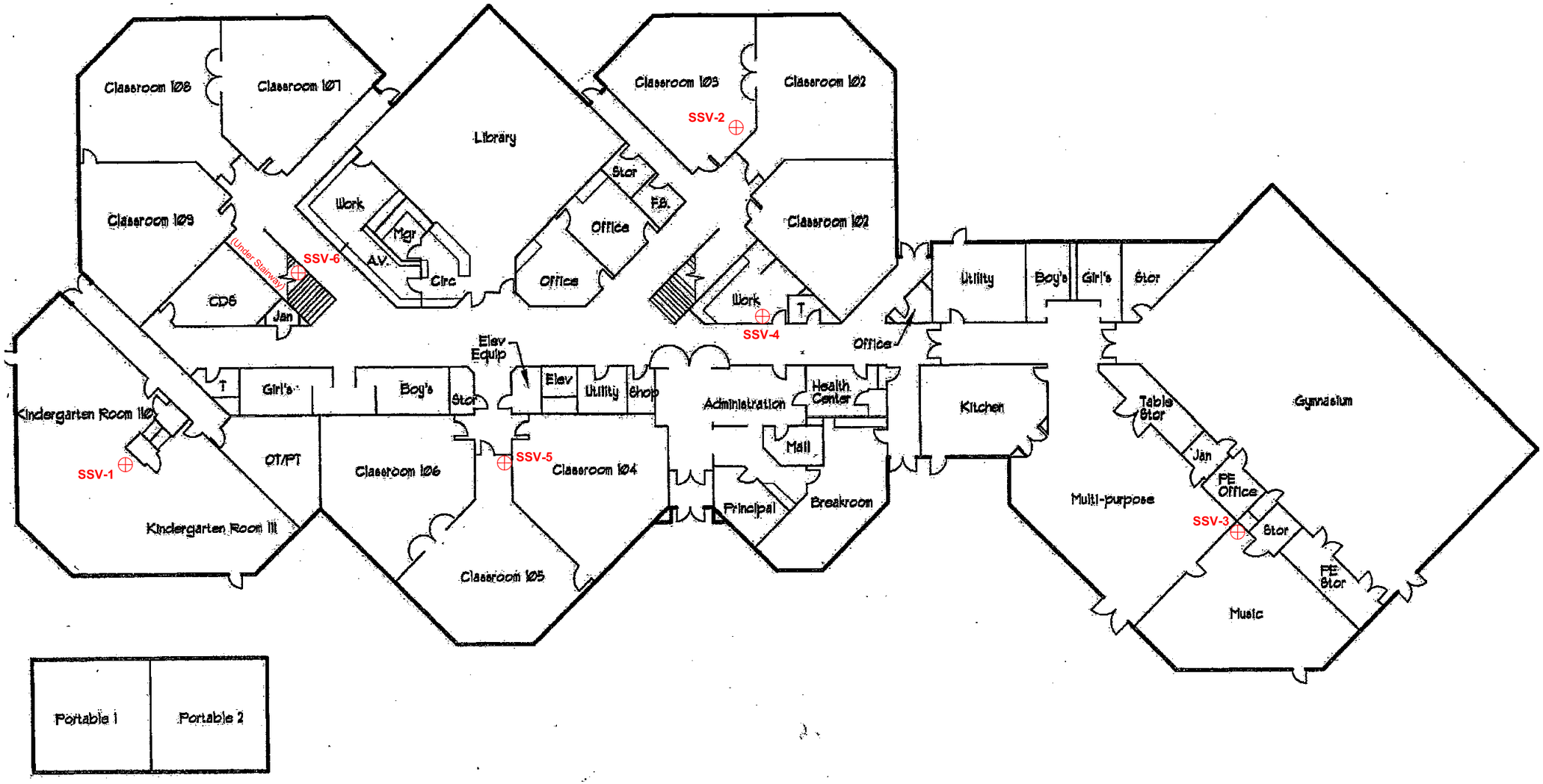
4) Leak testing using helium as a tracer gas was conducted at one sampling location (SSV-4) in accordance with the Standard Operating Procedure (SOP) provided in Appendix B of the Work Plan. The laboratory detected a helium concentration of only 0.21 percent in sample SSV-4, compared to a concentration of approximately 80 percent maintained inside the sampling shroud. This amount of leakage is considered to be negligible.

Aspect CONSULTING

Project Location Map
Soil Vapor Intrusion Assessment Work Plan
Crownhill Elementary School
Bremerton, Washington

DATE: July 2010	PROJECT NO. 100067
DESIGNED BY: DH	
DRAWN BY: SCC	FIGURE NO. 1
REVISED BY: -	

Q:\Crown Hill Elementary\100067 Crown Hill Elementary School\2010-06 Vapor Sampling\100067-01.dwg 8.5x11 Landscape
Jul 09, 2010 10:14am scudd



⊕ Proposed Sub-Slab Vapor Sampling Location

N

0 25 50

Approximate Scale in Feet

Aspect CONSULTING

Proposed Sub-Slab Vapor Sampling Locations
Soil Vapor Intrusion Assessment Work Plan
Crownhill Elementary School
Bremerton, Washington

DATE: July 2010	PROJECT NO. 100067
DESIGNED BY: DH	
DRAWN BY: SCC	FIGURE NO. 2
REVISED BY: -	

Q:\Crown Hill Elementary\100067 Crown Hill Elementary School\2010-06 Vapor Sampling\100067-02.dwg 11x17 Landscape
Jul 20, 2010 10:16am scudd

APPENDIX G

Interim Action Photos and Soil Disposal Certificates

Spring 2012 Interim Action

Photograph 1 – Start of excavation on March 28, 2012.

Photograph 2 – Excavation in progress on March 30, 2012. Note the two piles of quarry spalls to the left (east) of the excavation. These rocks were spread over the mud for better truck access to site. The barrels shown in this photo were removed with contaminated material.

Photograph 3 – Initial eastern side wall of excavation on April 2, 2012 showing landfill material. Note the post-hole digger and shovel beyond fence. These tools are adjacent to cs-21 step-out confirmation sample location.

Photograph 4 – This photo shows the over-night security of the site on April 2, 2012.

Photograph 5 – Loading of trucks in the morning of April 4, 2012.

Photograph 6 – Photo taken on April 4, 2012 showing the final extent of the eastern wall as well as the apparent extent of landfill material.

Photograph 7 – Photo taken on April 5, 2012 of the compaction of topsoil over geo-textile fabric. Sod was laid on top of this topsoil.

Photograph 8 –Spreading of pit run over geo-textile fabric on April 4, 2012. This material was compacted prior to the application of topsoil and hydroseed.

Photograph 9 – Finished laying and rolling sod on April 5, 2012.

Photograph 10 – Security (fence around entire excavation extent) of site on April 5, 2012. This picture was taken from atop the pile of topsoil. A few inches of topsoil was spread over the compacted pit run fill. Note the compactor under the excavator bucket.

Photograph 11 – This photo taken on April 10, 2012 showing applied topsoil and ¾" minus gravel that has been spread and compacted on road/driveway running through site. This gravel was laid directly on top of quarry spalls laid down for truck access.

Photograph 12 – Hydroseeding (blue-green) of the excavated area and on ground on either side of the newly installed road/driveway was completed on April 11, 2012.

CHEMICAL WASTE MANAGEMENT OF THE NW
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

CROWN HILL ELEMENTARY SCHOOL
WA0000630491
1537 BERTHA AVE
BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475749JJK
CWM TRACKING ID:	418171-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	03/29/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	04/10/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 04/24/12

CHEMICAL WASTE MANAGEMENT OF THE NW
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

CROWN HILL ELEMENTARY SCHOOL
WA0000630491
1537 BERTHA AVE
BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475745JJK
CWM TRACKING ID:	418291-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	04/09/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	04/10/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 05/17/12

CHEMICAL WASTE MANAGEMENT OF THE NW
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

CROWN HILL ELEMENTARY SCHOOL
WA0000630491
1537 BERTHA AVE
BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475746JJK
CWM TRACKING ID:	418290-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	04/09/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	04/10/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 05/17/12

CHEMICAL WASTE MANAGEMENT OF THE NW
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

CROWN HILL ELEMENTARY SCHOOL
WA0000630491
1537 BERTHA AVE
BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475748JJK
CWM TRACKING ID:	418172-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	03/29/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	04/10/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 04/24/12

WASTE MANAGEMENT

CHEMICAL WASTE MANAGEMENT OF THE NW
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

CROWN HILL ELEMENTARY SCHOOL
WA0000630491
1537 BERTHA AVE
BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475747JJK
CWM TRACKING ID:	418183-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	03/30/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 14
DISPOSAL DATE:	04/10/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 04/24/12

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(541) 454-3279 Fax

CROWN HILL ELEMENTARY SCHOOL
WA0000630491
1537 BERTHA AVE
BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475743JJK
CWM TRACKING ID:	418254-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	04/04/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 13
DISPOSAL DATE:	04/09/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 04/24/12

WASTE MANAGEMENT

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1537 BERTHA AVE
BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475741JJK
CWM TRACKING ID:	418256-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	04/04/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 13
DISPOSAL DATE:	04/09/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 04/24/12

WASTE MANAGEMENT

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BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475744JJK
CWM TRACKING ID:	418257-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	04/04/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 13
DISPOSAL DATE:	04/09/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 04/24/12

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BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475754JJK
CWM TRACKING ID:	418278-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	04/06/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 13
DISPOSAL DATE:	04/09/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 04/24/12

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BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475752JJK
CWM TRACKING ID:	418277-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	04/06/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 13
DISPOSAL DATE:	04/09/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 04/24/12

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1537 BERTHA AVE
BREMERTON WA 98312-2652

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material:

GENERATOR:	CROWN HILL ELEMENTARY SCHOOL
MANIFEST #:	009475753JJK
CWM TRACKING ID:	418279-01
PROFILE #:	OR302837
LINE ITEM:	9b.1
QUANTITY:	1 DT
RECEIVED DATE:	04/06/12
DISPOSAL PROCESS(ES):	STABILIZATION FOLLOWED BY LANDFILL
FINAL DISPOSAL LOCATION:	LANDFILL 13
DISPOSAL DATE:	04/10/12

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 06/04/12

Summer 20 13 Interim Action

Photograph 1 – Grading of additional soil cover in the North Landfill Area on August 8, 2013. Note underlying geotextile fabric and pre-existing catch basin in foreground.

Photograph 2 – Installation of new storm drain line from northeast corner of portable classroom (North Landfill Area) to pre-existing catch basin on August 8, 2013.

Photograph 3 – Finished (hydroseeded) construction of additional cover area in South Landfill Area on August 12, 2013.

Photograph 4 – Additional cover area in South Landfill Area on August 28, 2013, showing extent of grass growth less than 3 weeks after hydroseeding.

APPENDIX H

Terrestrial Ecological Evaluation Supporting Materials

Figure H-1

R:\Jobs\120204-01_Aspect_Crownhill_ElemMaps\Crownhill_Working_DPH.mxd dhennessy 6/12/2012 8:15:46 AM

Figure 1
Soil Sample Locations and 500 ft Buffer
Crownhill Elementray School TEE

ANCHOR QEA

Feet
0 110 220 330 440

Terrestrial Ecological Evaluation Process - Primary Exclusions

Documentation Form

Exclusion #	Exclusion Detail	Yes or No?	Are Institutional Controls Required If The Exclusion Applies?
1	Will soil contamination be located at least 6 feet beneath the ground surface and less than 15 feet?	(Yes) / No	Yes
	Will soil contamination located at least 15 feet beneath the ground surface?	(Yes) / No	No
	Will soil contamination located below the conditional point of compliance?	(Yes) / No	Yes
2	Will soil contamination be covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed?	(Yes) / No	Yes
3	Is there less than 1.5 acres of contiguous undeveloped land on the site, or within 500 feet of any area of the site affected by hazardous substances **other than** those listed in the table of Hazardous Substances of Concern? And Is there less than 0.25 acres of contiguous undeveloped land on or within 500 feet of any area of the site affected by hazardous substances **listed in** the table of Hazardous Substances of Concern?	Yes / (No) Yes / (No)	Other factors determine
4	Are concentrations of hazardous substances in the soil less than or equal to natural background concentrations of those substances at the point of compliance	Yes / (No)	No

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493]

[TEE Home]

Attachment H-1

Terrestrial Ecological Evaluation Process- Simplified or Site-Specific Evaluation?

Documentation Form

	Terrestrial Concern	Response (Circle One)
*1	Is the site is located on or directly adjacent to an area where management or land use plans will maintain or restore native or semi-native vegetation?	Yes / (No)
*2a	Is the site used by a threatened or endangered species?	Yes / (No)
*2b	Is the site used by a wildlife species classified by the state department of fish and wildlife as a "priority species" or "species of concern" under Title 77 RCW?	Yes / (No)
*2c	Is the site used by a plant species classified by the Washington state department of Natural Resources natural heritage program as "endangered," "threatened," or "sensitive" under Title 79 RCW.	Yes / (No)
*3	Is the site (area where the contamination is located) located on a property that contains at least ten acres of native vegetation within 500 feet of the area where the contamination is located?	Yes / (No)
4	Has the department determined that the site may present a risk to significant wildlife populations?	Yes / (No)

*1 This includes for example, green-belts, protected wetlands, forestlands, locally designated environmentally sensitive areas, open space areas managed for wildlife, and some parks or outdoor recreation areas. This does not include park areas used for intensive sport activities such as baseball or football.

*2a What are the threatened or endangered species in Washington state?

*2b Which plant species are classified as threatened, endangered, or sensitive? Where can I find out more information about this topic?

*2c For plants, "used" means that a plant species grows at the site or has been found growing at the site. For animals, "used" means that individuals of a species have been observed to live, feed or breed at the site.

*3 For this analysis, do not include native vegetation beyond the property boundary.

The following sources shall be used in making this determination: Natural Vegetation of Oregon and Washington, J.F. Franklin and C.T. Dyrness, Oregon State University Press, 1988, and L.C. Hitchcock, C.L. Hitchcock, J.W. Thompson and A. Cronquist, 1955-1969, Vascular Plants of the Pacific Northwest(5 volumes). Areas planted with native species for ornamental or landscaping purposes shall not be considered to be native vegetation. [WAC 173-340-7491(2)(c)(i)]

(Here's a link to the Seattle Public Library and the Washington State Library to borrow a copy of Natural Vegetation of Oregon and Washington, J.F. Franklin and C.T. Dyrness, Oregon State University Press, 1988, or you may purchase it through your favorite bookseller. Here's an additional link to a useful online Field Guide to Selected Rare Plants of Washington developed by the Washington State Department of Natural Resources' Natural Heritage Program (WNHP) and the Spokane District of the U.S.D.I. Bureau of Land Management (BLM) which contains fact sheets for 139 vascular plant species and one lichen species.

Here is an aid to calculating area and an aerial photo depicting a site, its 500 foot boundary and several labeled circles identifying various areas for reference in judging the area of native vegetation within the 500 foot radius.

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493] [Index of Tables]

[TEE Home]

Table 749-1

Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure

Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre).	
1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.	12
Area (acres) / Points 0.25 or less / 4 0.5 / 5 1.0 / 6 1.5 / 7 2.0 / 8 2.5 / 9 3.0 / 10 3.5 / 11 4.0 or more / 12	
2) Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1	1
3)[a] Enter a score in the box to the right for the habitat quality of the site, using the following rating system[b]. High=1, Intermediate=2, Low=3	3
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.[c]	2
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	1
6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.	7

Notes for Table 749-1

[a] It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score of (1) for questions 3 and 4.

[b] **Habitat rating system.** Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

> **Low:** Early successional vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.

High: Area is ecologically significant for one or more of the following reasons: Late-successional native plant communities present; relatively high species diversity; used by an uncommon or rare species; priority habitat (as defined by the Washington Department of fish and Wildlife); part of a larger area of habitat where size or fragmentation may be important for the retention of some species.

Intermediate: Area does not rate as either high or low.

[c] Indicate "yes" if the area attracts wildlife or is likely to do so. Examples: Birds frequently visit the area to feed; evidence of high use b mammals (tracks, scat, etc.); habitat "island" in an industrial area; unusual features of an area that make it important for feeding animals; heavy use during seasonal migrations.

[Area Calculation Aid] [Aerial Photo with Area Designations] [TEE Table 749-1] [Index of Tables]

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493]

[TEE Home]

Table 749-2

Priority contaminants of ecological concern for sites that qualify for the simplified terrestrial ecological evaluation[a]

Soil Concentration (mg/kg)		
Priority Contaminant	Unrestricted Land Use[b]	Industrial or Commercial Site
METALS[c]		
Antimony	See Note [d]	See Note [d]
Arsenic III	20 mg/kg	20 mg/kg
Arsenic IV	95 mg/kg	260 mg/kg
Barium	1,250 mg/kg	1,320mg/kg
Beryllium	25 mg/kg	See Note [d]
Cadmium	25 mg/kg	36 mg/kg
Chromium (total)	42 mg/kg	135 mg/kg
Cobalt	See Note [d]	See Note [d]
Copper	100 mg/kg	550 mg/kg
Lead	220 mg/kg	220 mg/kg
Magnesium	See Note [d]	See Note [d]
Manganese	See Note [d]	23,500 mg/kg
Mercury, inorganic	9 mg/kg	9 mg/kg
Mercury, organic	0.7 mg/kg	0.7 mg/kg
Molybdenum	See Note [d]	71 mg/kg
Nickel	100 mg/kg	1,850 mg/kg
Selenium	0.8 mg/kg	0.8 mg/kg
Silver	See Note [d]	See Note [d]
Tin	275 mg/kg	See Note [d]
Vanadium	26 mg/kg	See Note [d]
Zinc	270 mg/kg	570 mg/kg
PESTICIDES		
Aldicarb/aldicarb sulfone (total)	See Note [d]	See Note [d]
Aldrin	0.17 mg/kg	0.17 mg/kg
Benzene hexachloride (including lindane)	10 mg/kg	10 mg/kg

Carbofuran	See Note [d]	See Note [d]
Chlordane	1 mg/kg	7 mg/kg
Chlorpyrifos/chlorpyrifos-methal (total)	See Note [d]	See Note [d]
DDT/DDD/DDE	1 mg/kg	1 mg/kg
Dieldrin	0.17 mg/kg	0.17 mg/kg
Endosulfan	See Note [d]	See Note [d]
Endrin	0.4 mg/kg	0.4 mg/kg
Heptachlor/heptachlor epoxide (total)	0.6 mg/kg	0.6 mg/kg
Hexachlorobenzene	31 mg/kg	31 mg/kg
Parathion/methyl parathion (total)	See Note [d]	See Note [d]
Pentachlorophenol	11 mg/kg	11 mg/kg
Toxaphene	See Note [d]	See Note [d]
OTHER CHLORINATED ORGANICS		
Chlorinated dibenzofurans (total)	3E-06 mg/kg	3E-06 mg/kg
Dioxins	5E-06 mg/kg	5E-06 mg/kg
Hexchlorophene	See Note [d]	See Note [d]
PCB mixtures (total)	2 mg/kg	2 mg/kg
Pentachlorobenzene	168 mg/kg	See Note [d]
OTHER NONCHLORINATED ORGANICS		
Acenaphthene	See Note [d]	See Note [d]
Benzo(a)pyrene	30 mg/kg	300 mg/kg
Bis (2-ethylhexyl) phthalate	See Note [d]	See Note [d]
Di-n-butyl phthalate	200 mg/kg	See Note [d]
PETROLEUM		
Gasoline Range Organics	200 mg/kg	12,000 mg/kg except that the concentration shall not exceed residual saturation at the soil surface.
Diesel Range Organics Common examples of diesel range organics include: Diesel #2, Fuel Oil #2, and light oil including some bunker oils. Refer to Table 830-1	460 mg/kg	15,000 mg/kg except that the concentration shall not exceed residual saturation at the soil surface.

Table 749-2 Notes

[a] Caution on misusing these chemical concentration numbers. These values have been developed for use at sites where a site-specific terrestrial ecological evaluation is not required. They are not intended to be protective of terrestrial ecological receptors at every site. Exceedances of the values in this table do not necessarily trigger requirements for cleanup action under this chapter. The table is not intended for purposes such as evaluating sludges or wastes.

This list does not imply that sampling must be conducted for each of these chemicals at every site. Sampling should be conducted for those chemicals that might be present based on available information, such as current and past uses of chemicals at the site.

[b] Applies to any site that does not meet the definition of industrial or commercial.

[c] For arsenic, use the valence state most likely to be appropriate for site conditions, unless laboratory information is available. Where soil conditions alternate between saturated, anaerobic and unsaturated, aerobic states, resulting in the alternating presence of arsenic III and arsenic V, the arsenic III concentrations shall apply.

[d] Safe concentration has not yet been established.

[Area Calculation Aid] [Aerial Photo with Area Designations] [TEE Table 749-1] [TEE Table 749-2] [TEE Table 749-3] [TEE Table 749-4] [TEE Table 749-5] [TEE Table 830-1]

[Exclusions Main] [TEE Definitions] [Simplified or Site-Specific?] [Simplified Ecological Evaluation] [Site-Specific Ecological Evaluation] [WAC 173-340-7493]

[TEE Home]

APPENDIX I

Laboratory Reports

(included on CD)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 6, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on March 31, 2011 from the Crownhill 100094, F&BI 103426 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0406R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 31, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crownhill 100094, F&BI 103426 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
103426-01	NG-E6-46.2-46.5
103426-02	NG-E6-50-60
103426-03	NG-E6-65-66.5
103426-04	NG-E6-70-71.5
103426-05	NG-E6-75-76.5
103426-06	NG-E6-80-81.5
103426-07	NG-E6-85-86.5
103426-08	NG-E6-90-91
103426-09	NG-E6-95-96

DRO/RRO by Method NWTPH-Dx, Extraction Method 3510C/3550B

Soil sample concentrations were reported on a dry weight basis. The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

Date of Report: 04/06/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103426
Date Extracted: 04/04/11
Date Analyzed: 04/04/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-E6-46.2-46.5 103426-01	5,500	5,000	106
NG-E6-70-71.5 103426-04	3,800	3,600	105
NG-E6-95-96 103426-09	4,000	3,600	104
Method Blank 01-588 MB	<50	<250	98

Date of Report: 04/06/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103426

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-121 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	120	100	100	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	74-139

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

103426

SAMPLE CHAIN OF CUSTODY ME 03/31/11

BI2

Page # _____ of _____

Send Report To Dana Cannon

Company Aspect

Address _____

City, State, ZIP Seattle

Phone # _____ Fax # _____

SAMPLERS *(signature)*

PROJECT NAME/NO. Crawhill 100094

PO#

REMARKS HOLD for Instructions from Dana

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH _____
Rush charges authorized by _____

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	NWTPH-Dx						Notes
NG-E6-46.2-46.5	01	3/25/11	1306	Soil	1	X						★						★-DoDC
NG-E6-50-60	02		1345		1	X												3/31/11 MC
NG-E6-65-66.5	03		13:57		1	X												
NG-E6-70-71.5	04		1410		1	X			HOLD			★						
NG-E6-75-76.5	05		1415		1	X												
NG-E6-80-81.5	06		1418		1	X												
NG-E6-85-86	07		1435		1	X												
NG-E6-90-91	08		1440		1	X												
NG-E6-95-96	09	↓	1442	↓	1	X						★						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3-31-11	0945
Received by:		Michael Erdahl	FGBrs	↓	↓
Relinquished by:			Samples received at 2 °C		
Received by:					

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

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Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 8, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on March 30, 2011 from the Crownhill, F&BI 103408 project. There are 115 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0408R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 30, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crownhill, F&BI 103408 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
103408-01	NG-M1-0-3
103408-02	NG-M1-6-9
103408-03	NG-M1-12-15
103408-04	SG-M1-0-3
103408-05	SG-M1-6-9
103408-06	SG-M1-12-15
103408-07	SG-M2-0-3
103408-08	SG-M2-6-9
103408-09	SG-M2-12-15
103408-10	SG-M3-0-3
103408-11	SG-M3-6-9
103408-12	SG-M3-12-15
103408-13	SG-M4-0-3
103408-14	SG-M4-6-9
103408-15	SG-M4-12-15
103408-16	SG-M5-0-3
103408-17	SG-M5-6-9
103408-18	SG-M5-12-15
103408-19	SG-M6-0-3
103408-20	SG-M6-6-9
103408-21	SG-M6-12-15
103408-22	SG-M7-0-3
103408-23	SG-M7-6-9
103408-24	SG-M7-12-15
103408-25	SG-M8-0-3
103408-26	SG-M8-6-9
103408-27	SG-M8-12-15
103408-28	SG-M9-0-3
103408-29	SG-M9-6-9
103408-30	SG-M9-12-15
103408-31	SG-M10-0-3
103408-32	SG-M10-6-9
103408-33	SG-M10-12-15
103408-34	SG-E4-0-3
103408-35	SG-E4-6-9
103408-36	SG-E4-12-15
103408-37	SG-E5-0-3
103408-38	SG-E5-6-9

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103408-39	SG-E5-12-15
103408-40	SG-E6-0-3
103408-41	SG-E6-6-9
103408-42	SG-E6-12-15
103408-43	SG-F6-0-3
103408-44	SG-F6-6-9
103408-45	SG-F6-12-15
103408-46	NG-M4-0-3
103408-47	NG-M4-6-9
103408-48	NG-M4-12-15
103408-49	NG-M3-0-3
103408-50	NG-M3-6-9
103408-51	NG-M3-12-15
103408-52	NG-J6-0-3
103408-53	NG-J6-6-9
103408-54	NG-J6-12-15
103408-55	NG-J5-0-3
103408-56	NG-J5-6-9
103408-57	NG-J5-12-15
103408-58	NG-J4-0-3
103408-59	NG-J4-6-9
103408-60	NG-J4-12-15
103408-61	NG-K5-0-3
103408-62	NG-K5-6-9
103408-63	NG-K5-12-15
103408-64	NG-K4-0-3
103408-65	NG-K4-6-9
103408-66	NG-K4-12-15
103408-67	NG-K2-0-3
103408-68	NG-K2-6-9
103408-69	NG-K2-12-15
103408-70	NG-K1-0-3
103408-71	NG-K1-6-9
103408-72	NG-K1-12-15
103408-73	SG-E1-0-3
103408-74	SG-E1-6-9
103408-75	SG-E1-12-15
103408-76	SG-E7-0-3
103408-77	SG-E7-6-9
103408-78	SG-E7-12-15
103408-79	SG-E2-0-3

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103408-80	SG-E2-6-9
103408-81	SG-E2-12-15
103408-82	SG-E3-0-3
103408-83	SG-E3-6-9
103408-84	SG-E3-12-15
103408-85	SG-F2-0-3
103408-86	SG-F2-6-9
103408-87	SG-F2-12-15

DRO/RRO by Method NWTPH-Dx, Extraction Method 3550B

Soil sample concentrations were reported on a dry weight basis. The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

Metals by Method 200.8, Extraction Method 200.8

Soil sample concentrations were reported on a dry weight basis. All quality control requirements were acceptable.

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408
Date Extracted: 04/01/11
Date Analyzed: 04/02/11, 04/03/11, 04/04/11, 04/05/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-M1-0-3 103408-01	<50	<250	98
NG-M1-6-9 103408-02	<50	<250	96
NG-M1-12-15 103408-03	<50	<250	96
SG-M1-0-3 103408-04	<50	<250	95
SG-M1-6-9 103408-05	<50	<250	98
SG-M1-12-15 103408-06	<50	<250	98
SG-M2-0-3 103408-07	<50	<250	95
SG-M2-6-9 103408-08	<50	<250	95
SG-M2-12-15 103408-09	<50	<250	97
SG-M3-0-3 103408-10	<50	<250	96
SG-M3-6-9 103408-11	<50	<250	96

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408
Date Extracted: 04/01/11
Date Analyzed: 04/02/11, 04/03/11, 04/04/11, 04/05/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-M3-12-15 103408-12	<50	<250	96
SG-M4-0-3 103408-13	<50	<250	95
SG-M4-6-9 103408-14	<50	<250	94
SG-M4-12-15 103408-15	<50	<250	95
SG-M5-0-3 103408-16	<50	<250	96
SG-M5-6-9 103408-17	<50	<250	96
SG-M5-12-15 103408-18	<50	<250	94
SG-M6-0-3 103408-19	<50	<250	95
SG-M6-6-9 103408-20	<50	<250	92
SG-M6-12-15 103408-21	<50	<250	114
SG-M7-0-3 103408-22	<50	<250	117

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408
Date Extracted: 04/01/11
Date Analyzed: 04/02/11, 04/03/11, 04/04/11, 04/05/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-M7-6-9 103408-23	<50	<250	114
SG-M7-12-15 103408-24	<50	<250	110
SG-M8-0-3 103408-25	<50	<250	108
SG-M8-6-9 103408-26	<50	<250	111
SG-M8-12-15 103408-27	<50	<250	107
SG-M9-0-3 103408-28	<50	<250	113
SG-M9-6-9 103408-29	<50	<250	115
SG-M9-12-15 103408-30	<50	<250	110
SG-M10-0-3 103408-31	<50	<250	109
SG-M10-6-9 103408-32	<50	<250	112
SG-M10-12-15 103408-33	<50	<250	118

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408
Date Extracted: 04/01/11
Date Analyzed: 04/02/11, 04/03/11, 04/04/11, 04/05/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-E4-0-3 103408-34	<50	330	110
SG-E4-6-9 103408-35	<50	<250	112
SG-E4-12-15 103408-36	<50	<250	115
SG-E5-0-3 103408-37	<50	<250	115
SG-E5-6-9 103408-38	<50	<250	115
SG-E5-12-15 103408-39	<50	<250	111
SG-E6-0-3 103408-40	<50	<250	111
SG-E6-6-9 103408-41	<50	<250	98
SG-E6-12-15 103408-42	<50	<250	98
SG-F6-0-3 103408-43	110 x	470	104
SG-F6-6-9 103408-44	<50	<250	96

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408
Date Extracted: 04/01/11
Date Analyzed: 04/02/11, 04/03/11, 04/04/11, 04/05/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-F6-12-15 103408-45	260 x	830	106
NG-M4-0-3 103408-46	<50	<250	98
NG-M4-6-9 103408-47	<50	<250	99
NG-M4-12-15 103408-48	<50	<250	99
NG-M3-0-3 103408-49	<50	<250	98
NG-M3-6-9 103408-50	<50	<250	98
NG-M3-12-15 103408-51	<50	<250	99
NG-J6-0-3 103408-52	<50	<250	99
NG-J6-6-9 103408-53	<50	<250	97
NG-J6-12-15 103408-54	<50	<250	97
NG-J5-0-3 103408-55	<50	<250	95

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408
Date Extracted: 04/01/11
Date Analyzed: 04/02/11, 04/03/11, 04/04/11, 04/05/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-J5-6-9 103408-56	<50	<250	97
NG-J5-12-15 103408-57	<50	<250	97
NG-J4-0-3 103408-58	<50	<250	93
NG-J4-6-9 103408-59	<50	<250	95
NG-J4-12-15 103408-60	<50	<250	98
NG-K5-0-3 103408-61	<50	<250	97
NG-K5-6-9 103408-62	<50	960	96
NG-K5-12-15 103408-63	<50	430	93
NG-K4-0-3 103408-64	<50	<250	98
NG-K4-6-9 103408-65	<50	400	97
NG-K4-12-15 103408-66	<50	<250	97

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408
Date Extracted: 04/01/11
Date Analyzed: 04/02/11, 04/03/11, 04/04/11, 04/05/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-K2-0-3 103408-67	<50	<250	92
NG-K2-6-9 103408-68	<50	<250	98
NG-K2-12-15 103408-69	<50	<250	98
NG-K1-0-3 103408-70	<50	<250	98
NG-K1-6-9 103408-71	<50	<250	95
NG-K1-12-15 103408-72	<50	<250	97
SG-E1-0-3 103408-73	<50	<250	96
SG-E1-6-9 103408-74	<50	<250	95
SG-E1-12-15 103408-75	<50	<250	96
SG-E7-0-3 103408-76	<50	<250	95
SG-E7-6-9 103408-77	<50	<250	118

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408
Date Extracted: 04/01/11
Date Analyzed: 04/02/11, 04/03/11, 04/04/11, 04/05/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-E7-12-15 103408-78	<50	<250	116
SG-E2-0-3 103408-79	<50	<250	122
SG-E2-6-9 103408-80	<50	<250	127
SG-E2-12-15 103408-81	<50	<250	125
SG-E3-0-3 103408-82	<50	<250	122
SG-E3-6-9 103408-83	<50	<250	123
SG-E3-12-15 103408-84	<50	<250	127
SG-F2-0-3 103408-85	<50	<250	124
SG-F2-6-9 103408-86	<50	<250	123

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408
Date Extracted: 04/01/11
Date Analyzed: 04/02/11, 04/03/11, 04/04/11, 04/05/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-F2-12-15 103408-87	<50	<250	120
Method Blank 01-564 MB	<50	<250	100
Method Blank 01-565 MB	<50	<250	117
Method Blank 01-566 MB	<50	<250	94
Method Blank 01-567 MB	<50	<250	93
Method Blank 01-557 MB	<50	<250	91

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M1-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-01
Date Analyzed:	04/05/11	Data File:	103408-01.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.65
Lead	5.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M1-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-02
Date Analyzed:	04/05/11	Data File:	103408-02.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.68
Lead	4.99

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M1-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-03
Date Analyzed:	04/05/11	Data File:	103408-03.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.41
Lead	2.56

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M1-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-04
Date Analyzed:	04/05/11	Data File:	103408-04.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.18
Lead	1.61

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M1-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-05
Date Analyzed:	04/05/11	Data File:	103408-05.070
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.92

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M1-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-06
Date Analyzed:	04/05/11	Data File:	103408-06.072
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.20

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M2-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-07
Date Analyzed:	04/05/11	Data File:	103408-07.073
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.52
Lead	1.79

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M2-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-08
Date Analyzed:	04/05/11	Data File:	103408-08.074
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.44
Lead	1.80

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M2-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-09
Date Analyzed:	04/05/11	Data File:	103408-09.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	1.29

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M3-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-10
Date Analyzed:	04/05/11	Data File:	103408-10.076
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.02
Lead	1.48

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M3-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-11
Date Analyzed:	04/05/11	Data File:	103408-11.077
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.36
Lead	1.67

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M3-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-12
Date Analyzed:	04/05/11	Data File:	103408-12.078
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.46
Lead	1.90

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M4-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-13
Date Analyzed:	04/05/11	Data File:	103408-13.079
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.34
Lead	5.40

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M4-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-14
Date Analyzed:	04/05/11	Data File:	103408-14.080
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.05
Lead	2.86

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M4-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-15
Date Analyzed:	04/05/11	Data File:	103408-15.081
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.16
Lead	6.11

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M5-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-16
Date Analyzed:	04/05/11	Data File:	103408-16.083
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.12
Lead	26.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M5-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-17
Date Analyzed:	04/05/11	Data File:	103408-17.084
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.27
Lead	2.22

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M5-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-18
Date Analyzed:	04/05/11	Data File:	103408-18.085
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.18
Lead	1.67

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M6-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-19
Date Analyzed:	04/05/11	Data File:	103408-19.086
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.21
Lead	5.53

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M6-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-20
Date Analyzed:	04/05/11	Data File:	103408-20.105
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.95
Lead	3.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M6-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-21
Date Analyzed:	04/05/11	Data File:	103408-21.106
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M7-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-22
Date Analyzed:	04/05/11	Data File:	103408-22.107
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	6.75

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M7-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-23
Date Analyzed:	04/05/11	Data File:	103408-23.108
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.17
Lead	1.78

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M7-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-24
Date Analyzed:	04/05/11	Data File:	103408-24.109
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.66

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M8-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-25
Date Analyzed:	04/05/11	Data File:	103408-25.110
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.34
Lead	5.38

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M8-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-26
Date Analyzed:	04/05/11	Data File:	103408-26.111
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.96
Lead	5.27

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M8-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-27
Date Analyzed:	04/05/11	Data File:	103408-27.112
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.01
Lead	5.03

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M9-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-28
Date Analyzed:	04/05/11	Data File:	103408-28.113
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.91
Lead	14.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M9-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-29
Date Analyzed:	04/06/11	Data File:	103408-29.009
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.57
Lead	1.90

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M9-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-30
Date Analyzed:	04/05/11	Data File:	103408-30.116
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.94
Lead	4.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M10-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-31
Date Analyzed:	04/05/11	Data File:	103408-31.117
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.68
Lead	5.63

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M10-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-32
Date Analyzed:	04/05/11	Data File:	103408-32.118
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-M10-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-33
Date Analyzed:	04/05/11	Data File:	103408-33.119
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.17
Lead	1.41

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E4-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-34
Date Analyzed:	04/05/11	Data File:	103408-34.120
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.40
Lead	35.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E4-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-35
Date Analyzed:	04/05/11	Data File:	103408-35.121
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.22
Lead	1.91

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E4-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-36
Date Analyzed:	04/05/11	Data File:	103408-36.122
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.59

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E5-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-37
Date Analyzed:	04/05/11	Data File:	103408-37.123
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.30
Lead	67.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E5-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-38
Date Analyzed:	04/05/11	Data File:	103408-38.124
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.55
Lead	2.89

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E5-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-39
Date Analyzed:	04/05/11	Data File:	103408-39.131
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.88
Lead	2.34

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E6-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-40
Date Analyzed:	04/05/11	Data File:	103408-40.132
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.12
Lead	15.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E6-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-41
Date Analyzed:	04/05/11	Data File:	103408-41.133
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.12
Lead	4.23

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E6-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-42
Date Analyzed:	04/05/11	Data File:	103408-42.134
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	1.65

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F6-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-43
Date Analyzed:	04/05/11	Data File:	103408-43.135
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.35
Lead	51.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F6-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-44
Date Analyzed:	04/05/11	Data File:	103408-44.137
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.52
Lead	2.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F6-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-45
Date Analyzed:	04/05/11	Data File:	103408-45.138
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.42
Lead	1,090

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M4-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-46
Date Analyzed:	04/05/11	Data File:	103408-46.139
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.68
Lead	666

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M4-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-47
Date Analyzed:	04/05/11	Data File:	103408-47.140
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.63
Lead	6.86

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M4-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-48
Date Analyzed:	04/05/11	Data File:	103408-48.141
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.20
Lead	2.13

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M3-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-49
Date Analyzed:	04/05/11	Data File:	103408-49.142
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.28
Lead	71.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M3-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-50
Date Analyzed:	04/05/11	Data File:	103408-50.143
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.93
Lead	3.97

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M3-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-51
Date Analyzed:	04/05/11	Data File:	103408-51.144
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.20
Lead	2.81

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-J6-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-52
Date Analyzed:	04/05/11	Data File:	103408-52.145
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	80	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.80
Lead	26.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-J6-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-53
Date Analyzed:	04/05/11	Data File:	103408-53.146
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.89
Lead	8.42

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-J6-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-54
Date Analyzed:	04/05/11	Data File:	103408-54.148
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.70
Lead	3.42

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-J5-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-55
Date Analyzed:	04/05/11	Data File:	103408-55.149
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.24
Lead	27.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-J5-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-56
Date Analyzed:	04/05/11	Data File:	103408-56.150
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.70
Lead	2.97

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-J5-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-57
Date Analyzed:	04/05/11	Data File:	103408-57.151
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.13
Lead	1.43

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-J4-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-58
Date Analyzed:	04/05/11	Data File:	103408-58.158
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	41.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-J4-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-59
Date Analyzed:	04/05/11	Data File:	103408-59.159
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.97
Lead	6.83

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-J4-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-60
Date Analyzed:	04/05/11	Data File:	103408-60.154
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.05
Lead	2.40

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K5-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-61
Date Analyzed:	04/05/11	Data File:	103408-61.161
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.99
Lead	37.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K5-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-62
Date Analyzed:	04/05/11	Data File:	103408-62.162
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	16.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K5-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-63
Date Analyzed:	04/05/11	Data File:	103408-63.163
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.38
Lead	75.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K4-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-64
Date Analyzed:	04/05/11	Data File:	103408-64.164
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.21
Lead	41.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K4-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-65
Date Analyzed:	04/05/11	Data File:	103408-65.165
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	15.3
Lead	5,490

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K4-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-66
Date Analyzed:	04/05/11	Data File:	103408-66.166
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	49.6
Lead	12,200

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K2-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-67
Date Analyzed:	04/05/11	Data File:	103408-67.167
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.51
Lead	30.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K2-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-68
Date Analyzed:	04/05/11	Data File:	103408-68.169
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.04
Lead	5.00

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K2-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-69
Date Analyzed:	04/05/11	Data File:	103408-69.170
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K1-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-70
Date Analyzed:	04/05/11	Data File:	103408-70.171
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.10
Lead	28.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K1-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-71
Date Analyzed:	04/05/11	Data File:	103408-71.172
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.32
Lead	1.58

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K1-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-72
Date Analyzed:	04/05/11	Data File:	103408-72.173
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.29

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E1-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	103408-73
Date Analyzed:	04/05/11	Data File:	103408-73 .063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.69
Lead	27.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E1-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-74
Date Analyzed:	04/05/11	Data File:	103408-74.096
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.59

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E1-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-75
Date Analyzed:	04/05/11	Data File:	103408-75.128
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.47
Lead	1.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E7-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-76
Date Analyzed:	04/05/11	Data File:	103408-76.174
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.62
Lead	14.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E7-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-77
Date Analyzed:	04/05/11	Data File:	103408-77.175
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.69

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E7-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-78
Date Analyzed:	04/05/11	Data File:	103408-78.176
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.35
Lead	1.70

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E2-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-79
Date Analyzed:	04/05/11	Data File:	103408-79.177
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.74
Lead	5.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E2-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-80
Date Analyzed:	04/06/11	Data File:	103408-80.011
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	1.59

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E2-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-81
Date Analyzed:	04/06/11	Data File:	103408-81.028
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.08
Lead	1.46

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E3-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-82
Date Analyzed:	04/06/11	Data File:	103408-82.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	2.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E3-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-83
Date Analyzed:	04/06/11	Data File:	103408-83.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.20
Lead	1.46

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-E3-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-84
Date Analyzed:	04/06/11	Data File:	103408-84.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.18
Lead	1.76

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F2-0-3	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-85
Date Analyzed:	04/06/11	Data File:	103408-85.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.78

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F2-6-9	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-86
Date Analyzed:	04/06/11	Data File:	103408-86.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.82

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F2-12-15	Client:	Aspect Consulting
Date Received:	03/30/11	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	103408-87
Date Analyzed:	04/06/11	Data File:	103408-87.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.04
Lead	1.86

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	I1-236 mb
Date Analyzed:	04/05/11	Data File:	I1-236 mb.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill, F&BI 103408
Date Extracted:	04/04/11	Lab ID:	I1-237 mb
Date Analyzed:	04/05/11	Data File:	I1-237 mb.094
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	80	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	I1-238 mb
Date Analyzed:	04/05/11	Data File:	I1-238 mb.126
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	I1-239 mb
Date Analyzed:	04/05/11	Data File:	I1-239 mb.152
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill, F&BI 103408
Date Extracted:	04/05/11	Lab ID:	I1-240 mb
Date Analyzed:	04/06/11	Data File:	I1-240 mb.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103408-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	100	101	73-135	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	74-139

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103408-24 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	117	116	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	115	79-144

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103408-42 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	90	88	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	90	58-147

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103408-73 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	87	90	64-133	3

Laboratory Code: 103408-74 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	89	87	64-133	2

Laboratory Code: 103408-75 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	88	87	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	88	58-147

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103384-84 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	88	90	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	87	58-147

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103408-73 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.69	97	98	44-151	1
Lead	mg/kg (ppm)	20	27.3	94 b	97 b	65-126	3 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	112	80-120
Lead	mg/kg (ppm)	20	110	81-120

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103408-74 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	101	102	44-151	1
Lead	mg/kg (ppm)	20	1.59	110	113	65-126	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	106	80-120
Lead	mg/kg (ppm)	20	112	81-120

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103408-75 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.47	100	107	44-151	7
Lead	mg/kg (ppm)	20	1.39	109	111	65-126	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	102	80-120
Lead	mg/kg (ppm)	20	118	81-120

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103408-60 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	2.05	97 b	97 b	44-151	0 b
Lead	mg/kg (ppm)	20	2.40	109	108	65-126	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	104	80-120
Lead	mg/kg (ppm)	20	108	81-120

Date of Report: 04/08/11
Date Received: 03/30/11
Project: Crownhill, F&BI 103408

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	101	105	44-151	4
Lead	mg/kg (ppm)	20	1.11	103	106	65-126	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	102	80-120
Lead	mg/kg (ppm)	20	105	81-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

103408

SAMPLE CHAIN OF CUSTODY ME 03/30/11

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Page # 1 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crown Hill

PO#

REMARKS

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☑ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
NG-M1-0-3	01	3/29/11	0835	Soil	1	X						X						
NG-M1-6-9	02		0840		1	X						X						
NG-M1-12-15	03		0845		1	X						X						
SG-M1-0-3	04		0855		1	X						X						
SG-M1-6-9	05	A B	0900		2	X						X						
SG-M1-12-15	06	A B	0905		2	X						X						
SG-M2-0-3	07		0935		2	X						X						
SG-M2-6-9	08		0940		2	X						X						
SG-M2-12-15	09		0945		2	X						X						
SG-M3-0-3	10	A B	0955		2	X						X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Eric Markel	Aspect	3/30/11	1200
Received by:		HONG NGUYEN	FBI	3/30/11	14:00
Relinquished by:					
Received by:			Samples received at 3 °C		

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103408

SAMPLE CHAIN OF CUSTODY ME 03/30/11

Page # 2 of 9 BIY

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crown hill

PO#

REMARKS

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☑ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	TOTAL METALS (As, Pb)						Notes
SG-M3-6-9	11 A-B	3/29/11	1000	Soil	2	X						X						
SG-M3-12-15	12 A-B	"	1005	"	2	X						X						
SG-M4-0-3	13		1010		1	X						X						
SG-M4-6-9	14		1015		1	X						X						
SG-M4-12-15	15 A-B		1020		2	X						X						
SG-M5-0-3	16		1035		1	X						X						
SG-M5-6-9	17		1040		1	X						X						
SG-M5-12-15	18 A-B		1045		2	X						X						
SG-M6-0-3	19		1050		1	X						X						
SG-M6-6-9	20	"	1055	"	1	X						X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Markuson	Aspect	3/30/11	1200
Received by:	HONG NGUYEN	FBI	"	14:00
Relinquished by:		Samples received at 3 °C		
Received by:				

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103408

SAMPLE CHAIN OF CUSTODY ME 03/30/11

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Page # 3 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill

PO#

REMARKS

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☑ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

						ANALYSES REQUESTED												
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	TOTAL METALS (As, Pb)						Notes
SG-M6-12-15	21	3/29/11	1100	Soil	1	X						X						
SG-M7-0-3	22		1110		1	X						X						
SG-M7-6-9	23		1115		1	X						X						
SG-M7-12-15	24		1120		1	X						X						
SG-M8-0-3	25		1140		1	X						X						
SG-M8-6-9	26		1145		1	X						X						
SG-M8-12-15	27		1150		1	X						X						
SG-M9-0-3	28		1205		1	X						X						
SG-M9-6-9	29		1210		1	X						X						
SG-M9-12-15	30		1215		1	X						X						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Markuson	Aspect	3/30/11	1200
Received by:	HONG NGUYEN	AFAE	V	14:00
Relinquished by:		Samples received at 3 °C		
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

103408

SAMPLE CHAIN OF CUSTODY ME 03/30/11

Page # 4 of 9 BI4

Send Report To: Dana Cannon
Company: Aspect
Address:
City, State, ZIP: Seattle
Phone #: Fax #:

SAMPLERS (signature): [signature]
PROJECT NAME/NO.: Crownhill
PO#:
REMARKS:

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☑ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	TOTAL METALS (As, Pb)	Notes
						ANALYSES REQUESTED							
SG-M10-0-3	31	3/29/11	1215	soil	1	X						X	
SG-M10-6-9	32	↓	1220	↓	1	X						X	
SG-M10-12-15	33	↓	1225	↓	1	X						X	
SG-E4-0-3	34	↓	1350	↓	1	X						X	
SG-E4-6-9	35	↓	1355	↓	1	X						X	
SG-E4-12-15	36	↓	1400	↓	1	X						X	
SG-E5-0-3	37	↓	1415	↓	1	X						X	
SG-E5-6-9	38	↓	1420	↓	1	X						X	
SG-E5-12-15	39	↓	1425	↓	1	X						X	
SG-E6-0-3	40	↓	1440	↓	1	X						X	

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Eric Marhofer	Aspect	3/30/11	1200
Received by:	[signature]	HONG NGUYEN	FBI	↓	14:00
Relinquished by:					
Received by:			Samples received at 3 °C		

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103408

SAMPLE CHAIN OF CUSTODY

ME 03/30/11

BI4

Page # 5 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crown Hill

PO#

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
SG-E6-6-9	41	3/29/11	1445	soil	1	X						X						
SG-E6-12-15	42		1450		1	X						X						
SG-F6-0-3	43		1505		1	X						X						
SG-F6-6-9	44		1510		1	X						X						
SG-F6-12-15	45		1515		1	X						X						
NG-M4-0-3	46		0830		1	X						X						
NG-M4-6-9	47		0835		1	X						X						
NG-M4-12-15	48		0840		1	X						X						
NG-M3-0-3	49		0855		1	X						X						
NG-M3-6-9	50	↓	0900	↓	1	X						X						

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Markuson	Aspect	3/30/11	1200
Received by:	HONG NGUYEN	FBI	1	14:00
Relinquished by:				
Received by:		Samples received at 3 °C		

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103408

SAMPLE CHAIN OF CUSTODY

ME 03/30/11

BI4

Page # 6 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill

PO#

REMARKS

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total MTCA (As, Pb)						Notes
NG-M3-12-15	51	3/29/11	0905	soil	1	X						X						
NG-J6-0-3	52		0935		1	X						X						
NG-J6-6-9	53		0940		1	X						X						
NG-J6-12-15	54		0945		1	X						X						
NG-J5-0-3	55		1005		1	X						X						
NG-J5-6-9	56		1010		1	X						X						
NG-J5-12-15	57		1015		1	X						X						
NG-J4-0-3	58		1035		1	X						X						
NG-J4-6-9	59		1040		1	X						X						
NG-J4-12-15	60		1045		1	X						X						

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Eric Markhoff	Aspect	3/30/11	1200
Received by:		HOWARD ZEMYAN	FBI	1	14:00
Relinquished by:					
Received by:			Samples received at 3 °C		

103408

SAMPLE CHAIN OF CUSTODY

ME 03/30/11

BI4

Page # 1 of 9

Send Report To: Dana Cannon

Company: Aspect

Address:

City, State, ZIP: Seattle

Phone #: Fax #:

SAMPLERS (signature):

PROJECT NAME/NO.: Crown Ln 11

PO#:

REMARKS:

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals (43, PB)						Notes
NG-K5-0-3	61	3/29/11	1100	Soil	1	X						X						
NG-K5-6-9	62		1105		1	X						X						
NG-K5-12-15	63		1110		1	X						X						
NG-K4-0-3	64		1135		1	X						X						
NG-K4-6-9	65		1140		1	X						X						
NG-K4-12-15	66		1145		2	X						X						
NG-K2-0-3	67		1210		1	X						X						
NG-K2-6-9	68		1215		1	X						X						
NG-K2-12-15	69		1220		2	X						X						
NG-K1-0-3	70	↓	1235	↓	1	X						X						

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Markeley	Aspect	3/30/11	1700
Received by:	HONG NGUYEN	FB	V	14:00
Relinquished by:				
Received by:		Samples received at 7 °C		

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SAMPLE CHAIN OF CUSTODY

ME 03/30/11

BIY

Page # 8 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Cornwall

PO#

REMARKS

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☑ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	TOTAL METALS (As, Pb)						Notes
NG-K1-6-9	71	3/29/11	1240	Soil	1	X						X						
NG-K1-12-15	72		1245		1	X						X						
SG-E1-0-3	73AB		1340		2	X						X						MS/MSD
SG-E1-6-9	74AB		1345		2	X						X						MS/MSD
SG-E1-12-15	75AB		1350		2	X						X						MS/MSD
SG-E7-0-3	76		1355		1	X						X						~~MS/MSD~~ SM
SG-E7-6-9	77		1400		1	X						X						
SG-E7-12-15	78		1405		1	X						X						
SG-E2-0-3	79		1410		1	X						X						
SG-E2-6-9	80		~~1410~~ 1415		1	X						X						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Markuson	Aspect	3/30/11	1200
Received by:	HONG NGUYEN	FRS	3/30/11	14:00
Relinquished by:				
Received by:		Samples received at 3 °C		

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SAMPLE CHAIN OF CUSTODY ME 03/30/11

BI4

Page # 9 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crown Hill

PO#

REMARKS

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☑ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
SG-E2-12-15	81	3/29/11	1420	soil	1	X						X						
SG-E3-0-3	82		1430		1	X						X						
SG-E3-6-9	83		1435		1	X						X						
SG-E3-12-15	84		1440		1	X						X						
SG-F2-0-3	85		1510		1	X						X						
SG-F2-6-9	86		1515		1	X						X						
SG-F2-12-15	87		1520		1	X						X						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Aspect	3/30/11	1200
Received by:	HONG NGUYEN	FMI	"	14:00
Relinquished by:			Samples received at 3	°C
Received by:				

Friedman & Bruya, Inc.
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Seattle, WA 98119-2029
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 13, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on March 31, 2011 from the Crownhill 100094, F&BI 103427 project. There is 1 page included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0413R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 31, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crownhill 100094, F&BI 103427 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
103427-01	SG-J6-5
103427-02	SG-J6-20
103427-03	SG-J6-40
103427-04	NG-E6-5-6.5
103427-05	NG-E6-20-21.5
103427-06	NG-E6-40-41.5
103427-07	NG-A2-5-6.5
103427-08	NG-A2-20-21
103427-09	NG-A2-40-41.5
103427-10	NG-K3-5-6.5
103427-11	NG-K3-20-21.5
103427-12	NG-K3-40-41.5
103427-13	NG-F5-5-6.5
103427-14	NG-F5-20-21.5
103427-15	NG-F5-40-41.5

The samples were sent to Aquatic Research for total organic carbon analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**FBI007-94**	**PAGE 1**	
REPORT DATE:	**04/13/11**		
DATE SAMPLED:	**03/24-30/11**	**DATE RECEIVED:**	**04/01/11**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON SOIL SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 103427

CASE NARRATIVE

Fifteen soil samples were received by the laboratory in good condition. Analysis was performed according to the chain of custody received with the samples. No difficulties were encountered in the preparation or analysis of these samples. Sample data follows while QA/QC data is contained on the following page.

SAMPLE DATA

SAMPLE ID	TOC (%)
SG-J6-5	2.56
SG-J6-20	0.11
SG-J6-40	0.08
NG-E6-5-6.5	0.75
NG-E6-20-21.5	32.8
NG-E6-40-41.5	0.73
NG-A2-5-6.5	0.10
NG-A2-20-21	0.05
NG-A2-40-41.5	0.07
NG-K3-5-6.5	1.57
NG-K3-20-21.5	0.10
NG-K3-40-41.5	0.18
NG-F5-5-6.5	2.61
NG-F5-20-21.5	1.08
NG-F5-40-41.5	2.13

AQUATIC RESEARCH INCORPORATED

LABORATORY & CONSULTING SERVICES

3927 AURORA AVENUE NORTH, SEATTLE, WA 98103

PHONE: (206) 632-2715 FAX: (206) 632-2417

CASE FILE NUMBER:	**FBI007-94**	**PAGE 2**	
REPORT DATE:	**04/13/11**		
DATE SAMPLED:	**03/24-30/11**	**DATE RECEIVED:**	**04/01/11**

FINAL REPORT, LABORATORY ANALYSIS OF SELECTED PARAMETERS ON SOIL SAMPLES FROM FRIEDMAN & BRUYA, INC. / PROJECT NO. 103427

QA/QC DATA

QC PARAMETER	TOC (%)
METHOD	EPA 9060
DATE ANALYZED	04/13/11
DETECTION LIMIT	0.01
DUPLICATE	
SAMPLE ID	SG-J6-20
ORIGINAL	0.11
DUPLICATE	0.11
RPD	3.73%
SPIKE SAMPLE	
SAMPLE ID	
ORIGINAL	
SPIKED SAMPLE	
SPIKE ADDED	
% RECOVERY	NA
QC CHECK	
FOUND	3.53
TRUE	3.35
% RECOVERY	105.46%
BLANK	<0.01

RPD = RELATIVE PERCENT DIFFERENCE.
NA = NOT APPLICABLE OR NOT AVAILABLE.
NC = NOT CALCULABLE DUE TO ONE OR MORE VALUES BEING BELOW THE DETECTION LIMIT.
OR = RECOVERY NOT CALCULABLE DUE TO SPIKE SAMPLE OUT OF RANGE OR SPIKE TO LOW RELATIVE TOO SAMPLE CONCENTRATION.

SUBMITTED BY:

Steven Lazoff
Laboratory Director

FB1007-94

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To: Michael Erdahl
Company: Friedman and Bruya, Inc.
Address: 3012 16th Ave W
City, State, ZIP: Seattle, WA 98119
Phone #: (206) 285-8282 Fax #: (206) 283-5044

SUBCONTRACTER: Ag. Resach
PROJECT NAME/NO.: 103427
PO #: A-945
REMARKS: Please Email Results merdahl@friedmanandbruya.com

Page # 1 of 2

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC				Notes
SG-J6-5		3/24/11	1020	S	1							X				
SG-J6-20		↓	1047	↓	↓											
SG-J6-40		↓	1100									↓				
NG-E6-5-6.5		3/25/11	1200													
NG-E6-~~5-6.5~~ 20-21.5		↓	1245													
NG-E6-40-41.5		↓	1255													
NG-A2-5-6.5		3/28/11	1100													
NG-A2-20-21		↓	1105													
NG-A2-40-41.5		↓	1110													
NG-K3-5-6.5		3/29/11	0840													
NG-K3-20-21.5		↓	0847													
NG-K3-40-41.5		↓	0910													
NG-F5-5-6.5		3/30/11	1247	↓	↓							↓				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Michael Erdahl	Friedman & Bruya	4/1/11	09:30
Received by: [signature]	S. Nilsson	[illegible]	4/1/11	1100
Relinquished by:				
Received by:				

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Ag. Resach

PROJECT NAME/NO.	PO #
103427	A-945

REMARKS

Please Email Results
merdahl@friedmanandbruya.com

Page # 2 of 2

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC			Notes
NG-FS-20-21.5		3/30/11	1255	S	1							X			
NG-FS-40-41.5		↓	1316	↓	↓							↓			

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Michael Erdahl	Friedman & Bruya	4/1/11	09:30
Received by: [signature]	S Macson	ARL	4/1/11	1100
Relinquished by:				
Received by:				

103427

SAMPLE CHAIN OF CUSTODY

TOC ME 03-31-11 CI3

Page 1 of 2

Send Report To Dana Cannon

Company Aspect Consulting LLC

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS *(signature)*

PROJECT NAME/NO. Crowshill 100094

PO#

REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	TOC						Notes
~~MW-7 SG-J6-5~~	01	3-24-11	1020	S	1							X						~~(MW-7 (SG-J6)~~
~~MW-7 SG-J6-20~~	02	3-24-11	1097	S	1							X						~~(MW-7 (SG-J6)~~
~~MW-7 SG-J6-40~~	03	3-24-11	1100	S	1							X						~~(MW-7 (SG-J6)~~
NG-E6-5-6.5	04	3-25-11	1200	S	1							X						
NG-E6-20-21.5	05	3/25/11	1245	S	1							X						
NG-E6-40-41.5	06	3/25/11	1255	S	1	~~X~~	~~X~~	X				X						
NG-A2-5-6.5	07	3/28/11	1100	S	1							X						(MW-6)
NG-A2-20-21	08	3/28/11	1105	S	1							X						(MW-6)
NG-A2-40-41.5	09	3/28/11	1110	S	1							X						(MW-6)
~~MW-4-5-6.5~~		~~3/29/11~~	~~0810~~	~~S~~	~~1~~							~~X~~						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert Hansford	Aspect	3-31-11	0945
Received by:	Michael Erdahl	F&B	↓	↓
Relinquished by:		~~Samples received at~~ 2 °C		
Received by:				

Friedman & Bruya, Inc.
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103427

SAMPLE CHAIN OF CUSTODY

TOL ME 03-31-11 CI3

Page # 2 of 2

Send Report To Dana Campa

Company Aspect Consulting

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS *(signature)*

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	NC						Notes
NG-K3-5-6.5	10	3/29/11	0840	Soil	1							X						(MW-4)
NG-K3-20-21.5	11	3/29/11	0847	Soil	1							X						(MW-4)
NG-K3-40-41.5	12	3/29/11	0910	Soil	1							X						(MW-4)
NG-F5-5-6.5	13	3/30/11	1247	Soil	1							X						MW-5
NG-F5-20-21.5	14	3/30/11	1255	Soil	1							X						MW-5
NG-F5-40-41.5	15	3/30/11	1316	Soil	1							X						MW-5.

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R Hansen	Aspect	3-31-11	0945
Received by:		Michael Erdahl	F&B	↓	↓
Relinquished by:					
Received by:			Samples received at 2 °C		

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
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3012 16th Avenue West
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FAX: (206) 283-5044
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April 14, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on April 1, 2011 from the 100094 Crownhill, F&BI 104011 project. There are 151 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0414R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 1, 2011 by Friedman & Bruya, Inc. from the 100094 Crownhill, F&BI 104011 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
104011-01	NG-B2-0-3
104011-02	NG-B2-6-9
104011-03	NG-B2-12-15
104011-04	NG-C3-0-3
104011-05	NG-C3-6-9
104011-06	NG-C3-12-15
104011-07	NG-C2-0-3
104011-08	NG-C2-6-9
104011-09	NG-C2-12-15
104011-10	NG-D2-0-3
104011-11	NG-D2-6-9
104011-12	NG-D2-12-15
104011-13	NG-G2-0-3
104011-14	NG-G2-6-9
104011-15	NG-G2-12-15
104011-16	NG-D1-0-3
104011-17	NG-D1-6-9
104011-18	NG-D1-12-15
104011-19	NG-E1-0-3
104011-20	NG-E1-6-9
104011-21	NG-E1-12-15
104011-22	SG-L7-0-3
104011-23	SG-L7-6-9
104011-24	SG-L7-12-15
104011-25	SG-L8-0-3
104011-26	SG-L8-6-9
104011-27	SG-L8-12-15
104011-28	SG-L9-0-3
104011-29	SG-L9-6-9
104011-30	SG-L9-12-15
104011-31	SG-L10-0-3
104011-32	SG-L10-6-9
104011-33	SG-L10-12-15
104011-34	OG-10-0-3
104011-35	OG-10-6-9
104011-36	OG-10-12-15
104011-37	SG-K10-0-3
104011-38	SG-K10-6-9
104011-39	SG-K10-12-15

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
104011-40	SG-K9-0-3
104011-41	SG-K9-6-9
104011-42	SG-K9-12-15
104011-43	SG-K8-0-3
104011-44	SG-K8-6-9
104011-45	SG-K8-12-15
104011-46	SG-K7-0-3
104011-47	SG-K7-6-9
104011-48	SG-K7-12-15
104011-49	SG-J8-0-3
104011-50	SG-J8-6-9
104011-51	SG-J8-12-15
104011-52	SG-J9-0-3
104011-53	SG-J9-6-9
104011-54	SG-J9-12-15
104011-55	SG-J10-0-3
104011-56	SG-J10-6-9
104011-57	SG-J10-12-15
104011-58	SG-I8-0-3
104011-59	SG-I8-6-9
104011-60	SG-I8-12-15
104011-61	OG-3-0-3
104011-62	OG-3-6-9
104011-63	OG-3-12-15
104011-64	OG-1-0-3
104011-65	OG-1-6-9
104011-66	OG-1-12-15
104011-67	OG-9-0-3
104011-68	OG-9-6-9
104011-69	OG-9-12-15
104011-70	OG-12-0-3
104011-71	OG-12-6-9
104011-72	OG-12-12-15
104011-73	OG-8-0-3
104011-74	OG-8-6-9
104011-75	OG-8-12-15
104011-76	OG-13-0-3
104011-77	OG-13-6-9
104011-78	OG-13-12-15
104011-79	OG-2-0-3
104011-80	OG-2-6-9
104011-81	OG-2-12-15

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
104011-82	OG-5-0-3
104011-83	OG-5-6-9
104011-84	OG-5-12-15
104011-85	OG-6-0-3
104011-86	OG-6-6-9
104011-87	OG-6-12-15
104011-88	OG-7-0-3
104011-89	OG-7-6-9
104011-90	OG-7-12-15
104011-91	SG-H9-0-3
104011-92	SG-H9-6-9
104011-93	SG-H9-12-15
104011-94	NG-F3-0-3
104011-95	NG-F3-6-9
104011-96	NG-F6-12-15
104011-97	OG-11-0-3
104011-98	SG-H10-0-3
104011-99	SG-H10-6-9
104011-100	SG-H10-12-15
104011-101	SG-I9-0-3
104011-102	SG-I9-6-9
104011-103	SG-I9-12-15
104011-104	SG-I10-0-3
104011-105	SG-I10-6-9
104011-106	SG-I10-12-15
104011-107	OG-14-0-3
104011-108	OG-14-6-9
104011-109	OG-14-12-15
104011-110	OG-15-0-3
104011-111	OG-15-6-9
104011-112	OG-15-12-15
104011-113	RB-033111

DRO/RRO by Method NWTPH-Dx, Extraction Method 3510C/3550B

Soil sample concentrations were reported on a dry weight basis. The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

Metals by Method 200.8, Extraction Method 200.8

Soil sample concentrations were reported on a dry weight basis. All quality control requirements were acceptable.

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-B2-0-3 104011-01	<50	<250	117
NG-B2-6-9 104011-02	<50	<250	119
NG-B2-12-15 104011-03	<50	<250	117
NG-C3-0-3 104011-04	<50	<250	125
NG-C3-6-9 104011-05	<50	<250	118
NG-C3-12-15 104011-06	<50	<250	98
NG-C2-0-3 104011-07	<50	<250	96
NG-C2-6-9 104011-08	<50	<250	97
NG-C2-12-15 104011-09	<50	<250	98
NG-D2-0-3 104011-10	<50	280	96
NG-D2-6-9 104011-11	<50	<250	97
NG-D2-12-15 104011-12	<50	<250	98

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-G2-0-3 104011-13	<50	270	96
NG-G2-6-9 104011-14	<50	<250	96
NG-G2-12-15 104011-15	<50	<250	98
NG-D1-0-3 104011-16	<50	270	97
NG-D1-6-9 104011-17	<50	<250	98
NG-D1-12-15 104011-18	<50	<250	97
NG-E1-0-3 104011-19	<50	820	99
NG-E1-6-9 104011-20	<50	<250	97
NG-E1-12-15 104011-21	<50	<250	100
SG-L7-0-3 104011-22	<50	<250	98
SG-L7-6-9 104011-23	<50	<250	99
SG-L7-12-15 104011-24	<50	<250	96

Date of Report: 04/14/11
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Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-L8-0-3 104011-25	<50	<250	96
SG-L8-6-9 104011-26	<50	<250	99
SG-L8-12-15 104011-27	<50	<250	95
SG-L9-0-3 104011-28	<50	<250	96
SG-L9-6-9 104011-29	<50	<250	97
SG-L9-12-15 104011-30	<50	<250	97
SG-L10-0-3 104011-31	<50	<250	97
SG-L10-6-9 104011-32	<50	<250	94
SG-L10-12-15 104011-33	<50	<250	96
OG-10-0-3 104011-34	<50	<250	97
OG-10-6-9 104011-35	<50	<250	96
OG-10-12-15 104011-36	<50	<250	96

Date of Report: 04/14/11
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Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-K10-0-3 104011-37	<50	<250	92
SG-K10-6-9 104011-38	<50	<250	94
SG-K10-12-15 104011-39	<50	<250	97
SG-K9-0-3 104011-40	<50	<250	95
SG-K9-6-9 104011-41	<50	<250	100
SG-K9-12-15 104011-42	<50	<250	101
SG-K8-0-3 104011-43	<50	<250	100
SG-K8-6-9 104011-44	<50	<250	102
SG-K8-12-15 104011-45	<50	<250	100
SG-K7-0-3 104011-46	58 x	1,700	100
SG-K7-6-9 104011-47	<50	<250	100
SG-K7-12-15 104011-48	<50	310	98

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-J8-0-3 104011-49	<50	<250	95
SG-J8-6-9 104011-50	<50	<250	99
SG-J8-12-15 104011-51	<50	<250	99
SG-J9-0-3 104011-52	<50	<250	103
SG-J9-6-9 104011-53	<50	<250	98
SG-J9-12-15 104011-54	<50	<250	100
SG-J10-0-3 104011-55	<50	<250	99
SG-J10-6-9 104011-56	<50	<250	101
SG-J10-12-15 104011-57	<50	<250	98
SG-I8-0-3 104011-58	<50	<250	100
SG-I8-6-9 104011-59	<50	<250	102
SG-I8-12-15 104011-60	<50	<250	100

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-3-0-3 104011-61	<50	<250	96
OG-3-6-9 104011-62	<50	<250	96
OG-3-12-15 104011-63	<50	<250	98
OG-1-0-3 104011-64	<50	<250	97
OG-1-6-9 104011-65	<50	<250	96
OG-1-12-15 104011-66	<50	<250	96
OG-9-0-3 104011-67	<50	<250	98
OG-9-6-9 104011-68	<50	<250	95
OG-9-12-15 104011-69	<50	<250	97
OG-12-0-3 104011-70	<50	<250	102
OG-12-6-9 104011-71	<50	<250	101
OG-12-12-15 104011-72	<50	<250	100

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-8-0-3 104011-73	<50	<250	97
OG-8-6-9 104011-74	<50	<250	98
OG-8-12-15 104011-75	<50	<250	96
OG-13-0-3 104011-76	<50	<250	98
OG-13-6-9 104011-77	<50	<250	96
OG-13-12-15 104011-78	<50	<250	98
OG-2-0-3 104011-79	<50	<250	99
OG-2-6-9 104011-80	<50	<250	98
OG-2-12-15 104011-81	<50	<250	98
OG-5-0-3 104011-82	<50	<250	98
OG-5-6-9 104011-83	<50	<250	97
OG-5-12-15 104011-84	<50	<250	97

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-6-0-3 104011-85	<50	<250	98
OG-6-6-9 104011-86	<50	<250	98
OG-6-12-15 104011-87	<50	<250	97
OG-7-0-3 104011-88	<50	<250	99
OG-7-6-9 104011-89	<50	<250	98
OG-7-12-15 104011-90	<50	<250	97
SG-H9-0-3 104011-91	<50	<250	97
SG-H9-6-9 104011-92	<50	<250	97
SG-H9-12-15 104011-93	<50	<250	96
NG-F3-0-3 104011-94	<50	<250	99
NG-F3-6-9 104011-95	230	340	99
NG-F6-12-15 104011-96	<50	<250	99

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-11-0-3 104011-97	<50	<250	99
SG-H10-0-3 104011-98	<50	<250	96
SG-H10-6-9 104011-99	<50	<250	98
SG-H10-12-15 104011-100	<50	<250	98
SG-I9-0-3 104011-101	<50	<250	104
SG-I9-6-9 104011-102	<50	<250	106
SG-I9-12-15 104011-103	<50	<250	106
SG-I10-0-3 104011-104	<50	<250	105
SG-I10-6-9 104011-105	<50	<250	102
SG-I10-12-15 104011-106	<50	<250	104
OG-14-0-3 104011-107	<50	<250	100
OG-14-6-9 104011-108	<50	<250	106

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-14-12-15 104011-109	<50	<250	105
OG-15-0-3 104011-110	<50	<250	105
OG-15-6-9 104011-111	<50	<250	104
OG-15-12-15 104011-112	<50	<250	104
Method Blank 01-592 MB	<50	<250	116
Method Blank 01-593 MB	<50	<250	98
Method Blank 01-594 MB	<50	<250	102
Method Blank 01-595 MB	<50	<250	97
Method Blank 01-596 MB	<50	<250	97
Method Blank 01-588 MB	<50	<250	98

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/07/11
Date Analyzed: 04/09/11

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 47-140)
NG-D2-6-9 104011-113	<50	<250	86
Method Blank 01-615 MB	<50	<250	90

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-01
Date Analyzed:	04/07/11	Data File:	104011-01.093
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.69
Lead	7.81

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-02
Date Analyzed:	04/07/11	Data File:	104011-02.094
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.43
Lead	2.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-03
Date Analyzed:	04/07/11	Data File:	104011-03.095
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.05
Lead	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C3-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-04
Date Analyzed:	04/07/11	Data File:	104011-04.096
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.53
Lead	20.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C3-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-05
Date Analyzed:	04/07/11	Data File:	104011-05.097
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.04
Lead	1.21

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C3-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-06
Date Analyzed:	04/07/11	Data File:	104011-06.098
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	85	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-07
Date Analyzed:	04/07/11	Data File:	104011-07.100
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.23
Lead	72.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-08
Date Analyzed:	04/07/11	Data File:	104011-08.101
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.06
Lead	1.30

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-09
Date Analyzed:	04/07/11	Data File:	104011-09.102
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.08

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-10
Date Analyzed:	04/07/11	Data File:	104011-10.103
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.94
Lead	12.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-11
Date Analyzed:	04/07/11	Data File:	104011-11.110
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.30
Lead	1.78

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-12
Date Analyzed:	04/07/11	Data File:	104011-12.111
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.12
Lead	1.58

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-13
Date Analyzed:	04/07/11	Data File:	104011-13.112
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.55
Lead	34.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-14
Date Analyzed:	04/07/11	Data File:	104011-14.106
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.10
Lead	1.56

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-15
Date Analyzed:	04/07/11	Data File:	104011-15.113
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.14

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D1-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-16
Date Analyzed:	04/07/11	Data File:	104011-16.114
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	16.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D1-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-17
Date Analyzed:	04/07/11	Data File:	104011-17.115
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.26

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D1-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-18
Date Analyzed:	04/07/11	Data File:	104011-18.116
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.57

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E1-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-19
Date Analyzed:	04/07/11	Data File:	104011-19.117
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	63	60	125
Holmium	61	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.79
Lead	26.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E1-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-20
Date Analyzed:	04/07/11	Data File:	104011-20.118
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	1.93

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E1-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-21
Date Analyzed:	04/07/11	Data File:	104011-21.119
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	79	60	125
Holmium	77	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	1.91

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L7-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-22
Date Analyzed:	04/07/11	Data File:	104011-22.121
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.42
Lead	13.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L7-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-23
Date Analyzed:	04/07/11	Data File:	104011-23.122
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.10
Lead	1.87

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L7-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-24
Date Analyzed:	04/07/11	Data File:	104011-24.123
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.01
Lead	2.18

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-25
Date Analyzed:	04/07/11	Data File:	104011-25.124
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.21
Lead	2.73

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-26
Date Analyzed:	04/07/11	Data File:	104011-26.125
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.33

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-27
Date Analyzed:	04/07/11	Data File:	104011-27.126
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.47
Lead	1.86

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-28
Date Analyzed:	04/07/11	Data File:	104011-28.127
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.03
Lead	17.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-29
Date Analyzed:	04/08/11	Data File:	104011-29.011
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-30
Date Analyzed:	04/07/11	Data File:	104011-30.129
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.31
Lead	1.50

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-31
Date Analyzed:	04/07/11	Data File:	104011-31.136
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.24
Lead	9.40

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-32
Date Analyzed:	04/07/11	Data File:	104011-32.137
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	1.70

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-33
Date Analyzed:	04/07/11	Data File:	104011-33.133
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.58

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-34
Date Analyzed:	04/07/11	Data File:	104011-34.138
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.06
Lead	2.16

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-35
Date Analyzed:	04/07/11	Data File:	104011-35.139
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.34

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-36
Date Analyzed:	04/07/11	Data File:	104011-36.140
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.32

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-37
Date Analyzed:	04/07/11	Data File:	104011-37.142
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.24
Lead	10.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-38
Date Analyzed:	04/07/11	Data File:	104011-38.143
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.05
Lead	1.67

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-39
Date Analyzed:	04/07/11	Data File:	104011-39.144
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.36

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-40
Date Analyzed:	04/07/11	Data File:	104011-40.145
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.69
Lead	30.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-41
Date Analyzed:	04/07/11	Data File:	104011-41.146
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.68
Lead	8.13

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-42
Date Analyzed:	04/07/11	Data File:	104011-42.147
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-43
Date Analyzed:	04/07/11	Data File:	104011-43.148
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.59
Lead	8.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-44
Date Analyzed:	04/07/11	Data File:	104011-44.149
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	8.85

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-45
Date Analyzed:	04/07/11	Data File:	104011-45.150
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.33
Lead	14.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K7-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-46
Date Analyzed:	04/07/11	Data File:	104011-46.151
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.43
Lead	12.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K7-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-47
Date Analyzed:	04/07/11	Data File:	104011-47.153
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.90
Lead	16.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K7-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-48
Date Analyzed:	04/07/11	Data File:	104011-48.154
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	37.9
Lead	2,140

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-49
Date Analyzed:	04/07/11	Data File:	104011-49.155
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.06
Lead	25.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-50
Date Analyzed:	04/07/11	Data File:	104011-50.156
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	19.5
Lead	7,360

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-51
Date Analyzed:	04/08/11	Data File:	104011-51.018
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	2.26

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-52
Date Analyzed:	04/08/11	Data File:	104011-52.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.32
Lead	65.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-53
Date Analyzed:	04/08/11	Data File:	104011-53.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	26.3
Lead	3,800

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-54
Date Analyzed:	04/08/11	Data File:	104011-54.021
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.37
Lead	323

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-55
Date Analyzed:	04/08/11	Data File:	104011-55.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	21.8
Lead	98.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-56
Date Analyzed:	04/08/11	Data File:	104011-56.023
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.05
Lead	42.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-57
Date Analyzed:	04/08/11	Data File:	104011-57.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	3.64

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-58
Date Analyzed:	04/08/11	Data File:	104011-58.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.79

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-59
Date Analyzed:	04/08/11	Data File:	104011-59.025
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-60
Date Analyzed:	04/08/11	Data File:	104011-60.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-3-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-61
Date Analyzed:	04/08/11	Data File:	104011-61.027
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	2.74

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-3-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-62
Date Analyzed:	04/08/11	Data File:	104011-62.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.68
Lead	1.99

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-3-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-63
Date Analyzed:	04/08/11	Data File:	104011-63.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	1.63

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-1-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-64
Date Analyzed:	04/08/11	Data File:	104011-64.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.16
Lead	2.76

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-1-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-65
Date Analyzed:	04/08/11	Data File:	104011-65.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.70
Lead	3.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-1-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-66
Date Analyzed:	04/08/11	Data File:	104011-66.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.35
Lead	2.10

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-67
Date Analyzed:	04/08/11	Data File:	104011-67.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-68
Date Analyzed:	04/08/11	Data File:	104011-68.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.21

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-69
Date Analyzed:	04/08/11	Data File:	104011-69.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.19

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-12-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-70
Date Analyzed:	04/08/11	Data File:	104011-70.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.26

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-12-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-71
Date Analyzed:	04/11/11	Data File:	104011-71.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	98	60	125
Holmium	108	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.09

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-12-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-72
Date Analyzed:	04/11/11	Data File:	104011-72.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	97	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.10

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-73
Date Analyzed:	04/11/11	Data File:	104011-73.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	98	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.58
Lead	3.00

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-74
Date Analyzed:	04/11/11	Data File:	104011-74.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	1.48

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-75
Date Analyzed:	04/11/11	Data File:	104011-75.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.57
Lead	1.52

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-13-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-76
Date Analyzed:	04/11/11	Data File:	104011-76.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.65
Lead	3.27

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-13-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-77
Date Analyzed:	04/11/11	Data File:	104011-77.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	97	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.46
Lead	1.54

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-13-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-78
Date Analyzed:	04/11/11	Data File:	104011-78.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	99	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.21
Lead	1.57

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-79
Date Analyzed:	04/11/11	Data File:	104011-79.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.65
Lead	7.84

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-80
Date Analyzed:	04/11/11	Data File:	104011-80.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	1.60

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-81
Date Analyzed:	04/11/11	Data File:	104011-81.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.04
Lead	1.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-5-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-82
Date Analyzed:	04/11/11	Data File:	104011-82.059
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.00
Lead	12.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-5-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-83
Date Analyzed:	04/11/11	Data File:	104011-83.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.83
Lead	1.84

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-5-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-84
Date Analyzed:	04/11/11	Data File:	104011-84.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.05
Lead	2.01

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-6-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-85
Date Analyzed:	04/11/11	Data File:	104011-85.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.04
Lead	1.44

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-6-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-86
Date Analyzed:	04/11/11	Data File:	104011-86.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	2.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-6-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-87
Date Analyzed:	04/11/11	Data File:	104011-87.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	107	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.29
Lead	1.93

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-7-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-88
Date Analyzed:	04/11/11	Data File:	104011-88.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.28
Lead	2.78

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-7-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-89
Date Analyzed:	04/11/11	Data File:	104011-89.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.58

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-7-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-90
Date Analyzed:	04/11/11	Data File:	104011-90.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.26
Lead	1.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-91
Date Analyzed:	04/11/11	Data File:	104011-91.071
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.52

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-92
Date Analyzed:	04/11/11	Data File:	104011-92.083
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.12
Lead	1.60

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-93
Date Analyzed:	04/11/11	Data File:	104011-93.084
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.10
Lead	1.81

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F3-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-94
Date Analyzed:	04/11/11	Data File:	104011-94.086
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.60
Lead	82.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F3-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-95
Date Analyzed:	04/11/11	Data File:	104011-95.087
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.14
Lead	703

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F6-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-96
Date Analyzed:	04/11/11	Data File:	104011-96.088
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.34
Lead	1.89

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-11-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-97
Date Analyzed:	04/11/11	Data File:	104011-97.089
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.18
Lead	2.00

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-98
Date Analyzed:	04/11/11	Data File:	104011-98.090
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.74
Lead	18.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-99
Date Analyzed:	04/11/11	Data File:	104011-99.091
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-100
Date Analyzed:	04/11/11	Data File:	104011-100.092
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.07
Lead	1.38

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-101
Date Analyzed:	04/11/11	Data File:	104011-101.093
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.58
Lead	16.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-102
Date Analyzed:	04/11/11	Data File:	104011-102.094
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.41

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-103
Date Analyzed:	04/11/11	Data File:	104011-103.095
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	107	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-104
Date Analyzed:	04/11/11	Data File:	104011-104.097
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.30
Lead	6.80

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-105
Date Analyzed:	04/11/11	Data File:	104011-105.098
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.82

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-106
Date Analyzed:	04/11/11	Data File:	104011-106.099
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.32
Lead	1.83

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-14-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-107
Date Analyzed:	04/11/11	Data File:	104011-107.100
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.35
Lead	2.99

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-14-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-108
Date Analyzed:	04/11/11	Data File:	104011-108.101
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.18
Lead	1.93

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-14-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-109
Date Analyzed:	04/11/11	Data File:	104011-109.102
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.32

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-15-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-110
Date Analyzed:	04/11/11	Data File:	104011-110.103
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.02
Lead	1.62

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-15-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-111
Date Analyzed:	04/07/11	Data File:	104011-111.013
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.01
Lead	1.88

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-15-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-112
Date Analyzed:	04/07/11	Data File:	104011-112.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.02
Lead	1.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	I1-253 mb
Date Analyzed:	04/07/11	Data File:	I1-253 mb.078
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-254 mb
Date Analyzed:	04/08/11	Data File:	I1-254 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-255 mb
Date Analyzed:	04/07/11	Data File:	I1-255 mb.131
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-256 mb
Date Analyzed:	04/08/11	Data File:	I1-256 mb.012
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-257 mb
Date Analyzed:	04/11/11	Data File:	I1-257 mb.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	102	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-258 mb
Date Analyzed:	04/11/11	Data File:	I1-258 mb.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-259 mb
Date Analyzed:	04/07/11	Data File:	I1-259 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	RB-033111	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/08/11	Lab ID:	104011-113
Date Analyzed:	04/08/11	Data File:	104011-113.057
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/08/11	Lab ID:	I1-263 mb
Date Analyzed:	04/08/11	Data File:	I1-263 mb.039
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	121	116	63-146	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	119	79-144

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-21 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	95	96	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-59 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	95	96	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	58-147

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-63 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	103	103	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	74-139

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-85 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	103	106	73-135	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	115	74-139

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-121 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	120	100	100	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	74-139

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	101	101	61-133	0

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-123 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.12	104	110	44-151	6
Lead	mg/kg (ppm)	20	1.69	97	97	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	105	80-120
Lead	mg/kg (ppm)	20	105	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-14 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.10	97	101	44-151	4
Lead	mg/kg (ppm)	20	1.56	104	104	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	98	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-33 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	100	98	44-151	2
Lead	mg/kg (ppm)	20	1.58	102	106	65-126	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	107	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-58 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.03	96	94	44-151	2
Lead	mg/kg (ppm)	20	1.79	100	102	65-126	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	103	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-71 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.03	96	96	44-151	0
Lead	mg/kg (ppm)	20	1.09	88	90	65-126	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	103	80-120
Lead	mg/kg (ppm)	20	90	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-91 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	95	95	44-151	0
Lead	mg/kg (ppm)	20	1.52	94	94	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	95	80-120
Lead	mg/kg (ppm)	20	98	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-112 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.02	94	97	44-151	3
Lead	mg/kg (ppm)	20	1.51	100	101	65-126	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	100	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104006-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	106	104	56-167	2
Lead	ug/L (ppb)	10	<1	98	92	76-125	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	99	55-128
Lead	ug/L (ppb)	10	104	67-135

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Page # 1 of 12

Send Report To Dana Cannon

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Address

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Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. | PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
NG-B2-0-3	01	3/31/11	1215	SOIL	1	X						X					
6-9	02		1220	SOIL	1	X						X					
12-15	03		1225	SOIL	1	X						X					
NG-C3-0-3	04		1145		1	X						X					
6-9	05		1150		1	X						X					
12-15	06		1155		1	X						X					
NG-C2 0-3	07		1120		1	X						X					
6-9	08		1125		1	X						X					
12-15	09		1130		1	X						X					
(NP) NG NG-D2-0-3	10		1025		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amy Tilg	Aspect	4/1/11	1510
Received by:		Nhan Phan	FEBI	4/1/11	V
Relinquished by:					
Received by:					

Samples received at 5 °C

10

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Page # 2 of 12

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Company Aspect

Address

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Phone # Fax #

SAMPLERS (signature) [signature]

PROJECT NAME/NO. 100094 Queen hill

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

ANALYSES REQUESTED

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb	Notes
NG-D2-6-9	11	3/31/11	1030	Soil	1	X						X	
-12-15	12		1035		1	X						X	
NG-G2-0-3	13		1035		1	X						X	
6-9	14		1040		1	X						X	
12-15	15 A-B		1045		2	X						X	
NG-D1-0-3	16		1310		1	X						X	
6-9	17		1315		1	X						X	
12-15	18		1320		1	X						X	
NG-E1-0-3	19		1335		1	X						X	
6-9	20		1340		1	X						X	

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Relinquished by: [signature]	Molly Ravits	Aspect	4/1/11	1510
Received by: [signature]	Nhan Phan	F&BI	4/1/11	✓
Relinquished by:				
Received by:				

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Samples received at 5 °C

11

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SAMPLE CHAIN OF CUSTODY

ME 04/01/11

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PROJECT NAME/NO. 100094 Crawford

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb					Notes
NG-E1 - 12-15	21	3-31-11	1345	SOIL	1	X						X					
SG-L7 - 0-3	22		1245		1	X						X					
6-9	23 A-B		1250		2	X						X					
12-15	24 A-B		1255		2	X						X					
SG-L8 - 0-3	25		1300		1	X						X					
6-9	26 A-B		1305		2	X						X					
12-15	27 A B		1310		2	X						X					
SG-L9 - 0-3	28		1325		1	X						X					
6-9	29		1330		1	X						X					
12-15	30		1335		1	X						X					

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Pavitt	Aspect	4/1/11	1510
Received by:	Nhan Phan	Fe BI	4/1/11	V
Relinquished by:				
Received by:				

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SAMPLE CHAIN OF CUSTODY MG 04/01/11

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PROJECT NAME/NO. Clearwell 1000904

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REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	HFs, Pb					Notes
SG ~~MG~~-L10 -0-3	31	3-31-11	1350	Soil	1	X						X					
w BL 4/4/11 MG -6-9	32		1355		1	X						X					
-12-15	33		1400		1	X						X					
OG-10 -0-3	34		1410		1	X						X					
6-9	35		1415		1	X						X					
12-15	36		1420		1	X						X					
SG-K10-0-3	37		1430		1	X						X					
SG-K10-6-9	38		1435		1	X						X					
12-15	39		1440		1	X						X					
SG-K9 -0-3	40	~~1545~~	1545		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amy Tice	Aspect	4/1/11	1510
Received by:		Nhan Phan	FedEx	4/1/11	V
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Samples received at 5 °C

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SAMPLE CHAIN OF CUSTODY

ME 04/01/11

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REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb					Notes
SG-K9 - 6-9	41	3/31/11	1450	SOIL	1	X						X					
- 12-15	42 A,B		1455		2	X						X					
SG-K8 - 0-3	43		1525		1	X						X					
- 6-9	44		1530		1	X						X					
- 12-15	45		1535		1	X						X					
SG-K7 - 0-3	46	~~1545~~	1545		1	X						X					
- 6-9	47	~~1550~~	1550		1	X						X					
- 12-15	48	~~1555~~	1555		1	X						X					
SG-K8 - 0-3	49		1435		1	X						X					
- 6-9	50		~~1440~~ 1445 (DP)		1	X						X					

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Received by:	Nhan Phan	FeBI	4/1/11	V
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PROJECT NAME/NO. 100094 Graduhill

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REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-J8-12-15	51	3-31-11	1445	Soil	1	X						X					
SG-J9-0-3	52		1455		1	X						X					
-6-9	53		1500		1	X						X					
-12-15	54		1505		1	X						X					
SG-J10-0-3	55		1515		1	X						X					
-6-9	56		1520		1	X						X					
-12-15	57		1525		1	X						X					
SG-I8-0-3	58		1600		1	X						X					
-6-9	59		1605		1	X						X					
-12-15	60		1610		1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amy Tice	Aspect	4/1/11	1510
Received by:		Nhan Phan	FeBI	4/1/11	V
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SAMPLERS (signature)
PROJECT NAME/NO. 100094 Crown Hill
PO #
REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb					Notes
06-3-0-3	61	4/1/11	0935	Soil	1	X						X					
6-9	62		0940		1	X						X					
12-15	63		0945		1	X						X					
06-1-0-3	64		1000		1	X						X					
6-9	65		1005		1	X						X					
12-15	66		1010		1	X						X					
06-9-0-3	67		0815		1	X						X					
6-9	68		0820		1	X						X					
12-15	69		0825		1	X						X					
06-12-03	70	↓	—	↓	1	X						X					

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Relinquished by:	Molly Ravits	Molly Ravits	Aspect	4/1/11	1510
Received by:		Khan Phan	FedEx	4/1/11	
Relinquished by:					
Received by:					

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SAMPLE CHAIN OF CUSTODY

104011

MO 04/01/11

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Address

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SAMPLERS (signature) Molly Ravits

PROJECT NAME/NO. 100094 Crown III

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REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	PAHs, PB					Notes
OG-12-6-9	71	4/1/11	—	Soil	1	X						X					
OG-12-12-15	72		—		1	X						X					
OG-8-0-3	73		0845		1	X						X					
8-6-9	74		0850		1	X						X					
-12-15	75		0855		1	X						X					
OG-13-0-3	76		—		1	X						X					
-6-9	77		—		1	X						X					
-12-15	78		—		1	X						X					
OG-2-0-3	79		1000		1	X						X					
6-9	80A-B	↓	1005	↓	2	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ravits	Molly Ravits	Aspect	4/1/11	1510
Received by:		Nhan Phan	FEBI	4/1/11	V
Relinquished by:					
Received by:					

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104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

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Address

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SAMPLERS (signature)

PROJECT NAME/NO. 10009 + Crawl'l

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
06-2-12-15	81A-B	4/1/11	1080	SOIL	2	X						X					
06-5-0-3	82		0940		1	X						X					
6-9	83		0945		1	X						X					
12-15	84		0950		1	X						X					
06-6-0-3	85		0905		1	X						X					
6-9	86		0910		1	X						X					
12-15	87		0915		1	X						X					
06-7-0-3	88		0845		1	X						X					
6-9	89		0850		1	X						X					
12-15	90		0855		1	X						X					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Perrits	Molly Perrits	Aspect	4/1/11	1510
Received by:		Nhan Pham	FEBI	4/1/11	V
Relinquished by:					
Received by:					

Samples received at 5 °C

(11)

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 100094 Crownhill

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-H9-0-3	91	3-31-11	—	SOIL	1	X						X					
SG-H9-6-9	92		—		1	X						X					
SG-H9-12-15	93		—		1	X						X					
NG-F3-0-3	94		1130		1	X						X					
-6-9	95		1135		1	X						X					
-12-15	96		1140		1	X						X					
06-11-0-3	97		—		1	X						X					
SG-H10-0-3	98		—		1	X						X					
-6-9	99		—		1	X						X					
-12-15	100		—		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amy Tice	ASPECT	4/1/11	1510
Received by:		Nhan Phan	FedEx	4/1/11	V
Relinquished by:					
Received by:					

Samples received at 5 °C

(10)

104011

SAMPLE CHAIN OF CUSTODY ME 04/01/11

Send Report To Dana Cannon
Company Aspect
Address
City, State, ZIP Seattle
Phone # Fax #

SAMPLERS (signature)
PROJECT NAME/NO. 100044 Crosshill
PO #
REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-I9-0-3	101	3-31-11	1605	SOIL	1	X						X					
-6-9	102		1610		1	X						X					
-12-15	103		1615		1	X						X					
SG-I10-0-3	104		1545		1	X						X					
-6-9	105		1550		1	X						X		✓			
-12-15	106		1555		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amytice	Aspect	4/1/11	1510
Received by:		Nhan Phan	FEBI	4/1/11	V
Relinquished by:					
Received by:					

FORMS\COC\COC.DOC

Samples received at 5 °C

(6)

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Send Report To Vance Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) [signature]

PROJECT NAME/NO. 100094 Cashill

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb	Notes
OG-14-0-3	107	4/1/11	—	soil	1	X						X	
-6-9	108	↓	—	↓	1	X						X	
-12-15	109	↓	—	↓	1	X						X	
OG-15-0-3	110	↓	—	↓	1	X						X	
-6-9	111	↓	—	↓	1	X						X	
-12-15	112	↓	—	↓	1	X						X	
RB-033111	113	3/31/11	—	water	2	X						X	-Added per BH 4/4/11 mc

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Seattle, WA 98119-2029
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Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	M. Revitt	Molly Revitz	Aspect	4/1/11	1510
Received by:	[signature]	Nhan Phan	FeBI	4/1/11	✓
Relinquished by:					
Received by:					

FORMS\COC\COC.DOC

Samples received at 5 °C

6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 18, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on March 25, 2011 from the Crownhill 100094, F&BI 103360 project. There are 112 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0418R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 25, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crownhill 100094, F&BI 103360 project. The samples were received at 5 °C in good condition and were refrigerated upon receipt. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
103360-01	NG-D9-6-9
103360-02	NG-D9-12-15
103360-03	NG-H10-12-14
103360-04	NG-D10-0-3
103360-05	NG-D10-6-9
103360-06	NG-D10-12-15
103360-07	NG-F8-0-3
103360-08	NG-F8-6-9
103360-09	NG-F8-12-15
103360-10	NG-F9-0-3
103360-11	NG-F9-6-9
103360-12	NG-F9-12-15
103360-13	NG-F10-0-3
103360-14	NG-F10-6-9
103360-15	NG-F10-12-15
103360-16	NG-E10-0-3
103360-17	NG-E10-6-9
103360-18	NG-E10-12-15
103360-19	NG-E9-0-3
103360-20	NG-E9-6-9
103360-21	NG-E9-12-15
103360-22	NG-D9-0-3
103360-23	NG-F7-12-15
103360-24	NG-I8-0-3
103360-25	NG-I8-6-9
103360-26	NG-I8-12-15
103360-27	NG-I7-0-3
103360-28	NG-I7-6-9
103360-29	NG-I7-12-15
103360-30	NG-I6-0-3
103360-31	NG-I6-6-9
103360-32	NG-I6-12-15
103360-33	NG-H6-6-9
103360-34	NG-H6-12-15
103360-35	NG-H7-0-3
103360-36	NG-H7-6-9
103360-37	NG-H7-12-15

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103360-38	NG-H8-0-3
103360-39	NG-H8-6-9
103360-40	NG-H8-12-15
103360-41	NG-H10-0-3
103360-42	NG-H10-6-9
103360-43	NG-G10-0-3
103360-44	NG-G10-6-9
103360-45	NG-G10-12-15
103360-46	NG-G9-0-3
103360-47	NG-G9-6-9
103360-48	NG-G9-12-15
103360-49	NG-G7-0-3
103360-50	NG-G7-6-9
103360-51	NG-G7-12-15
103360-52	NG-G6-0-3
103360-53	NG-G6-6-9
103360-54	NG-G6-13.5-15
103360-55	NG-G5-0-3
103360-56	NG-G5-6-9
103360-57	NG-G5-13.5-15
103360-58	NG-F6-0-3
103360-59	NG-F6-6-9
103360-60	NG-F6-12-15
103360-61	NG-F7-0-3
103360-62	NG-F7-6-9
103360-63	NG-I5-0-3
103360-64	NG-I5-6-9
103360-65	NG-I5-12-15
103360-66	NG-I4-0-3
103360-67	NG-I4-6-9
103360-68	NG-I4-12-15
103360-69	NG-H5-0-3
103360-70	NG-H5-6-9
103360-71	NG-H5-12-15
103360-72	NG-H6-0-3
103360-73	RB-032511

CASE NARRATIVE (continued)

DRO/RRO by Method NWTPH-Dx, Extraction Method 3510C/3550B
Soil sample concentrations were reported on a dry weight basis. The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

PAHs by Method 8270D SIM, Extraction Method 3510C
The laboratory control sample exceeded the acceptance criteria for fluorene. Fluorene was not detected in the samples, therefore the data were acceptable. All other quality control requirements were acceptable.

VOCs by Method 8260B, Extraction Method 5030B
Several 8260C compounds failed below the acceptance criteria in the matrix spike samples. The laboratory control samples met the acceptance criteria, therefore the data were likely due to sample matrix effect. All other quality control requirements were acceptable.

SVOCs by Method 8270D, Extraction Method 3510C
All quality control requirements were acceptable.

Metals by Method 200.8, Extraction Method 200.8
Soil sample concentrations were reported on a dry weight basis. The water calibration standard did not pass the acceptance criteria for vanadium. The data were flagged accordingly. All other quality control requirements were acceptable.

Mercury by Method 1631E, Extraction Method 200.8
All quality control requirements were acceptable.

PCBs by Method 8082, Extraction Method 3510C
All quality control requirements were acceptable.

Subcontract Analysis
Sample RB-032511 was sent to Fremont for hexavalent chromium analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360
Date Extracted: 03/28/11 and 03/29/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-D9-6-9 103360-01	<50	<250	119
NG-D9-12-15 103360-02	<50	<250	110
NG-H10-12-14 103360-03	<50	<250	117
NG-D10-0-3 103360-04	<50	<250	115
NG-D10-6-9 103360-05	<50	<250	114
NG-D10-12-15 103360-06	<50	<250	118
NG-F8-0-3 103360-07	<50	<250	122
NG-F8-6-9 103360-08	<50	<250	121
NG-F8-12-15 103360-09	<50	<250	119
NG-F9-0-3 103360-10	<50	<250	115
NG-F9-6-9 103360-11	1,000 x	3,900	121
NG-F9-12-15 103360-12	310 x	770	120

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360
Date Extracted: 03/28/11 and 03/29/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-F10-0-3 103360-13	<50	<250	120
NG-F10-6-9 103360-14	<50	<250	120
NG-F10-12-15 103360-15	<50	<250	121
NG-E10-0-3 103360-16	<50	<250	122
NG-E10-6-9 103360-17	<50	<250	119
NG-E10-12-15 103360-18	<50	<250	127
NG-E9-0-3 103360-19	<50	<250	124
NG-E9-6-9 103360-20	<50	<250	123
NG-E9-12-15 103360-21	4,000	7,300	125
NG-D9-0-3 103360-22	<50	<250	128
NG-F7-12-15 103360-23	<50	<250	129
NG-I8-0-3 103360-24	<50	<250	132

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360
Date Extracted: 03/28/11 and 03/29/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-I8-6-9 103360-25	<50	<250	128
NG-I8-12-15 103360-26	<50	<250	128
NG-I7-0-3 103360-27	<50	<250	127
NG-I7-6-9 103360-28	<50	300	127
NG-I7-12-15 103360-29	<50	<250	129
NG-I6-0-3 103360-30	<50	<250	125
NG-I6-6-9 103360-31	<50	<250	129
NG-I6-12-15 103360-32	<50	<250	121
NG-H6-6-9 103360-33	410 x	1,700	107
NG-H6-12-15 103360-34	180 x	1,000	104
NG-H7-0-3 103360-35	<50	<250	102
NG-H7-6-9 103360-36	<50	<250	103

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360
Date Extracted: 03/28/11 and 03/29/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-H7-12-15 103360-37	<50	<250	101
NG-H8-0-3 103360-38	<50	<250	103
NG-H8-6-9 103360-39	<50	<250	101
NG-H8-12-15 103360-40	<50	<250	102
NG-H10-0-3 103360-41	<50	<250	102
NG-H10-6-9 103360-42	<50	<250	101
NG-G10-0-3 103360-43	<50	<250	100
NG-G10-6-9 103360-44	<50	<250	102
NG-G10-12-15 103360-45	<50	<250	103
NG-G9-0-3 103360-46	<50	<250	105
NG-G9-6-9 103360-47	200 x	1,600	104
NG-G9-12-15 103360-48	<50	<250	95

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360
Date Extracted: 03/28/11 and 03/29/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-G7-0-3 103360-49	<50	350	101
NG-G7-6-9 103360-50	140 x	380	104
NG-G7-12-15 103360-51	<50	<250	102
NG-G6-0-3 103360-52	<50	<250	104
NG-G6-6-9 103360-53	<50	<250	111
NG-G6-13.5-15 103360-54	<50	<250	111
NG-G5-0-3 103360-55	<50	<250	112
NG-G5-6-9 103360-56	<50	<250	112
NG-G5-13.5-15 103360-57	<50	<250	111
NG-F6-0-3 103360-58	<50	360	121
NG-F6-6-9 103360-59	<50	<250	113
NG-F6-12-15 103360-60	<50	<250	111

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360
Date Extracted: 03/28/11 and 03/29/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-F7-0-3 103360-61	<50	500	110
NG-F7-6-9 103360-62	<50	<250	109
NG-I5-0-3 103360-63	<50	<250	111
NG-I5-6-9 103360-64	<50	<250	108
NG-I5-12-15 103360-65	<50	<250	108
NG-I4-0-3 103360-66	<50	<250	109
NG-I4-6-9 103360-67	<50	<250	110
NG-I4-12-15 103360-68	<50	<250	111
NG-H5-0-3 103360-69	<50	<250	110
NG-H5-6-9 103360-70	83 x	510	111
NG-H5-12-15 103360-71	210 x	630	107

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360
Date Extracted: 03/28/11 and 03/29/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-H6-0-3 103360-72	<50	<250	112
Method Blank 01-530 MB	<50	<250	97
Method Blank 01-534 MB	<50	<250	106
Method Blank 01-535 MB	<50	<250	85
Method Blank 01-536 MB	<50	<250	88

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360
Date Extracted: 03/30/11
Date Analyzed: 03/31/11

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
RB-032511 103360-73	<50	<250	95
Method Blank 01-550 MB	<50	<250	88

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D9-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-01
Date Analyzed:	03/30/11	Data File:	103360-01.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.88
Lead	9.62

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D9-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-02
Date Analyzed:	03/30/11	Data File:	103360-02.013
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.75
Lead	6.61

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H10-12-14	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-03
Date Analyzed:	03/30/11	Data File:	103360-03.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.06
Lead	3.99

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D10-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-04
Date Analyzed:	03/30/11	Data File:	103360-04.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.25
Lead	5.21

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D10-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-05
Date Analyzed:	03/30/11	Data File:	103360-05.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.99
Lead	35.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D10-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-06
Date Analyzed:	03/30/11	Data File:	103360-06.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.98
Lead	5.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F8-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-07
Date Analyzed:	03/30/11	Data File:	103360-07.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.27
Lead	10.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F8-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-08
Date Analyzed:	03/30/11	Data File:	103360-08.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.91
Lead	44.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F8-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-09
Date Analyzed:	03/30/11	Data File:	103360-09.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.91
Lead	854

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F9-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-10
Date Analyzed:	03/30/11	Data File:	103360-10.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.87
Lead	4.60

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F9-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-11
Date Analyzed:	03/30/11	Data File:	103360-11.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.72
Lead	273

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F9-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-12
Date Analyzed:	03/30/11	Data File:	103360-12.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.71
Lead	7.41

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F10-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-13
Date Analyzed:	03/30/11	Data File:	103360-13.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.67
Lead	6.07

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F10-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-14
Date Analyzed:	03/30/11	Data File:	103360-14.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.64
Lead	5.22

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F10-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-15
Date Analyzed:	03/30/11	Data File:	103360-15.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.59
Lead	1.73

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E10-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	103360-16
Date Analyzed:	03/30/11	Data File:	103360-16.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.43
Lead	7.34

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E10-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-17
Date Analyzed:	03/30/11	Data File:	103360-17.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.44
Lead	9.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E10-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-18
Date Analyzed:	03/30/11	Data File:	103360-18.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.47
Lead	9.16

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E9-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-19
Date Analyzed:	03/30/11	Data File:	103360-19.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.42
Lead	18.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E9-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-20
Date Analyzed:	03/30/11	Data File:	103360-20.052
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.62
Lead	9.73

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E9-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-21
Date Analyzed:	03/30/11	Data File:	103360-21.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.90
Lead	646

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D9-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-22
Date Analyzed:	03/30/11	Data File:	103360-22.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.93
Lead	8.54

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-23
Date Analyzed:	03/30/11	Data File:	103360-23.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.97
Lead	36.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I8-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-24
Date Analyzed:	03/30/11	Data File:	103360-24.045
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.60
Lead	3.41

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I8-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-25
Date Analyzed:	03/30/11	Data File:	103360-25.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.26
Lead	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I8-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-26
Date Analyzed:	03/30/11	Data File:	103360-26.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.06
Lead	1.52

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-27
Date Analyzed:	03/30/11	Data File:	103360-27.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.46
Lead	1.98

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-28
Date Analyzed:	03/30/11	Data File:	103360-28.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.30
Lead	1.77

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-29
Date Analyzed:	03/30/11	Data File:	103360-29.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.61

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-30
Date Analyzed:	03/30/11	Data File:	103360-30.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.81
Lead	18.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-31
Date Analyzed:	03/30/11	Data File:	103360-31.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.56
Lead	2.07

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I6-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-32
Date Analyzed:	03/30/11	Data File:	103360-32.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.57

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-33
Date Analyzed:	03/30/11	Data File:	103360-33.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	25.3
Lead	4,800

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H6-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-34
Date Analyzed:	03/30/11	Data File:	103360-34.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	30.0
Lead	8,120

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-35
Date Analyzed:	03/30/11	Data File:	103360-35.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.66
Lead	2.98

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-36
Date Analyzed:	03/30/11	Data File:	103360-36.070
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.55
Lead	114

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-37
Date Analyzed:	03/31/11	Data File:	103360-37.013
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.26
Lead	226

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H8-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-38
Date Analyzed:	03/31/11	Data File:	103360-38.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.49
Lead	3.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H8-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-39
Date Analyzed:	03/31/11	Data File:	103360-39.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.29
Lead	3.19

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H8-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-40
Date Analyzed:	03/31/11	Data File:	103360-40.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.08
Lead	4.23

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H10-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-41
Date Analyzed:	03/31/11	Data File:	103360-41.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.03
Lead	1.85

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H10-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-42
Date Analyzed:	03/31/11	Data File:	103360-42.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.42
Lead	2.86

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G10-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-43
Date Analyzed:	03/31/11	Data File:	103360-43.021
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.38
Lead	4.04

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G10-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-44
Date Analyzed:	03/31/11	Data File:	103360-44.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.75
Lead	3.99

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G10-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-45
Date Analyzed:	03/31/11	Data File:	103360-45.023
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.56
Lead	3.16

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G9-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-46
Date Analyzed:	03/31/11	Data File:	103360-46.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.63
Lead	3.11

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G9-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-47
Date Analyzed:	03/31/11	Data File:	103360-47.025
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.71
Lead	277

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G9-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-48
Date Analyzed:	03/31/11	Data File:	103360-48.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.67
Lead	2.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-49
Date Analyzed:	03/31/11	Data File:	103360-49.028
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.96
Lead	42.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-50
Date Analyzed:	03/31/11	Data File:	103360-50.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.19
Lead	183

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-51
Date Analyzed:	03/31/11	Data File:	103360-51.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.29
Lead	20.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-52
Date Analyzed:	03/31/11	Data File:	103360-52.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.01
Lead	30.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-53
Date Analyzed:	03/31/11	Data File:	103360-53.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.71
Lead	411

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G6-13.5-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-54
Date Analyzed:	03/31/11	Data File:	103360-54.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.47
Lead	319

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G5-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-55
Date Analyzed:	03/31/11	Data File:	103360-55.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.99
Lead	15.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G5-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-56
Date Analyzed:	03/31/11	Data File:	103360-56.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	31.4
Lead	5,170

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G5-13.5-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-57
Date Analyzed:	03/31/11	Data File:	103360-57.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	42.0
Lead	6,160

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-58
Date Analyzed:	03/31/11	Data File:	103360-58.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.40
Lead	44.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-59
Date Analyzed:	03/31/11	Data File:	103360-59.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	21.4
Lead	2,230

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F6-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-60
Date Analyzed:	03/31/11	Data File:	103360-60.045
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	44.6
Lead	7,320

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-61
Date Analyzed:	03/31/11	Data File:	103360-61.046
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.74
Lead	22.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-62
Date Analyzed:	03/31/11	Data File:	103360-62.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.10
Lead	65.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I5-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-63
Date Analyzed:	03/31/11	Data File:	103360-63.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.79
Lead	6.20

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I5-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-64
Date Analyzed:	03/31/11	Data File:	103360-64.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.26
Lead	1.43

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I5-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-65
Date Analyzed:	03/31/11	Data File:	103360-65.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.62
Lead	1.86

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I4-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-66
Date Analyzed:	03/31/11	Data File:	103360-66.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.04
Lead	32.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I4-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-67
Date Analyzed:	03/31/11	Data File:	103360-67.052
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.41
Lead	1.64

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I4-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-68
Date Analyzed:	03/31/11	Data File:	103360-68.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.21
Lead	1.12

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H5-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-69
Date Analyzed:	03/31/11	Data File:	103360-69.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.88
Lead	35.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H5-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-70
Date Analyzed:	03/31/11	Data File:	103360-70.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	27.7
Lead	9,840

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H5-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-71 x10
Date Analyzed:	03/31/11	Data File:	103360-71 x10.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	29.6
Lead	12,800

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	103360-72
Date Analyzed:	03/31/11	Data File:	103360-72.059
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.74
Lead	66.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/28/11	Lab ID:	I1-211 mb
Date Analyzed:	03/30/11	Data File:	I1-211 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	I1-214 mb
Date Analyzed:	03/30/11	Data File:	I1-214 mb.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	I1-216 mb
Date Analyzed:	03/31/11	Data File:	I1-216 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/30/11	Lab ID:	I1-218 mb
Date Analyzed:	03/31/11	Data File:	I1-218 mb.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	RB-032511	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/31/11	Lab ID:	103360-73
Date Analyzed:	04/01/11	Data File:	103360-73.013
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	84	60	125
Holmium	77	60	125

Analyte:	Concentration ug/L (ppb)
Vanadium	<1 ca
Chromium	<1
Copper	1.39
Zinc	1.29
Arsenic	<1
Selenium	<1
Antimony	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/31/11	Lab ID:	I1-222 mb
Date Analyzed:	04/01/11	Data File:	I1-222 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	99	60	125
Indium	99	60	125
Holmium	102	60	125

Analyte:	Concentration ug/L (ppb)
Vanadium	<1 ca
Chromium	<1
Copper	<1
Zinc	<1
Arsenic	<1
Selenium	<1
Antimony	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	RB-032511	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-73
Date Analyzed:	03/29/11	Data File:	032915.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	57	121
Toluene-d8	96	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	01-493 mb
Date Analyzed:	03/29/11	Data File:	032907.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	RB-032511	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-73
Date Analyzed:	04/01/11	Data File:	040116.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	105	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	01-540 mb
Date Analyzed:	03/31/11	Data File:	033116.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	95	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	RB-032511	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	103360-73
Date Analyzed:	04/07/11	Data File:	040625.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59	10	137
Phenol-d6	32	10	100
Nitrobenzene-d5	94	11	153
2-Fluorobiphenyl	97	21	159
2,4,6-Tribromophenol	95	10	210
Terphenyl-d14	102	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103360
Date Extracted:	03/29/11	Lab ID:	01-539 mb
Date Analyzed:	04/12/11	Data File:	041203.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	54	10	137
Phenol-d6	38	10	100
Nitrobenzene-d5	94	11	153
2-Fluorobiphenyl	99	21	159
2,4,6-Tribromophenol	89	10	210
Terphenyl-d14	130	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360
Date Extracted: 03/30/11
Date Analyzed: 03/31/11

RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR PCBs AS AROCLORS
USING EPA METHOD 8082A

Results Reported as ug/L (ppb)

	Aroclor							Surrogate
Sample ID	1221	1232	1016	1242	1248	1254	1260	(% Rec.)
Laboratory ID								(Limit 42-147)
RB-032511	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	71
103360-73								
Method Blank	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	51

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103342-72 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	86	84	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	87	58-147

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103360-32 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	106	105	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	97	79-144

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103360-67 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	103	99	73-135	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	74-139

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103360-40 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	85	85	64-133	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	86	58-147

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	81	79	58-134	2

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103360-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	7.88	97 b	97 b	44-151	0 b
Lead	mg/kg (ppm)	20	9.62	93 b	100 b	65-126	7 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	105	80-120
Lead	mg/kg (ppm)	20	99	81-120

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103360-24 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.60	107	102	44-151	5
Lead	mg/kg (ppm)	20	3.41	101	97	65-126	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	109	80-120
Lead	mg/kg (ppm)	20	97	81-120

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103360-39 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.29	103	100	44-151	3
Lead	mg/kg (ppm)	20	3.19	95	99	65-126	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	111	80-120
Lead	mg/kg (ppm)	20	100	81-120

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103360-63 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.79	104	109	44-151	5
Lead	mg/kg (ppm)	20	6.20	103 b	102 b	65-126	1 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	108	80-120
Lead	mg/kg (ppm)	20	99	81-120

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103380-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vanadium	ug/L (ppb)	20	<1	109	99	76-134	10
Chromium	ug/L (ppb)	20	<1	101	99	67-132	2
Copper	ug/L (ppb)	20	2.91	96	95	50-144	1
Zinc	ug/L (ppb)	50	5.35	98	101	46-148	3
Arsenic	ug/L (ppb)	10	<1	100	101	56-167	1
Selenium	ug/L (ppb)	5	<1	97	100	54-170	3
Antimony	ug/L (ppb)	20	<1	91	97	34-148	6
Lead	ug/L (ppb)	10	<1	99	110	76-125	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vanadium	ug/L (ppb)	20	104	66-141
Chromium	ug/L (ppb)	20	102	66-135
Copper	ug/L (ppb)	20	93	66-134
Zinc	ug/L (ppb)	50	101	57-135
Arsenic	ug/L (ppb)	10	94	55-128
Selenium	ug/L (ppb)	5	94	59-134
Antimony	ug/L (ppb)	20	93	41-138
Lead	ug/L (ppb)	10	105	67-135

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 103352-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	122	10-172
Chloromethane	ug/L (ppb)	50	<10	105	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	124	36-166
Bromomethane	ug/L (ppb)	50	<1	123	47-169
Chloroethane	ug/L (ppb)	50	<1	122	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	28 vo	44-165
Acetone	ug/L (ppb)	250	<10	99	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	23 vo	60-136
Methylene chloride	ug/L (ppb)	50	<5	15 vo	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	104	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	105	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	74	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	105	71-127
Chloroform	ug/L (ppb)	50	<1	107	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	107	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	109	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	104	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	106	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	110	56-152
Benzene	ug/L (ppb)	50	<0.35	105	76-125
Trichloroethene	ug/L (ppb)	50	<1	101	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	106	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	112	61-150
Dibromomethane	ug/L (ppb)	50	<1	108	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	115	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	104	72-132
Toluene	ug/L (ppb)	50	<1	101	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	106	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	104	68-131
2-Hexanone	ug/L (ppb)	250	<10	121	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	105	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	97	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	112	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	107	69-134
Chlorobenzene	ug/L (ppb)	50	<1	101	77-122
Ethylbenzene	ug/L (ppb)	50	<1	104	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	110	73-137
m,p-Xylene	ug/L (ppb)	100	<2	103	69-135
o-Xylene	ug/L (ppb)	50	<1	107	68-137
Styrene	ug/L (ppb)	50	<1	102	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	107	65-142
Bromoform	ug/L (ppb)	50	<1	119	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	99	58-144
Bromobenzene	ug/L (ppb)	50	<1	101	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	99	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	106	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	105	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	98	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	100	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	102	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	100	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	96	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	97	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	94	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	93	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	94	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	106	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	93	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	75	60-143
Naphthalene	ug/L (ppb)	50	<1	100	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	93	69-148

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	128	129	25-158	1
Chloromethane	ug/L (ppb)	50	111	110	45-156	1
Vinyl chloride	ug/L (ppb)	50	119	125	50-154	5
Bromomethane	ug/L (ppb)	50	111	130	55-143	16
Chloroethane	ug/L (ppb)	50	126	138	58-146	9
Trichlorofluoromethane	ug/L (ppb)	50	116	120	50-150	3
Acetone	ug/L (ppb)	250	115	95	60-155	19
1,1-Dichloroethene	ug/L (ppb)	50	108	108	67-136	0
Methylene chloride	ug/L (ppb)	50	103	100	39-148	3
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	109	108	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	106	105	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	106	107	79-121	1
2,2-Dichloropropane	ug/L (ppb)	50	127	130	55-143	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	108	108	80-123	0
Chloroform	ug/L (ppb)	50	105	107	80-121	2
2-Butanone (MEK)	ug/L (ppb)	250	111	108	57-149	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	105	105	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	103	107	83-130	4
1,1-Dichloropropene	ug/L (ppb)	50	109	110	77-129	1
Carbon tetrachloride	ug/L (ppb)	50	110	110	75-158	0
Benzene	ug/L (ppb)	50	105	107	69-134	2
Trichloroethene	ug/L (ppb)	50	102	104	80-120	2
1,2-Dichloropropane	ug/L (ppb)	50	107	109	77-123	2
Bromodichloromethane	ug/L (ppb)	50	111	111	81-133	0
Dibromomethane	ug/L (ppb)	50	108	109	82-125	1
4-Methyl-2-pentanone	ug/L (ppb)	250	116	115	70-140	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	118	118	82-132	0
Toluene	ug/L (ppb)	50	103	106	72-122	3
trans-1,3-Dichloropropene	ug/L (ppb)	50	117	118	80-136	1
1,1,2-Trichloroethane	ug/L (ppb)	50	104	106	75-124	2
2-Hexanone	ug/L (ppb)	250	122	120	64-152	2
1,3-Dichloropropane	ug/L (ppb)	50	106	108	76-126	2
Tetrachloroethene	ug/L (ppb)	50	104	105	76-121	1
Dibromochloromethane	ug/L (ppb)	50	113	114	84-133	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	110	111	82-125	1
Chlorobenzene	ug/L (ppb)	50	105	106	83-114	1
Ethylbenzene	ug/L (ppb)	50	109	109	77-124	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	111	111	84-127	0
m,p-Xylene	ug/L (ppb)	100	110	110	83-125	0
o-Xylene	ug/L (ppb)	50	115	113	86-121	2
Styrene	ug/L (ppb)	50	115	114	85-127	1
Isopropylbenzene	ug/L (ppb)	50	118	114	87-122	3
Bromoform	ug/L (ppb)	50	124	121	74-136	2
n-Propylbenzene	ug/L (ppb)	50	109	113	74-126	4
Bromobenzene	ug/L (ppb)	50	104	109	80-121	5
1,3,5-Trimethylbenzene	ug/L (ppb)	50	113	113	80-126	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	108	110	66-126	2
1,2,3-Trichloropropane	ug/L (ppb)	50	105	107	67-124	2
2-Chlorotoluene	ug/L (ppb)	50	106	110	77-127	4
4-Chlorotoluene	ug/L (ppb)	50	109	112	78-128	3
tert-Butylbenzene	ug/L (ppb)	50	114	113	85-127	1
1,2,4-Trimethylbenzene	ug/L (ppb)	50	113	113	82-125	0
sec-Butylbenzene	ug/L (ppb)	50	113	113	80-125	0
p-Isopropyltoluene	ug/L (ppb)	50	116	114	82-127	2
1,3-Dichlorobenzene	ug/L (ppb)	50	109	108	85-116	1
1,4-Dichlorobenzene	ug/L (ppb)	50	105	106	84-121	1
1,2-Dichlorobenzene	ug/L (ppb)	50	106	106	85-116	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	102	109	57-141	7
1,2,4-Trichlorobenzene	ug/L (ppb)	50	102	114	72-130	11
Hexachlorobutadiene	ug/L (ppb)	50	97	110	53-141	13
Naphthalene	ug/L (ppb)	50	103	113	64-133	9
1,2,3-Trichlorobenzene	ug/L (ppb)	50	101	113	65-136	11

ate of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	94	95	64-100	1
2-Methylnaphthalene	ug/L (ppb)	1	101	105	41-130	4
1-Methylnaphthalene	ug/L (ppb)	1	98	101	64-109	3
Acenaphthylene	ug/L (ppb)	1	96	98	67-104	2
Acenaphthene	ug/L (ppb)	1	93	94	65-103	1
Fluorene	ug/L (ppb)	1	108 vo	101	64-106	7
Phenanthrene	ug/L (ppb)	1	91	92	66-106	1
Anthracene	ug/L (ppb)	1	90	93	67-112	3
Fluoranthene	ug/L (ppb)	1	98	105	69-116	7
Pyrene	ug/L (ppb)	1	94	99	68-115	5
Benz(a)anthracene	ug/L (ppb)	1	83	91	59-100	9
Chrysene	ug/L (ppb)	1	89	93	66-103	4
Benzo(b)fluoranthene	ug/L (ppb)	1	91	102	59-114	11
Benzo(k)fluoranthene	ug/L (ppb)	1	92	92	55-111	0
Benzo(a)pyrene	ug/L (ppb)	1	86	93	54-111	8
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	88	99	35-124	12
Dibenz(a,h)anthracene	ug/L (ppb)	1	89	89	35-116	0
Benzo(g,h,i)perylene	ug/L (ppb)	1	87	88	39-114	1

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	41	47	22-64	14
Bis(2-chloroethyl) ether	ug/L (ppb)	50	94	96	52-122	2
2-Chlorophenol	ug/L (ppb)	50	88	96	61-108	9
1,3-Dichlorobenzene	ug/L (ppb)	50	92	95	59-105	3
1,4-Dichlorobenzene	ug/L (ppb)	50	90	98	59-107	9
1,2-Dichlorobenzene	ug/L (ppb)	50	91	97	56-110	6
Benzyl alcohol	ug/L (ppb)	50	81	87	52-106	7
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	84	91	44-117	8
2-Methylphenol	ug/L (ppb)	50	51	59	41-95	15
Hexachloroethane	ug/L (ppb)	50	91	97	56-115	6
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	93	99	62-111	6
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	71	82	24-138	14
Nitrobenzene	ug/L (ppb)	50	93	97	55-116	4
Isophorone	ug/L (ppb)	50	94	100	66-121	6
2-Nitrophenol	ug/L (ppb)	50	94	98	53-116	4
2,4-Dimethylphenol	ug/L (ppb)	50	85	95	44-103	11
Benzoic acid	ug/L (ppb)	75	31	32	10-59	3
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	93	98	53-113	5
2,4-Dichlorophenol	ug/L (ppb)	50	93	98	55-114	5
1,2,4-Trichlorobenzene	ug/L (ppb)	50	91	96	67-102	5
Hexachlorobutadiene	ug/L (ppb)	50	90	96	57-112	6
4-Chloroaniline	ug/L (ppb)	50	75	83	24-106	10
4-Chloro-3-methylphenol	ug/L (ppb)	50	93	99	49-123	6
2-Methylnaphthalene	ug/L (ppb)	50	93	98	55-119	5
Hexachlorocyclopentadiene	ug/L (ppb)	50	87	92	24-132	6
2,4,6-Trichlorophenol	ug/L (ppb)	50	99	101	65-116	2
2,4,5-Trichlorophenol	ug/L (ppb)	50	97	102	53-117	5
2-Chloronaphthalene	ug/L (ppb)	50	97	102	49-118	5
2-Nitroaniline	ug/L (ppb)	50	99	103	59-126	4
Dimethyl phthalate	ug/L (ppb)	50	97	103	54-115	6
2,6-Dinitrotoluene	ug/L (ppb)	50	99	103	54-123	4
3-Nitroaniline	ug/L (ppb)	50	80	81	34-112	1
2,4-Dinitrophenol	ug/L (ppb)	50	106	107	53-123	1
Dibenzofuran	ug/L (ppb)	50	95	100	39-128	5
2,4-Dinitrotoluene	ug/L (ppb)	50	102	105	44-128	3
4-Nitrophenol	ug/L (ppb)	50	62	63	10-102	2
Diethyl phthalate	ug/L (ppb)	50	97	102	48-121	5
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	95	101	70-130	6
N-Nitrosodiphenylamine	ug/L (ppb)	50	93	97	70-130	4
4-Nitroaniline	ug/L (ppb)	50	92	87	23-173	6
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	104	106	58-124	2
4-Bromophenyl phenyl ether	ug/L (ppb)	50	95	99	57-115	4
Hexachlorobenzene	ug/L (ppb)	50	94	98	66-109	4
Pentachlorophenol	ug/L (ppb)	50	96	96	52-129	0
Carbazole	ug/L (ppb)	50	96	100	33-140	4
Di-n-butyl phthalate	ug/L (ppb)	50	97	102	51-121	5
Benzyl butyl phthalate	ug/L (ppb)	50	97	102	50-128	5
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	96	103	50-127	7
Di-n-octyl phthalate	ug/L (ppb)	50	98	104	54-129	6

Date of Report: 04/18/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103360

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	2.5	98	102	48-139	4
Aroclor 1260	ug/L (ppb)	2.5	118	123	50-142	4

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

2930 Westlake Ave N Suite 100
Seatlle. WA 98109
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, Washington 98119

RE: 103360
Lab ID: 1103114

March 29, 2011

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 3/28/2011 for the analyses presented in the following report.

Hexavalent Chromium by EPA Method 7196

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michelle Clements
Sr. Chemist / Lab Manager

Date: *03/29/2011*

CLIENT: Friedman & Bruya
Project: 103360
Lab Order: 1103114

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date Collected	Date Received
1103114-001	RB-032511	03/25/2011 9:00 AM	03/28/2011 12:22 PM

Analytical Report

WO#: **1103114**

Date Reported: **3/29/2011**

Client: Friedman & Bruya

Collection Date: 3/25/2011 9:00:00 AM

Project: 103360

Lab ID: 1103114-001

Matrix: Water

Client Sample ID: RB-032511

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Hexavalent Chromium by EPA Method 7196						Analyst: **BR**
Chromium, Hexavalent	ND	0.0500	H	mg/L	1	3/28/2011 3:41:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *3/29/2011*

Work Order: 1103114
CLIENT: Friedman & Bruya
Project: 103360

QC SUMMARY REPORT

Hexavalent Chromium by EPA Method 7196

Sample ID: **MB-R415** SampType: **MBLK** Units: **mg/L** Prep Date: RunNo: **415**
Client ID: **PBW** Batch ID: **R415** Analysis Date: **3/28/2011** SeqNo: **8489**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.0500									

Sample ID: **LCS-R415** SampType: **LCS** Units: **mg/L** Prep Date: RunNo: **415**
Client ID: **LCSW** Batch ID: **R415** Analysis Date: **3/28/2011** SeqNo: **8490**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	0.253	0.0500	0.2500	0	101	65	135				

Sample ID: **1103114-001ADUP** SampType: **DUP** Units: **mg/L** Prep Date: RunNo: **415**
Client ID: **RB-032511** Batch ID: **R415** Analysis Date: **3/28/2011** SeqNo: **8493**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.0500		0	0	0	0	0	0	30	H

Sample ID: **1103114-001AMS** SampType: **MS** Units: **mg/L** Prep Date: RunNo: **415**
Client ID: **RB-032511** Batch ID: **R415** Analysis Date: **3/28/2011** SeqNo: **8494**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	0.261	0.0500	0.2500	0	104	65	135				H

Sample ID: **1103114-001AMSD** SampType: **MSD** Units: **mg/L** Prep Date: RunNo: **415**
Client ID: **RB-032511** Batch ID: **R415** Analysis Date: **3/28/2011** SeqNo: **8495**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	0.257	0.0500	0.2500	0	103	65	135	0.2610	1.54	0	H

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

110314

Page # 1 of 1

Send Report To: Michael Erdahl

Company: Friedman and Bruya, Inc.

Address: 3012 16th Ave W

City, State, ZIP: Seattle, WA 98119

Phone #: (206) 285-8282 Fax #: (206) 283-5044

SUBCONTRACTER: Fremont

PROJECT NAME/NO.: 103360

PO #: A-925

REMARKS: Please Email Results merdahl@friedmanandbruya.com

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	Cr VI				Notes
RB-032511		3/25/11	0900	W	1							✓				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	3/28/11	11:30 AM
Received by:	Sean Galloway	Sean Galloway	Fremont Analytical	3/28/11	12:14 PM
Relinquished by:					
Received by:					

103360

SAMPLE CHAIN OF CUSTODY

ME 03/25/11 BI4 / VL

Page # 1 of 9

Send Report To Dana Cannon

Company Aspect

Address -

City, State, ZIP Seattle

Phone # ____ Fax # ____

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH ____

Rush charges authorized by ____

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

						ANALYSES REQUESTED												
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Metals Pb, As						Notes
NG-D9-6-9	01	3/25/11	1500	S	1	X						X						
NG-D9-12-15	02	3/25/11	1505	S	1	X						X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A Harbold	Aspect	3/25/11	1545
Received by:	Yelena Aravkina	F&B, Inc.	3/25/11	17:55
Relinquished by:				
Received by:		Samples received at 5 °C		

FORMS\COC\COC.DOC

103360

SAMPLE CHAIN OF CUSTODY

ME 03/28/11

BIG NV

Page # 2 of 4

Send Report To Dana Cannon

Company Aqueat

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	metal As, Pb						Notes
NG-H10-12-14	03	3/25/11	1355	S	1	X						X						
NG-D10-0-3	04		1425		1	X						X						
NG-D10-6-9	05		1430		1	X						X						
NG-D10-12-15	06		1435		1	X						X						
NG-F8-0-3	07		1300		1	X						X						
NG-F8-6-9	08		1305		1	X						X						
NG-F8-12-15	09		1310		1	X						X						
NG-F9-0-3	10		1325		1	X						X						
NG-F9-6-9	11		1330		1	X						X						
NG-F9-12-15	12		1335		1	X						X						

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Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R Hurlburt	Aqueat	3/25/11	1545
Received by:		Yelena Aravkina	FB, Inc.	3/25/11	17:55
Relinquished by:					
Received by:			Samples received at 5 °C		

FORMS\COC\COC.DOC

103360

SAMPLE CHAIN OF CUSTODY

ME 03/28/11

BIG / 41

Page # 3 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	metal As, Pb						Notes
NG-F10-0-3	13	3/25/11	1345	S	1	X						X						
F10-6-9	14	"	1350	"	1	X						X						
F10-12-15	15		1355		1	X						X						
NG-E10-03	16		1415		1	X						X						
E10-6-9	17		1420		1	X						X						
E10-12-15	18		1425		1	X						X						
NG-E9-0-3	19		1455		1	X						X						
E9-6-9	20		1500		1	X						X						
E9-12-15	21		1505		1	X						X						
NG-D9-0-3	22		1955		1	X						X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
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Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanlet	Aspect	3/25/11	1545
Received by:		Yelena Aravkina	FRB, Inc.	3/25/11	17:55
Relinquished by:					
Received by:			Samples received at 5 °C		

103360

SAMPLE CHAIN OF CUSTODY

ME 03/28/11

BIG 9/11

Page # 4 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle, WA

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crown Hill 100994

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Metal As, Pb						Notes
NG-F7-12-15	23	3/25/11	1210	S	1	X						X						
NG-I8-0-3	24		0835			X						X						
NG-I8-6-9	25		0840			X						X						
I8-12-15	26		0845			X						X						
NG-I7-0-3	27		0905			X						X						
I7-6-9	28		0910			X						X						
I7-12-15	29		0915			X						X						
NG-I6-0-3	30		0920			X						X						
I6-6-9	31		0925			X						X						
I6-12-15	32		0930			X						X						

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hartford	Aspect	3/25/11	1545
Received by:		Yelena Aravina	FBB, Inc.	3/25/11	17:24
Relinquished by:					
Received by:			Samples received at 5 °C		

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103360

SAMPLE CHAIN OF CUSTODY

ME 03/28/11

BTEX/VI

Page # 5 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS *(signature)*

PROJECT NAME/NO. Crawford 100094

PO#

REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Metals Pb, As						Notes
NG-H6 - 6-9	33	3/25/11	1110	S	1	X						X						
12-15	34		1115		1	X						X						
NG-H7 - 0-3	35		1215		1	X						X						
6-9	36		1220		1	X						X						
12-15	37		1225		1	X						X						
NG-H8 0-3	38		1150		1	X						X						
6-9	39		1155		1	X						X						
12-15	40		1200		1	X						X						
NG-H10 0-3	41		1345			X						X						
6-9	42	↓	1350	↓		X						X						

Friedman & Bruya, Inc.
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Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R. Hartford	Aspect	3/25/11	1545
Received by:		Yelena Aravina	F&B, Inc.	3/25/11	17:55
Relinquished by:					
Received by:			Samples received at 5 °C		

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103360

SAMPLE CHAIN OF CUSTODY

ME 03/25/11 BI4/V1

Page # 6 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert Hanford

PROJECT NAME/NO. Crowther II 100094

PO#

REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Metals As, Pb						Notes
NG-G10-0-3	43	3/25	0835	S	1	X						X						
6-9	44		0840		1	X						X						
12-15	45		0845		1	X						X						
NG-G9 0-3	46		0905		1	X						X						
6-9	47		0910		1	X						X						
12-15	48		0915		1	X						X						
NG-G7 0-3	49		0935		1	X						X						
6-9	50AB		0940		1	X						X						
12-15	51		0945		1	X						X						
NG-G6 0-3	52		1020		1	X						X						

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert Hanford	Robert Hanford	Aspect	3/25	1545
Received by:		Yelena Aravitskaya	F&B Inc.	3/25/11	17:55
Relinquished by:					
Received by:			Samples received at 5 °C		

Friedman & Bruya, Inc.
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103360

SAMPLE CHAIN OF CUSTODY

ME 03/25/11 BIY 1/11

Page # 2 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	MTCA 5 Metals						Notes
NG-G6-6-9	53A,B	3/25/11	1025	S	2	X						X						
~~12-15~~ 13.5-15	54A,B		1030		2	X						X						
NG-G5 0-3	55		1050		1	X						X						
6-9	56		1055		1	X						X						
~~12-15~~ 13.5-15	57A,B		1100		2	X						X						
NG-F6 0-3	58		1135		1	X						X						
6-9	59		1140		1	X						X						
12-15	60		1145		1	X						X						
NG-F7 0-3	61		1200		1	X						X						
6-9	62		1205		1	X						X						

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Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3/25/11	1545
Received by:		Yelena Aravkina	FRB, Inc.	3/25/11	17:55
Relinquished by:					
Received by:			Samples received at 5 °C		

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103360

SAMPLE CHAIN OF CUSTODY

ME 03/25/11 BEY 1/11

Page # 8 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle WA

Phone # Fax #

SAMPLERS (Signature)

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Metals Pb Hg						Notes
NG-I5 0-3	63	3/25/11	1000	S	1	X						X						
6-9	64		1005		1	X						X						
12-15	65		1010		1	X						X						
NG-I4 0-3	66		1025		1	X						X						
6-9	67		1030		1	X						X						
12-15	68		1045		2	X						X						
NG-H5 0-3	69		1050		1	X						X						
6-9	70		1055		1	X						X						
12-15	71		1100		1	X						X						
NG-H6 0-3	72		1105	S	1	X						X						

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R. Hanford	Aspect	3/25/11	1545
Received by:		Yelena Aravkina	FLB, Inc.	3/25/11	17:55
Relinquished by:					
Received by:			Samples received at 5 °C		

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103360 [redacted]

SAMPLE CHAIN OF CUSTODY

6 ??? A & B Rinsate - VI/BI

Send Report To: Dana Cameron
Company: Aspect
Address:
City, State, ZIP: Seattle
Phone #: Fax #:

SAMPLERS (signature): [signature] ME [redacted] 03/25/11

PROJECT NAME/NO.: Coonhill 100074

PO#:

REMARKS* As, Pb, Antimony, Cu, Cr, Se Vandium, Zn & Hex Cr.
**As Pb - only

Page # 9 of 9

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	CPAHs	PCBs	Total MTL*	Total MTLs As Pb **			Notes
RB-032511	73A-F	3/25/11	0900	W	6	X			X	X		X	X	X				

Friedman & Bruya, Inc.
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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Robert K Anhorn	Aspect	3/25/11	1545
Received by:	[signature]	Yelena Aravkina	FEB, Inc.	3/25/11	17:55
Relinquished by:					
Received by:			Samples received at 5 °C		

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 20, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on March 25, 2011 from the Crownhill 100094, F&BI 103342 project. There are 177 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0420R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 25, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crownhill 100094, F&BI 103342 project. The samples were received at 2 °C in good condition and were refrigerated upon receipt. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
103342-01	SG-J6-3
103342-02	SG-J6-0-3
103342-03	SG-J6-8
103342-04	SG-J6-6-9
103342-05	SG-J6-14
103342-06	SG-J6-12-15
103342-07	SG-G2-3
103342-08	SG-G2-0-3
103342-09	SG-G2-9
103342-10	SG-G2-6-9
103342-11	SG-G2-14
103342-12	SG-G2-12-15
103342-13	SG-F3-2
103342-14	SG-F3-0-3
103342-15	SG-F3-7
103342-16	SG-F3-6-9
103342-17	SG-F3-12-15
103342-18	SG-H3-2
103342-19	SG-H3-0-3
103342-20	SG-H3-8
103342-21	SG-H3-6-9
103342-22	SG-H3-13.5
103342-23	SG-H3-12-15
103342-24	NG-H9-2
103342-25	NG-H9-0-3
103342-26	NG-H9-8
103342-27	NG-H9-6-9
103342-28	NG-H9-12-15
103342-29	NG-H9-13
103342-30	NG-G8-2
103342-31	NG-G8-0-3
103342-32	NG-G8-8
103342-33	NG-G8-6-9
103342-34	NG-G8-13
103342-35	NG-G8-12-15
103342-36	NG-E6-2

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103342-37	NG-E6-0-3
103342-38	NG-E6-7
103342-39	NG-E6-6-9
103342-40	NG-E6-13
103342-41	NG-E6-12-15
103342-42	SG-I7-0-3
103342-43	SG-I7-8.5-10
103342-44	SG-I7-12-15
103342-45	NG-F4-0-3
103342-46	NG-F4-6-9
103342-47	NG-F4-12-15
103342-48	NG-F5-0-3
103342-49	NG-F5-8-10
103342-50	NG-F5-12-15
103342-51	NG-C7-2
103342-52	NG-C7-0-3
103342-53	NG-C7-7
103342-54	NG-C7-6-9
103342-55	NG-C7-13
103342-56	NG-C7-12-15
103342-57	NG-C7-18
103342-58	NG-C7-17-20
103342-59	SG-J7-3
103342-60	SG-J7-0-3
103342-61	SG-J7-9
103342-62	SG-J7-6-9
103342-63	SG-J7-14
103342-64	SG-J7-12-15
103342-65	NG-A7-6-9
103342-66	NG-A7-7
103342-67	NG-K3-0-3
103342-68	NG-K3-6-9
103342-69	NG-K3-12-15
103342-70	NG-I9-0-3
103342-71	NG-I9-6-9
103342-72	NG-I9-12-15
103342-73	SG-F3-13

The following methods were performed:

GRO and BTEX by Method NWTPH-Gx/8021B, Extraction Method 5030B/5035A

The surrogate used for this analysis was 4-bromofluorobenzene. All quality control requirements were acceptable.

DRO/RRO by Method NWTPH-Dx, Extraction Method 3510C/3550B
The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

PAHs by Method 8270D SIM, Extraction Method 3510C/3550B
Soil sample concentrations were reported on a dry weight basis. All quality control requirements were acceptable.

VOCs by Method 8260B, Extraction Method 5030B/5035A
Soil sample concentrations were reported on a dry weight basis. The 8260C calibration standard failed the acceptance criteria for several analytes. The data were flagged accordingly. The 8260C laboratory control sample and laboratory control sample duplicate failed the relative percent difference for dichlorofluromethane. The analyte was not detected therefore the data were acceptable. All other quality control requirements were acceptable.

SVOCs by Method 8270D, Extraction Method 3510C/3550B
Soil sample concentrations were reported on a dry weight basis. An 8270D internal standard failed the acceptance criteria for several samples due to matrix interferences. The data were flagged accordingly. The samples were diluted and reanalyzed. The 8270D matrix spike and matrix spike duplicate failed the relative percent difference for several compounds. The analyte was not detected therefore the data were acceptable. All other quality control requirements were acceptable. Samples SG-G2-0-3, SG-F3-0-3, NG-E6-6-9, and SG-J7-0-3 were analyzed at a dilution due to matrix interference.

Metals by Method 200.8, Extraction Method 200.8
Soil sample concentrations were reported on a dry weight basis. All quality control requirements were acceptable.

Mercury by Method 1631E, Extraction Method 200.8
All quality control requirements were acceptable.

Hexavalent Chromium by Method 7196, Extraction Method 7196
Soil sample concentrations were reported on a dry weight basis. All quality control requirements were acceptable.

PCBs by Method 8082, Extraction Method 3510C/3550B/3580
All quality control requirements were acceptable.

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 03/28/11
Date Analyzed: 03/28/11 and 03/29/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-J6-0-3 103342-02	<50	380	95
SG-J6-6-9 103342-04	<50	<250	96
SG-J6-12-15 103342-06	<50	<250	95
SG-G2-0-3 103342-08	61 x	420	94
SG-G2-6-9 103342-10	<50	<250	93
SG-G2-12-15 103342-12	<50	<250	97
SG-F3-0-3 103342-14	930	1,200	93
SG-F3-6-9 103342-16	<50	<250	101
SG-F3-12-15 103342-17	<50	<250	91
SG-H3-0-3 103342-19	<50	<250	91
SG-H3-6-9 103342-21	<50	<250	93

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 03/28/11
Date Analyzed: 03/28/11 and 03/29/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-H3-12-15 103342-23	<50	<250	96
NG-H9-0-3 103342-25	<50	<250	90
NG-H9-6-9 103342-27	<50	<250	93
NG-H9-12-15 103342-28	<50	<250	90
NG-G8-0-3 103342-31	<50	<250	92
NG-G8-6-9 103342-33	<50	<250	92
NG-G8-12-15 103342-35	<50	<250	90
NG-E6-0-3 103342-37	<50	<250	91
NG-E6-6-9 103342-39	<50	<250	93
NG-E6-12-15 103342-41	<50	<250	104
SG-I7-0-3 103342-42	<50	<250	101

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 03/28/11
Date Analyzed: 03/28/11 and 03/29/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-I7-8.5-10 103342-43	<50	<250	106
SG-I7-12-15 103342-44	<50	<250	104
NG-F4-0-3 103342-45	<50	<250	90
NG-F4-6-9 103342-46	<50	<250	115
NG-F4-12-15 103342-47	<50	<250	104
NG-F5-0-3 103342-48	<50	<250	103
NG-F5-8-10 103342-49	2,200	1,700	117
NG-F5-12-15 103342-50	<50	<250	110
NG-C7-0-3 103342-52	<50	<250	112
NG-C7-6-9 103342-54	<50	<250	106
NG-C7-12-15 103342-56	<50	<250	108

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 03/28/11
Date Analyzed: 03/28/11 and 03/29/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-C7-17-20 103342-58	<50	<250	106
SG-J7-0-3 103342-60	940 x	3,500	116
SG-J7-6-9 103342-62	<50	<250	106
SG-J7-12-15 103342-64	<50	<250	105
NG-A7-6-9 103342-65	<50	<250	100
NG-K3-0-3 103342-67	<50	<250	109
NG-K3-6-9 103342-68	<50	<250	110
NG-K3-12-15 103342-69	<50	<250	98
NG-I9-0-3 103342-70	<50	<250	100
NG-I9-6-9 103342-71	<50	<250	98

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 03/28/11
Date Analyzed: 03/28/11 and 03/29/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-I9-12-15 103342-72	<50	<250	99
Method Blank 01-528 MB	<50	<250	93
Method Blank 01-529 MB	<50	<250	106
Method Blank 01-530 MB	<50	<250	97

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-02
Date Analyzed:	03/29/11	Data File:	103342-02.073
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	11.8
Lead	2,260

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-04
Date Analyzed:	03/29/11	Data File:	103342-04.074
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.34
Lead	5.73

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J6-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-06
Date Analyzed:	03/29/11	Data File:	103342-06.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.04
Lead	4.57

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G2-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-08
Date Analyzed:	03/29/11	Data File:	103342-08.076
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	85	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	9.42

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G2-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-10
Date Analyzed:	03/29/11	Data File:	103342-10.070
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.32
Lead	1.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G2-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-12
Date Analyzed:	03/29/11	Data File:	103342-12.078
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.04
Lead	1.46

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F3-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-14
Date Analyzed:	03/29/11	Data File:	103342-14.079
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.15
Lead	27.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F3-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-16
Date Analyzed:	03/29/11	Data File:	103342-16.080
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.47
Lead	2.86

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F3-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-17
Date Analyzed:	03/29/11	Data File:	103342-17.081
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.81
Lead	2.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H3-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-19
Date Analyzed:	03/29/11	Data File:	103342-19.082
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	83	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.22
Lead	46.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H3-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-21
Date Analyzed:	03/29/11	Data File:	103342-21.083
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	85	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.21

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H3-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-23
Date Analyzed:	03/29/11	Data File:	103342-23.084
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.34
Lead	1.84

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H9-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-25
Date Analyzed:	03/29/11	Data File:	103342-25.085
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.84
Lead	5.33

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H9-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-27
Date Analyzed:	03/29/11	Data File:	103342-27.086
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.53
Lead	2.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-H9-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-28
Date Analyzed:	03/29/11	Data File:	103342-28.088
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G8-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-31
Date Analyzed:	03/29/11	Data File:	103342-31.089
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	8.17

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G8-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-33
Date Analyzed:	03/29/11	Data File:	103342-33.090
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.87
Lead	7.72

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G8-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-35
Date Analyzed:	03/29/11	Data File:	103342-35.091
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.61
Lead	43.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-37
Date Analyzed:	03/29/11	Data File:	103342-37.092
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.37
Lead	12.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-39
Date Analyzed:	03/29/11	Data File:	103342-39.093
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	33.7
Lead	2,680

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E6-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-41
Date Analyzed:	03/29/11	Data File:	103342-41.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	23.2
Lead	2,420

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-42
Date Analyzed:	03/29/11	Data File:	103342-42.018
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	94	60	125
Indium	90	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	18.9
Chromium	9.41
Copper	13.3
Zinc	17.2
Arsenic	1.29
Selenium	<1
Antimony	1.75
Lead	5.95

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I7-8.5-10	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-43
Date Analyzed:	03/29/11	Data File:	103342-43.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	99	60	125
Indium	89	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	16.3
Chromium	14.1
Copper	14.5
Zinc	14.6
Arsenic	1.09
Selenium	<1
Antimony	<1
Lead	2.00

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-44
Date Analyzed:	03/29/11	Data File:	103342-44.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	99	60	125
Indium	87	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	17.2
Chromium	11.7
Copper	13.1
Zinc	15.5
Arsenic	1.06
Selenium	<1
Antimony	<1
Lead	1.34

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F4-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-45
Date Analyzed:	03/29/11	Data File:	103342-45.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	101	60	125
Indium	94	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	20.5
Chromium	12.5
Copper	34.2
Zinc	77.4
Arsenic	10.6
Selenium	<1
Antimony	<1
Lead	25.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F4-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-46 x10
Date Analyzed:	03/29/11	Data File:	103342-46 x10.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	99	60	125
Indium	89	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	41.1
Chromium	206
Copper	6,820
Zinc	8,800
Arsenic	38.9
Selenium	<10
Antimony	82.7
Lead	2,580

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F4-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-47
Date Analyzed:	03/29/11	Data File:	103342-47.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	87	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	18.8
Chromium	9.75
Copper	33.2
Zinc	30.0
Arsenic	1.84
Selenium	<1
Antimony	<1
Lead	34.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F5-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-48
Date Analyzed:	03/29/11	Data File:	103342-48.025
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	101	60	125
Indium	90	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	23.9
Chromium	12.4
Copper	39.9
Zinc	77.4
Arsenic	1.54
Selenium	<1
Antimony	1.83
Lead	52.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F5-8-10	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-49 x10
Date Analyzed:	03/29/11	Data File:	103342-49 x10.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	94	60	125
Indium	91	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	382
Chromium	159
Copper	4,360
Zinc	6,520
Arsenic	49.6
Selenium	<10
Antimony	544
Lead	3,700

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F5-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-50 x10
Date Analyzed:	03/29/11	Data File:	103342-50 x10.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	94	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	87.1
Chromium	576
Copper	3,010
Zinc	14,600
Arsenic	57.9
Selenium	<10
Antimony	98.1
Lead	26,300

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-52
Date Analyzed:	03/29/11	Data File:	103342-52.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	90	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	21.5
Chromium	13.7
Copper	18.9
Zinc	58.1
Arsenic	1.84
Selenium	<1
Antimony	1.13
Lead	10.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-54
Date Analyzed:	03/29/11	Data File:	103342-54.028
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	88	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	28.6
Chromium	18.5
Copper	16.2
Zinc	28.0
Arsenic	2.15
Selenium	<1
Antimony	1.17
Lead	5.56

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-56
Date Analyzed:	03/29/11	Data File:	103342-56.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	87	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	19.9
Chromium	13.9
Copper	12.3
Zinc	23.2
Arsenic	1.52
Selenium	<1
Antimony	<1
Lead	3.12

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C7-17-20	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-58
Date Analyzed:	03/29/11	Data File:	103342-58.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	22.0
Chromium	14.1
Copper	10.6
Zinc	16.9
Arsenic	1.63
Selenium	<1
Antimony	<1
Lead	2.40

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-60 x10
Date Analyzed:	03/29/11	Data File:	103342-60 x10.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	91	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	77.8
Chromium	146
Copper	5,720
Zinc	6,380
Arsenic	25.6
Selenium	<10
Antimony	195
Lead	3,450

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-62 x10
Date Analyzed:	03/29/11	Data File:	103342-62 x10.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	88	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	15.8
Chromium	1,710
Copper	5,730
Zinc	5,810
Arsenic	35.1
Selenium	<10
Antimony	544
Lead	1,950

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-64
Date Analyzed:	03/29/11	Data File:	103342-64.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	85	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	11.9
Chromium	7.07
Copper	11.3
Zinc	10.2
Arsenic	<1
Selenium	<1
Antimony	<1
Lead	1.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-65
Date Analyzed:	03/29/11	Data File:	103342-65.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	85	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	25.8
Chromium	16.7
Copper	13.6
Zinc	22.1
Arsenic	1.78
Selenium	<1
Antimony	<1
Lead	2.72

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K3-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-67
Date Analyzed:	03/29/11	Data File:	103342-67.052
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.82
Lead	89.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K3-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-68
Date Analyzed:	03/29/11	Data File:	103342-68.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	15.1
Lead	762

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-K3-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-69
Date Analyzed:	03/29/11	Data File:	103342-69.095
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	85	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.75
Lead	2.18

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I9-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-70
Date Analyzed:	03/29/11	Data File:	103342-70.096
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.68
Lead	76.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I9-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-71
Date Analyzed:	03/29/11	Data File:	103342-71.098
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.91
Lead	2.02

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-I9-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	103342-72
Date Analyzed:	03/29/11	Data File:	103342-72.099
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.36
Lead	1.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	I1-209 mb
Date Analyzed:	03/29/11	Data File:	I1-209 mb.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	I1-210 mb
Date Analyzed:	03/29/11	Data File:	I1-210 mb.012
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Vanadium	<1
Chromium	<1
Copper	<1
Zinc	<1
Arsenic	<1
Selenium	<1
Antimony	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/28/11	Lab ID:	I1-211 mb
Date Analyzed:	03/29/11	Data File:	I1-211 mb.094
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	84	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 04/04/11
Date Analyzed: 04/07/11

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR HEXAVALENT CHROMIUM USING EPA METHOD 7196

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Hexavalent Chromium
SG-I7-0-3 103342-42	<5.0
SG-I7-8.5-10 103342-43	<5.0
SG-I7-12-15 103342-44	<5.0
NG-F4-0-3 103342-45	<5.0
NG-F4-6-9 103342-46	<5.0
NG-F4-12-15 103342-47	<5.0
NG-F5-0-3 103342-48	<5.0
NG-F5-8-10 103342-49	<5.0
NG-F5-12-15 103342-50	<5.0
NG-C7-0-3 103342-52	<5.0
NG-C7-6-9 103342-54	<5.0

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 04/04/11
Date Analyzed: 04/07/11

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR HEXAVALENT CHROMIUM USING EPA METHOD 7196

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Hexavalent Chromium
NG-C7-12-15 103342-56	<5.0
NG-C7-17-20 103342-58	<5.0
SG-J7-0-3 103342-60	<5.0
SG-J7-6-9 103342-62	<5.0
SG-J7-12-15 103342-64	<5.0
NG-A7-6-9 103342-65	<5.0
Method Blank	<5.0

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-J6-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-01
Date Analyzed:	04/05/11	Data File:	040519.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	42	158
Toluene-d8	105	42	159
4-Bromofluorobenzene	107	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-J6-8	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-03
Date Analyzed:	04/05/11	Data File:	040520.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	112	42	158
Toluene-d8	108	42	159
4-Bromofluorobenzene	114	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-J6-14	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-05
Date Analyzed:	04/05/11	Data File:	040521.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	42	158
Toluene-d8	95	42	159
4-Bromofluorobenzene	93	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-G2-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-07
Date Analyzed:	04/05/11	Data File:	040522.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	42	158
Toluene-d8	101	42	159
4-Bromofluorobenzene	100	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-G2-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-09
Date Analyzed:	04/05/11	Data File:	040523.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	42	158
Toluene-d8	99	42	159
4-Bromofluorobenzene	98	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-G2-14	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-11
Date Analyzed:	04/05/11	Data File:	040524.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	42	158
Toluene-d8	98	42	159
4-Bromofluorobenzene	100	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-F3-2	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-13
Date Analyzed:	04/05/11	Data File:	040525.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	42	158
Toluene-d8	102	42	159
4-Bromofluorobenzene	103	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-F3-7	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-15
Date Analyzed:	04/05/11	Data File:	040526.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	42	158
Toluene-d8	101	42	159
4-Bromofluorobenzene	105	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-H3-2	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-18
Date Analyzed:	04/05/11	Data File:	040527.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	86	42	158
Toluene-d8	85	42	159
4-Bromofluorobenzene	85	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	0.060	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-H3-8	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-20
Date Analyzed:	04/05/11	Data File:	040528.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	42	158
Toluene-d8	100	42	159
4-Bromofluorobenzene	102	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-H3-13.5	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-22
Date Analyzed:	04/05/11	Data File:	040529.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	42	158
Toluene-d8	100	42	159
4-Bromofluorobenzene	101	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-H9-2	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-24
Date Analyzed:	04/05/11	Data File:	040530.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	42	158
Toluene-d8	106	42	159
4-Bromofluorobenzene	107	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-H9-8	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-26
Date Analyzed:	04/05/11	Data File:	040531.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	42	158
Toluene-d8	104	42	159
4-Bromofluorobenzene	106	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-H9-13	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-29
Date Analyzed:	04/05/11	Data File:	040532.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	42	158
Toluene-d8	98	42	159
4-Bromofluorobenzene	99	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-G8-2	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-30
Date Analyzed:	04/05/11	Data File:	040533.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	42	158
Toluene-d8	101	42	159
4-Bromofluorobenzene	103	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-G8-8	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-32
Date Analyzed:	04/05/11	Data File:	040538.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	42	158
Toluene-d8	100	42	159
4-Bromofluorobenzene	103	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-G8-13	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-34
Date Analyzed:	04/05/11	Data File:	040539.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	42	158
Toluene-d8	98	42	159
4-Bromofluorobenzene	99	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-E6-2	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-36
Date Analyzed:	04/05/11	Data File:	040540.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	42	158
Toluene-d8	99	42	159
4-Bromofluorobenzene	101	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-E6-7	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-38
Date Analyzed:	04/05/11	Data File:	040541.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	42	158
Toluene-d8	96	42	159
4-Bromofluorobenzene	99	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-E6-13	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	103342-40
Date Analyzed:	04/05/11	Data File:	040542.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	42	158
Toluene-d8	105	42	159
4-Bromofluorobenzene	108	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-C7-2	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	103342-51
Date Analyzed:	04/04/11	Data File:	040421.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5 ca	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-C7-7	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	103342-53
Date Analyzed:	04/05/11	Data File:	040429.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5 ca	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-C7-13	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	103342-55
Date Analyzed:	04/05/11	Data File:	040430.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	104	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5 ca	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-C7-18	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	103342-57
Date Analyzed:	04/05/11	Data File:	040431.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5 ca	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-J7-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	103342-59
Date Analyzed:	04/05/11	Data File:	040432.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5 ca	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	0.10	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	0.11
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-J7-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	103342-61
Date Analyzed:	04/05/11	Data File:	040433.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5 ca	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-J7-14	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	103342-63
Date Analyzed:	04/05/11	Data File:	040511.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5 ca	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	NG-A7-7	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	103342-66
Date Analyzed:	04/05/11	Data File:	040509.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5 ca	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SG-F3-13	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	103342-73
Date Analyzed:	04/05/11	Data File:	040510.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5 ca	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/04/11	Lab ID:	01-504 mb
Date Analyzed:	04/04/11	Data File:	040420.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5 ca	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	04/05/11	Lab ID:	01-503 mb
Date Analyzed:	04/05/11	Data File:	040518.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	116	42	158
Toluene-d8	116	42	159
4-Bromofluorobenzene	117	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-J6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-02 1/5
Date Analyzed:	04/05/11	Data File:	040438.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	110	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.013
Anthracene	<0.01
Fluoranthene	0.046
Pyrene	0.096
Benz(a)anthracene	0.035
Chrysene	0.090
Benzo(a)pyrene	0.080
Benzo(b)fluoranthene	0.083
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	0.067
Dibenz(a,h)anthracene	0.026
Benzo(g,h,i)perylene	0.25

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-J6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-04 1/5
Date Analyzed:	04/04/11	Data File:	040410.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	110	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-J6-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-06 1/5
Date Analyzed:	04/04/11	Data File:	040411.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	106	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-G2-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-08 1/5
Date Analyzed:	04/15/11	Data File:	041423.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	79	50	150
Benzo(a)anthracene-d12	151	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.040
Anthracene	<0.01
Fluoranthene	0.018
Pyrene	0.034
Benz(a)anthracene	0.018
Chrysene	0.066
Benzo(a)pyrene	0.012
Benzo(b)fluoranthene	0.031
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	0.015
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	0.043

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-G2-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-10 1/5
Date Analyzed:	04/04/11	Data File:	040412.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	104	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-G2-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-12 1/5
Date Analyzed:	04/04/11	Data File:	040418.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	50	150
Benzo(a)anthracene-d12	103	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-F3-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-14 1/5
Date Analyzed:	04/15/11	Data File:	041424.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	81	50	150
Benzo(a)anthracene-d12	124	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.96 ve
Acenaphthylene	0.12
Acenaphthene	0.056
Fluorene	0.42
Phenanthrene	0.48
Anthracene	0.070
Fluoranthene	0.17
Pyrene	0.27
Benz(a)anthracene	0.11
Chrysene	0.20
Benzo(a)pyrene	0.097
Benzo(b)fluoranthene	0.13
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	0.094
Dibenz(a,h)anthracene	0.034
Benzo(g,h,i)perylene	0.12

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-F3-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-14 1/50
Date Analyzed:	04/08/11	Data File:	040716.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	146	50	150
Benzo(a)anthracene-d12	123	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.96
Acenaphthylene	<0.1
Acenaphthene	0.11
Fluorene	0.35
Phenanthrene	0.46
Anthracene	<0.1
Fluoranthene	0.14
Pyrene	0.26
Benz(a)anthracene	0.11
Chrysene	0.21
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	0.11
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	0.11

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-F3-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-16 1/5
Date Analyzed:	04/04/11	Data File:	040419.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	50	150
Benzo(a)anthracene-d12	106	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-F3-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-17 1/5
Date Analyzed:	04/04/11	Data File:	040415.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	89	50	150
Benzo(a)anthracene-d12	107	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-H3-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-19 1/5
Date Analyzed:	04/05/11	Data File:	040439.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	98	50	150
Benzo(a)anthracene-d12	108	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.012
Anthracene	<0.01
Fluoranthene	0.024
Pyrene	0.030
Benz(a)anthracene	0.013
Chrysene	0.023
Benzo(a)pyrene	0.024
Benzo(b)fluoranthene	0.031
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	0.026
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	0.037

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-H3-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-21 1/5
Date Analyzed:	04/04/11	Data File:	040416.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	50	150
Benzo(a)anthracene-d12	103	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-H3-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-23 1/5
Date Analyzed:	04/04/11	Data File:	040417.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	106	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-H9-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-25 1/5
Date Analyzed:	04/05/11	Data File:	040436.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	99	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-H9-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-27 1/5
Date Analyzed:	04/04/11	Data File:	040422.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	100	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-H9-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-28 1/5
Date Analyzed:	04/04/11	Data File:	040423.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	103	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-G8-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-31 1/5
Date Analyzed:	04/05/11	Data File:	040437.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	101	50	150
Benzo(a)anthracene-d12	97	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	0.019
Benz(a)anthracene	<0.01
Chrysene	0.018
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	0.012
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	0.018
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	0.11

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-G8-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-33 1/5
Date Analyzed:	04/05/11	Data File:	040424.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	98	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-G8-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-35 1/5
Date Analyzed:	04/05/11	Data File:	040425.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	50	150
Benzo(a)anthracene-d12	102	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.016
Anthracene	<0.01
Fluoranthene	0.025
Pyrene	0.028
Benz(a)anthracene	<0.01
Chrysene	0.013
Benzo(a)pyrene	0.013
Benzo(b)fluoranthene	0.014
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	0.011
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	0.011

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-E6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-37 1/5
Date Analyzed:	04/05/11	Data File:	040426.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	96	50	150
Benzo(a)anthracene-d12	104	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-E6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-39 1/5
Date Analyzed:	04/08/11	Data File:	040718.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	83	50	150
Benzo(a)anthracene-d12	107	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.021
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.030
Anthracene	<0.01
Fluoranthene	0.027
Pyrene	0.068
Benz(a)anthracene	0.030
Chrysene	0.10
Benzo(a)pyrene	0.072
Benzo(b)fluoranthene	0.060
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	0.14
Dibenz(a,h)anthracene	0.033
Benzo(g,h,i)perylene	0.85

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-E6-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-41 1/5
Date Analyzed:	04/05/11	Data File:	040434.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	101	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-C7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-52 1/5
Date Analyzed:	04/01/11	Data File:	040111.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	103	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	0.025

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-C7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-54 1/5
Date Analyzed:	04/01/11	Data File:	040113.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	89	50	150
Benzo(a)anthracene-d12	109	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-C7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-56 1/5
Date Analyzed:	04/04/11	Data File:	040406.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	89	50	150
Benzo(a)anthracene-d12	104	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-C7-17-20	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-58 1/5
Date Analyzed:	04/04/11	Data File:	040408.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	108	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-J7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-60 1/500
Date Analyzed:	04/08/11	Data File:	040719.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	411 ds	50	150
Benzo(a)anthracene-d12	112	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<1
Acenaphthylene	<1
Acenaphthene	<1
Fluorene	<1
Phenanthrene	27
Anthracene	2.7
Fluoranthene	46
Pyrene	54
Benz(a)anthracene	15
Chrysene	22
Benzo(a)pyrene	18
Benzo(b)fluoranthene	29
Benzo(k)fluoranthene	8.8
Indeno(1,2,3-cd)pyrene	21
Dibenz(a,h)anthracene	3.8
Benzo(g,h,i)perylene	20

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-J7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-62 1/5
Date Analyzed:	04/05/11	Data File:	040435.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	95	50	150
Benzo(a)anthracene-d12	104	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.054
Anthracene	<0.01
Fluoranthene	0.095
Pyrene	0.15
Benz(a)anthracene	0.032
Chrysene	0.061
Benzo(a)pyrene	0.071
Benzo(b)fluoranthene	0.093
Benzo(k)fluoranthene	0.037
Indeno(1,2,3-cd)pyrene	0.093
Dibenz(a,h)anthracene	0.015
Benzo(g,h,i)perylene	0.087

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SG-J7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-64 1/5
Date Analyzed:	04/04/11	Data File:	040407.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	89	50	150
Benzo(a)anthracene-d12	109	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	NG-A7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-65 1/5
Date Analyzed:	04/04/11	Data File:	040409.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	106	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	01-541 mb 1/5
Date Analyzed:	04/04/11	Data File:	040405.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	107	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	01-542 mb 1/5
Date Analyzed:	04/01/11	Data File:	040110.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	99	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-J6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-02
Date Analyzed:	04/09/11	Data File:	040827.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	80	50	150
Phenol-d6	79	50	150
Nitrobenzene-d5	86	50	150
2-Fluorobiphenyl	94	50	150
2,4,6-Tribromophenol	80	50	150
Terphenyl-d14	96 J	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	0.034
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03 J
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3 J
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03 J
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-J6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-02 1/10
Date Analyzed:	04/18/11	Data File:	041810.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	72	50	150
Phenol-d6	86	50	150
Nitrobenzene-d5	84	50	150
2-Fluorobiphenyl	90	50	150
2,4,6-Tribromophenol	67	50	150
Terphenyl-d14	91	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<3	2,4,6-Trichlorophenol	<3
Bis(2-chloroethyl) ether	<0.3	2,4,5-Trichlorophenol	<3
2-Chlorophenol	<3	2-Chloronaphthalene	<0.3
1,3-Dichlorobenzene	<0.3	2-Nitroaniline	<0.3
1,4-Dichlorobenzene	<0.3	Dimethyl phthalate	<0.3
1,2-Dichlorobenzene	<0.3	2,6-Dinitrotoluene	<0.3
Benzyl alcohol	<0.3	3-Nitroaniline	<9
Bis(2-chloroisopropyl) ether	<0.3	2,4-Dinitrophenol	<9
2-Methylphenol	<3	Dibenzofuran	<0.3
Hexachloroethane	<0.3	2,4-Dinitrotoluene	<0.3
N-Nitroso-di-n-propylamine	<0.3	4-Nitrophenol	<3
3-Methylphenol + 4-Methylphenol	<6	Diethyl phthalate	<0.3
Nitrobenzene	<0.3	4-Chlorophenyl phenyl ether	<0.3
Isophorone	<0.3	N-Nitrosodiphenylamine	<0.3
2-Nitrophenol	<3	4-Nitroaniline	<9
2,4-Dimethylphenol	<3	4,6-Dinitro-2-methylphenol	<9
Benzoic acid	<15	4-Bromophenyl phenyl ether	<0.3
Bis(2-chloroethoxy)methane	<0.3	Hexachlorobenzene	<0.3
2,4-Dichlorophenol	<3	Pentachlorophenol	<3
1,2,4-Trichlorobenzene	<0.3	Carbazole	<0.3
Hexachlorobutadiene	<0.3	Di-n-butyl phthalate	<0.3
4-Chloroaniline	<30	Benzyl butyl phthalate	<0.3
4-Chloro-3-methylphenol	<3	Bis(2-ethylhexyl) phthalate	<3
2-Methylnaphthalene	<0.3	Di-n-octyl phthalate	<0.3
Hexachlorocyclopentadiene	<0.9		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-J6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-04
Date Analyzed:	04/08/11	Data File:	040809.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	96	50	150
Phenol-d6	89	50	150
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	98	50	150
2,4,6-Tribromophenol	93	50	150
Terphenyl-d14	104	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-J6-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-06
Date Analyzed:	04/08/11	Data File:	040812.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	93	50	150
Phenol-d6	89	50	150
Nitrobenzene-d5	91	50	150
2-Fluorobiphenyl	95	50	150
2,4,6-Tribromophenol	87	50	150
Terphenyl-d14	98	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-G2-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-08 1/50
Date Analyzed:	04/09/11	Data File:	040834.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	67	50	150
Phenol-d6	68	50	150
Nitrobenzene-d5	82	50	150
2-Fluorobiphenyl	82	50	150
2,4,6-Tribromophenol	50	50	150
Terphenyl-d14	95	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<15	2,4,6-Trichlorophenol	<15
Bis(2-chloroethyl) ether	<1.5	2,4,5-Trichlorophenol	<15
2-Chlorophenol	<15	2-Chloronaphthalene	<1.5
1,3-Dichlorobenzene	<1.5	2-Nitroaniline	<1.5
1,4-Dichlorobenzene	<1.5	Dimethyl phthalate	<1.5
1,2-Dichlorobenzene	<1.5	2,6-Dinitrotoluene	<1.5
Benzyl alcohol	<1.5	3-Nitroaniline	<45
Bis(2-chloroisopropyl) ether	<1.5	2,4-Dinitrophenol	<45
2-Methylphenol	<15	Dibenzofuran	<1.5
Hexachloroethane	<1.5	2,4-Dinitrotoluene	<1.5
N-Nitroso-di-n-propylamine	<1.5	4-Nitrophenol	<15
3-Methylphenol + 4-Methylphenol	<30	Diethyl phthalate	<1.5
Nitrobenzene	<1.5	4-Chlorophenyl phenyl ether	<1.5
Isophorone	<1.5	N-Nitrosodiphenylamine	<1.5
2-Nitrophenol	<15	4-Nitroaniline	<45
2,4-Dimethylphenol	<15	4,6-Dinitro-2-methylphenol	<45
Benzoic acid	<75	4-Bromophenyl phenyl ether	<1.5
Bis(2-chloroethoxy)methane	<1.5	Hexachlorobenzene	<1.5
2,4-Dichlorophenol	<15	Pentachlorophenol	<15
1,2,4-Trichlorobenzene	<1.5	Carbazole	<1.5
Hexachlorobutadiene	<1.5	Di-n-butyl phthalate	<1.5
4-Chloroaniline	<150	Benzyl butyl phthalate	<1.5
4-Chloro-3-methylphenol	<15	Bis(2-ethylhexyl) phthalate	<15
2-Methylnaphthalene	<1.5	Di-n-octyl phthalate	<1.5
Hexachlorocyclopentadiene	<4.5		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-G2-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-10
Date Analyzed:	04/08/11	Data File:	040805.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	95	50	150
Phenol-d6	92	50	150
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	98	50	150
2,4,6-Tribromophenol	91	50	150
Terphenyl-d14	100	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-G2-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-12
Date Analyzed:	04/08/11	Data File:	040808.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	94	50	150
Phenol-d6	91	50	150
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	99	50	150
2,4,6-Tribromophenol	92	50	150
Terphenyl-d14	100	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-F3-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-14 1/50
Date Analyzed:	04/12/11	Data File:	041216A.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	50	150
Phenol-d6	74	50	150
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	89	50	150
2,4,6-Tribromophenol	52	50	150
Terphenyl-d14	88	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<15	2,4,6-Trichlorophenol	<15
Bis(2-chloroethyl) ether	<1.5	2,4,5-Trichlorophenol	<15
2-Chlorophenol	<15	2-Chloronaphthalene	<1.5
1,3-Dichlorobenzene	<1.5	2-Nitroaniline	<1.5
1,4-Dichlorobenzene	<1.5	Dimethyl phthalate	<1.5
1,2-Dichlorobenzene	<1.5	2,6-Dinitrotoluene	<1.5
Benzyl alcohol	<1.5	3-Nitroaniline	<45
Bis(2-chloroisopropyl) ether	<1.5	2,4-Dinitrophenol	<45
2-Methylphenol	<15	Dibenzofuran	<1.5
Hexachloroethane	<1.5	2,4-Dinitrotoluene	<1.5
N-Nitroso-di-n-propylamine	<1.5	4-Nitrophenol	<15
3-Methylphenol + 4-Methylphenol	<30	Diethyl phthalate	<1.5
Nitrobenzene	<1.5	4-Chlorophenyl phenyl ether	<1.5
Isophorone	<1.5	N-Nitrosodiphenylamine	<1.5
2-Nitrophenol	<15	4-Nitroaniline	<45
2,4-Dimethylphenol	<15	4,6-Dinitro-2-methylphenol	<45
Benzoic acid	<75	4-Bromophenyl phenyl ether	<1.5
Bis(2-chloroethoxy)methane	<1.5	Hexachlorobenzene	<1.5
2,4-Dichlorophenol	<15	Pentachlorophenol	<15
1,2,4-Trichlorobenzene	<1.5	Carbazole	<1.5
Hexachlorobutadiene	<1.5	Di-n-butyl phthalate	<1.5
4-Chloroaniline	<150	Benzyl butyl phthalate	<1.5
4-Chloro-3-methylphenol	<15	Bis(2-ethylhexyl) phthalate	<15
2-Methylnaphthalene	2.3	Di-n-octyl phthalate	<1.5
Hexachlorocyclopentadiene	<4.5		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-F3-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-16
Date Analyzed:	04/08/11	Data File:	040813.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	94	50	150
Phenol-d6	90	50	150
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	96	50	150
2,4,6-Tribromophenol	91	50	150
Terphenyl-d14	99	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-F3-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-17
Date Analyzed:	04/08/11	Data File:	040814.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	92	50	150
Phenol-d6	87	50	150
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	96	50	150
2,4,6-Tribromophenol	91	50	150
Terphenyl-d14	96	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-H3-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-19
Date Analyzed:	04/09/11	Data File:	040828.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	86	50	150
Phenol-d6	83	50	150
Nitrobenzene-d5	90	50	150
2-Fluorobiphenyl	96	50	150
2,4,6-Tribromophenol	92	50	150
Terphenyl-d14	105 J	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	0.060 J
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3 J
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03 J
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-H3-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-19 1/50
Date Analyzed:	04/12/11	Data File:	041214A.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	70	50	150
Phenol-d6	79	50	150
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	85	50	150
2,4,6-Tribromophenol	64	50	150
Terphenyl-d14	87	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<15	2,4,6-Trichlorophenol	<15
Bis(2-chloroethyl) ether	<1.5	2,4,5-Trichlorophenol	<15
2-Chlorophenol	<15	2-Chloronaphthalene	<1.5
1,3-Dichlorobenzene	<1.5	2-Nitroaniline	<1.5
1,4-Dichlorobenzene	<1.5	Dimethyl phthalate	<1.5
1,2-Dichlorobenzene	<1.5	2,6-Dinitrotoluene	<1.5
Benzyl alcohol	<1.5	3-Nitroaniline	<45
Bis(2-chloroisopropyl) ether	<1.5	2,4-Dinitrophenol	<45
2-Methylphenol	<15	Dibenzofuran	<1.5
Hexachloroethane	<1.5	2,4-Dinitrotoluene	<1.5
N-Nitroso-di-n-propylamine	<1.5	4-Nitrophenol	<15
3-Methylphenol + 4-Methylphenol	<30	Diethyl phthalate	<1.5
Nitrobenzene	<1.5	4-Chlorophenyl phenyl ether	<1.5
Isophorone	<1.5	N-Nitrosodiphenylamine	<1.5
2-Nitrophenol	<15	4-Nitroaniline	<45
2,4-Dimethylphenol	<15	4,6-Dinitro-2-methylphenol	<45
Benzoic acid	<75	4-Bromophenyl phenyl ether	<1.5
Bis(2-chloroethoxy)methane	<1.5	Hexachlorobenzene	<1.5
2,4-Dichlorophenol	<15	Pentachlorophenol	<15
1,2,4-Trichlorobenzene	<1.5	Carbazole	<1.5
Hexachlorobutadiene	<1.5	Di-n-butyl phthalate	<1.5
4-Chloroaniline	<150	Benzyl butyl phthalate	<1.5
4-Chloro-3-methylphenol	<15	Bis(2-ethylhexyl) phthalate	<15
2-Methylnaphthalene	<1.5	Di-n-octyl phthalate	<1.5
Hexachlorocyclopentadiene	<4.5		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-H3-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-21
Date Analyzed:	04/08/11	Data File:	040815.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	98	50	150
Phenol-d6	93	50	150
Nitrobenzene-d5	94	50	150
2-Fluorobiphenyl	99	50	150
2,4,6-Tribromophenol	98	50	150
Terphenyl-d14	102	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-H3-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-23
Date Analyzed:	04/08/11	Data File:	040816.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	98	50	150
Phenol-d6	92	50	150
Nitrobenzene-d5	94	50	150
2-Fluorobiphenyl	98	50	150
2,4,6-Tribromophenol	94	50	150
Terphenyl-d14	99	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-H9-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-25
Date Analyzed:	04/09/11	Data File:	040825.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	92	50	150
Phenol-d6	86	50	150
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	92	50	150
2,4,6-Tribromophenol	92	50	150
Terphenyl-d14	100	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	0.22
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-H9-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-27
Date Analyzed:	04/08/11	Data File:	040817.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	93	50	150
Phenol-d6	87	50	150
Nitrobenzene-d5	90	50	150
2-Fluorobiphenyl	93	50	150
2,4,6-Tribromophenol	92	50	150
Terphenyl-d14	96	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-H9-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-28
Date Analyzed:	04/08/11	Data File:	040818.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	91	50	150
Phenol-d6	89	50	150
Nitrobenzene-d5	88	50	150
2-Fluorobiphenyl	96	50	150
2,4,6-Tribromophenol	95	50	150
Terphenyl-d14	96	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-G8-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-31
Date Analyzed:	04/09/11	Data File:	040826.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	94	50	150
Phenol-d6	90	50	150
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	96	50	150
2,4,6-Tribromophenol	96	50	150
Terphenyl-d14	104	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-G8-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-33
Date Analyzed:	04/18/11	Data File:	041818.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	111	50	150
Phenol-d6	92	50	150
Nitrobenzene-d5	87	50	150
2-Fluorobiphenyl	91	50	150
2,4,6-Tribromophenol	86	50	150
Terphenyl-d14	92	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-G8-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-35
Date Analyzed:	04/09/11	Data File:	040820.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	93	50	150
Phenol-d6	86	50	150
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	94	50	150
2,4,6-Tribromophenol	93	50	150
Terphenyl-d14	105	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-E6-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-37
Date Analyzed:	04/09/11	Data File:	040821.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	93	50	150
Phenol-d6	90	50	150
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	95	50	150
2,4,6-Tribromophenol	91	50	150
Terphenyl-d14	104	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-E6-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-39 1/50
Date Analyzed:	04/09/11	Data File:	040835.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	78	50	150
Phenol-d6	69	50	150
Nitrobenzene-d5	97	50	150
2-Fluorobiphenyl	68	50	150
2,4,6-Tribromophenol	52	50	150
Terphenyl-d14	91	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<15	2,4,6-Trichlorophenol	<15
Bis(2-chloroethyl) ether	<1.5	2,4,5-Trichlorophenol	<15
2-Chlorophenol	<15	2-Chloronaphthalene	<1.5
1,3-Dichlorobenzene	<1.5	2-Nitroaniline	<1.5
1,4-Dichlorobenzene	<1.5	Dimethyl phthalate	<1.5
1,2-Dichlorobenzene	<1.5	2,6-Dinitrotoluene	<1.5
Benzyl alcohol	<1.5	3-Nitroaniline	<45
Bis(2-chloroisopropyl) ether	<1.5	2,4-Dinitrophenol	<45
2-Methylphenol	<15	Dibenzofuran	<1.5
Hexachloroethane	<1.5	2,4-Dinitrotoluene	<1.5
N-Nitroso-di-n-propylamine	<1.5	4-Nitrophenol	<15
3-Methylphenol + 4-Methylphenol	<30	Diethyl phthalate	<1.5
Nitrobenzene	<1.5	4-Chlorophenyl phenyl ether	<1.5
Isophorone	<1.5	N-Nitrosodiphenylamine	<1.5
2-Nitrophenol	<15	4-Nitroaniline	<45
2,4-Dimethylphenol	<15	4,6-Dinitro-2-methylphenol	<45
Benzoic acid	<75	4-Bromophenyl phenyl ether	<1.5
Bis(2-chloroethoxy)methane	<1.5	Hexachlorobenzene	<1.5
2,4-Dichlorophenol	<15	Pentachlorophenol	<15
1,2,4-Trichlorobenzene	<1.5	Carbazole	<1.5
Hexachlorobutadiene	<1.5	Di-n-butyl phthalate	<1.5
4-Chloroaniline	<150	Benzyl butyl phthalate	<1.5
4-Chloro-3-methylphenol	<15	Bis(2-ethylhexyl) phthalate	<15
2-Methylnaphthalene	<1.5	Di-n-octyl phthalate	<1.5
Hexachlorocyclopentadiene	<4.5		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-E6-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-41
Date Analyzed:	04/18/11	Data File:	041819.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	112	50	150
Phenol-d6	96	50	150
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	95	50	150
2,4,6-Tribromophenol	79	50	150
Terphenyl-d14	94	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	0.030	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-C7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-52
Date Analyzed:	04/07/11	Data File:	040627.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	95	50	150
Phenol-d6	87	50	150
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	97	50	150
2,4,6-Tribromophenol	90	50	150
Terphenyl-d14	106	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-C7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-54
Date Analyzed:	04/07/11	Data File:	040630.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	90	50	150
Phenol-d6	83	50	150
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	98	50	150
2,4,6-Tribromophenol	88	50	150
Terphenyl-d14	105	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-C7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-56
Date Analyzed:	04/07/11	Data File:	040631.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	78	50	150
Phenol-d6	76	50	150
Nitrobenzene-d5	84	50	150
2-Fluorobiphenyl	91	50	150
2,4,6-Tribromophenol	55	50	150
Terphenyl-d14	97	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	NG-C7-17-20	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-58
Date Analyzed:	04/07/11	Data File:	040632.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	84	50	150
Phenol-d6	81	50	150
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	94	50	150
2,4,6-Tribromophenol	61	50	150
Terphenyl-d14	97	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-J7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-60 1/500
Date Analyzed:	04/09/11	Data File:	040830.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	0 ds	50	150
Phenol-d6	0 ds	50	150
Nitrobenzene-d5	155 ds	50	150
2-Fluorobiphenyl	60	50	150
2,4,6-Tribromophenol	0 ds	50	150
Terphenyl-d14	90 J	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<150	2,4,6-Trichlorophenol	<150
Bis(2-chloroethyl) ether	<15	2,4,5-Trichlorophenol	<150
2-Chlorophenol	<150	2-Chloronaphthalene	<15
1,3-Dichlorobenzene	<15	2-Nitroaniline	<15
1,4-Dichlorobenzene	<15	Dimethyl phthalate	<15
1,2-Dichlorobenzene	<15	2,6-Dinitrotoluene	<15
Benzyl alcohol	<15	3-Nitroaniline	<450
Bis(2-chloroisopropyl) ether	<15	2,4-Dinitrophenol	<450
2-Methylphenol	<150	Dibenzofuran	<15
Hexachloroethane	<15	2,4-Dinitrotoluene	<15
N-Nitroso-di-n-propylamine	<15	4-Nitrophenol	<150
3-Methylphenol + 4-Methylphenol	<300	Diethyl phthalate	<15
Nitrobenzene	<15	4-Chlorophenyl phenyl ether	<15
Isophorone	<15	N-Nitrosodiphenylamine	<15
2-Nitrophenol	<150	4-Nitroaniline	<450
2,4-Dimethylphenol	<150	4,6-Dinitro-2-methylphenol	<450
Benzoic acid	<750	4-Bromophenyl phenyl ether	<15
Bis(2-chloroethoxy)methane	<15	Hexachlorobenzene	<15
2,4-Dichlorophenol	<150	Pentachlorophenol	<150
1,2,4-Trichlorobenzene	<15	Carbazole	<15
Hexachlorobutadiene	<15	Di-n-butyl phthalate	<15
4-Chloroaniline	<1,500	Benzyl butyl phthalate	<15 J
4-Chloro-3-methylphenol	<150	Bis(2-ethylhexyl) phthalate	<150 J
2-Methylnaphthalene	<15	Di-n-octyl phthalate	<15 J
Hexachlorocyclopentadiene	<45		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-J7-0-3	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-60 1/1000
Date Analyzed:	04/18/11	Data File:	041808.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	0 ds	50	150
Phenol-d6	0 ds	50	150
Nitrobenzene-d5	0 ds	50	150
2-Fluorobiphenyl	0 ds	50	150
2,4,6-Tribromophenol	0 ds	50	150
Terphenyl-d14	80	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<300	2,4,6-Trichlorophenol	<300
Bis(2-chloroethyl) ether	<30	2,4,5-Trichlorophenol	<300
2-Chlorophenol	<300	2-Chloronaphthalene	<30
1,3-Dichlorobenzene	<30	2-Nitroaniline	<30
1,4-Dichlorobenzene	<30	Dimethyl phthalate	<30
1,2-Dichlorobenzene	<30	2,6-Dinitrotoluene	<30
Benzyl alcohol	<30	3-Nitroaniline	<900
Bis(2-chloroisopropyl) ether	<30	2,4-Dinitrophenol	<900
2-Methylphenol	<300	Dibenzofuran	<30
Hexachloroethane	<30	2,4-Dinitrotoluene	<30
N-Nitroso-di-n-propylamine	<30	4-Nitrophenol	<300
3-Methylphenol + 4-Methylphenol	<600	Diethyl phthalate	<30
Nitrobenzene	<30	4-Chlorophenyl phenyl ether	<30
Isophorone	<30	N-Nitrosodiphenylamine	<30
2-Nitrophenol	<300	4-Nitroaniline	<900
2,4-Dimethylphenol	<300	4,6-Dinitro-2-methylphenol	<900
Benzoic acid	<1,500	4-Bromophenyl phenyl ether	<30
Bis(2-chloroethoxy)methane	<30	Hexachlorobenzene	<30
2,4-Dichlorophenol	<300	Pentachlorophenol	<300
1,2,4-Trichlorobenzene	<30	Carbazole	<30
Hexachlorobutadiene	<30	Di-n-butyl phthalate	<30
4-Chloroaniline	<3,000	Benzyl butyl phthalate	<30
4-Chloro-3-methylphenol	<300	Bis(2-ethylhexyl) phthalate	<300
2-Methylnaphthalene	<30	Di-n-octyl phthalate	<30
Hexachlorocyclopentadiene	<90		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-J7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-62
Date Analyzed:	04/09/11	Data File:	040829.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	69	50	150
Phenol-d6	76	50	150
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	96	50	150
2,4,6-Tribromophenol	48 vo	50	150
Terphenyl-d14	101 J	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03 js
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9 js
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9 js
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03 js
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03 js
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3 js
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03 J
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3 J
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-J7-6-9	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-62 1/10
Date Analyzed:	04/18/11	Data File:	041809.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63	50	150
Phenol-d6	83	50	150
Nitrobenzene-d5	88	50	150
2-Fluorobiphenyl	93	50	150
2,4,6-Tribromophenol	38 ds	50	150
Terphenyl-d14	93	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<3	2,4,6-Trichlorophenol	<3
Bis(2-chloroethyl) ether	<0.3	2,4,5-Trichlorophenol	<3
2-Chlorophenol	<3	2-Chloronaphthalene	<0.3
1,3-Dichlorobenzene	<0.3	2-Nitroaniline	<0.3
1,4-Dichlorobenzene	<0.3	Dimethyl phthalate	<0.3
1,2-Dichlorobenzene	<0.3	2,6-Dinitrotoluene	<0.3
Benzyl alcohol	<0.3	3-Nitroaniline	<9
Bis(2-chloroisopropyl) ether	<0.3	2,4-Dinitrophenol	<9
2-Methylphenol	<3	Dibenzofuran	<0.3
Hexachloroethane	<0.3	2,4-Dinitrotoluene	<0.3
N-Nitroso-di-n-propylamine	<0.3	4-Nitrophenol	<3
3-Methylphenol + 4-Methylphenol	<6	Diethyl phthalate	<0.3
Nitrobenzene	<0.3	4-Chlorophenyl phenyl ether	<0.3
Isophorone	<0.3	N-Nitrosodiphenylamine	<0.3
2-Nitrophenol	<3	4-Nitroaniline	<9
2,4-Dimethylphenol	<3	4,6-Dinitro-2-methylphenol	<9
Benzoic acid	<15	4-Bromophenyl phenyl ether	<0.3
Bis(2-chloroethoxy)methane	<0.3	Hexachlorobenzene	<0.3
2,4-Dichlorophenol	<3	Pentachlorophenol	<3
1,2,4-Trichlorobenzene	<0.3	Carbazole	<0.3
Hexachlorobutadiene	<0.3	Di-n-butyl phthalate	<0.3
4-Chloroaniline	<30	Benzyl butyl phthalate	<0.3
4-Chloro-3-methylphenol	<3	Bis(2-ethylhexyl) phthalate	<3
2-Methylnaphthalene	<0.3	Di-n-octyl phthalate	<0.3
Hexachlorocyclopentadiene	<0.9		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	SG-J7-12-15	Client:	Aspect Consulting
Date Received:	03/25/11	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	103342-64
Date Analyzed:	04/07/11	Data File:	040633.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	86	50	150
Phenol-d6	83	50	150
Nitrobenzene-d5	91	50	150
2-Fluorobiphenyl	99	50	150
2,4,6-Tribromophenol	70	50	150
Terphenyl-d14	100	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	01-543 mb
Date Analyzed:	04/08/11	Data File:	040804.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	92	50	150
Phenol-d6	92	50	150
Nitrobenzene-d5	94	50	150
2-Fluorobiphenyl	96	50	150
2,4,6-Tribromophenol	86	50	150
Terphenyl-d14	98	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103342
Date Extracted:	03/29/11	Lab ID:	01-544 mb
Date Analyzed:	04/07/11	Data File:	040626.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	93	50	150
Phenol-d6	89	50	150
Nitrobenzene-d5	96	50	150
2-Fluorobiphenyl	99	50	150
2,4,6-Tribromophenol	87	50	150
Terphenyl-d14	102	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	2,4,6-Trichlorophenol	<0.3
Bis(2-chloroethyl) ether	<0.03	2,4,5-Trichlorophenol	<0.3
2-Chlorophenol	<0.3	2-Chloronaphthalene	<0.03
1,3-Dichlorobenzene	<0.03	2-Nitroaniline	<0.03
1,4-Dichlorobenzene	<0.03	Dimethyl phthalate	<0.03
1,2-Dichlorobenzene	<0.03	2,6-Dinitrotoluene	<0.03
Benzyl alcohol	<0.03	3-Nitroaniline	<0.9
Bis(2-chloroisopropyl) ether	<0.03	2,4-Dinitrophenol	<0.9
2-Methylphenol	<0.3	Dibenzofuran	<0.03
Hexachloroethane	<0.03	2,4-Dinitrotoluene	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitrophenol	<0.3
3-Methylphenol + 4-Methylphenol	<0.6	Diethyl phthalate	<0.03
Nitrobenzene	<0.03	4-Chlorophenyl phenyl ether	<0.03
Isophorone	<0.03	N-Nitrosodiphenylamine	<0.03
2-Nitrophenol	<0.3	4-Nitroaniline	<0.9
2,4-Dimethylphenol	<0.3	4,6-Dinitro-2-methylphenol	<0.9
Benzoic acid	<1.5	4-Bromophenyl phenyl ether	<0.03
Bis(2-chloroethoxy)methane	<0.03	Hexachlorobenzene	<0.03
2,4-Dichlorophenol	<0.3	Pentachlorophenol	<0.3
1,2,4-Trichlorobenzene	<0.03	Carbazole	<0.03
Hexachlorobutadiene	<0.03	Di-n-butyl phthalate	<0.03
4-Chloroaniline	<3	Benzyl butyl phthalate	<0.03
4-Chloro-3-methylphenol	<0.3	Bis(2-ethylhexyl) phthalate	<0.3
2-Methylnaphthalene	<0.03	Di-n-octyl phthalate	<0.03
Hexachlorocyclopentadiene	<0.09		

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 03/28/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR PCBs REPORTED AS AROCLORS USING EPA METHOD 8082A

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Aroclor 1221	1232	1016	1242	1248	1254	1260	Surrogate (% Rec.) (Limit 50-150)
SG-J6-0-3 103342-02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	84
SG-J6-6-9 103342-04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	87
SG-J6-12-15 103342-06	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	97
SG-G2-0-3 103342-08	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	67
SG-G2-6-9 103342-10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	79
SG-G2-12-15 103342-12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	72
SG-F3-0-3 103342-14	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	121
SG-F3-6-9 103342-16	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	81
SG-F3-12-15 103342-17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	105
SG-H3-0-3 103342-19	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	77
SG-H3-6-9 103342-21	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	76

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 03/28/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR PCBs REPORTED AS AROCLORS USING EPA METHOD 8082A

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Aroclor 1221	1232	1016	1242	1248	1254	1260	Surrogate (% Rec.) (Limit 50-150)
SG-H3-12-15 103342-23	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	71
NG-H9-0-3 103342-25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	121
NG-H9-6-9 103342-27	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	100
NG-H9-12-15 103342-28	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	101
NG-G8-0-3 103342-31	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	71
NG-G8-6-9 103342-33	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	80
NG-G8-12-15 103342-35	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	77
NG-E6-0-3 103342-37	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	83
NG-E6-6-9 103342-39	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	0.4	81
NG-E6-12-15 103342-41	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	124
NG-C7-0-3 103342-52	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	106

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342
Date Extracted: 03/28/11
Date Analyzed: 03/29/11 and 03/30/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR PCBs REPORTED AS AROCLORS USING EPA METHOD 8082A

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Aroclor 1221	1232	1016	1242	1248	1254	1260	Surrogate (% Rec.) (Limit 50-150)
NG-C7-6-9 103342-54	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	96
NG-C7-12-15 103342-56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	86
NG-C7-17-20 103342-58	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	122
SG-J7-0-3 103342-60	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	74
SG-J7-6-9 103342-62	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	80
SG-J7-12-15 103342-64	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	78
NG-A7-6-9 103342-65	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	77
Method Blank	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	122
Method Blank	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	90

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103342-10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	93	90	73-135	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	74-139

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103342-52 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	97	95	63-146	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	79-144

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103342-72 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	86	84	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	87	58-147

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103342-10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.32	93	93	44-151	0
Lead	mg/kg (ppm)	20	1.51	101	102	65-126	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	107	80-120
Lead	mg/kg (ppm)	20	98	81-120

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103342-52 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vanadium	mg/kg (ppm)	30	21.5	101 b	103 b	35-137	2 b
Chromium	mg/kg (ppm)	50	13.7	104 b	105 b	51-132	1 b
Copper	mg/kg (ppm)	50	18.9	101 b	101 b	53-123	0 b
Zinc	mg/kg (ppm)	50	58.1	108 b	121 b	40-135	11 b
Arsenic	mg/kg (ppm)	10	1.84	102	106	44-151	4
Selenium	mg/kg (ppm)	5	<1	95	97	52-128	2
Antimony	mg/kg (ppm)	20	1.13	96	98	27-158	2
Lead	mg/kg (ppm)	20	10.4	98 b	98 b	65-126	0 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vanadium	mg/kg (ppm)	30	107	78-125
Chromium	mg/kg (ppm)	50	104	79-125
Copper	mg/kg (ppm)	50	104	86-114
Zinc	mg/kg (ppm)	50	106	79-120
Arsenic	mg/kg (ppm)	10	109	80-120
Selenium	mg/kg (ppm)	5	101	81-121
Antimony	mg/kg (ppm)	20	98	42-156
Lead	mg/kg (ppm)	20	103	81-120

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103360-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	7.88	97 b	97 b	44-151	0 b
Lead	mg/kg (ppm)	20	9.62	93 b	100 b	65-126	7 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	105	80-120
Lead	mg/kg (ppm)	20	99	81-120

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR HEXAVALENT CHROMIUM USING EPA METHOD 7196

Laboratory Code: 103342-52 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Hexavalent Chromium	mg/kg (ppm)	<5.0	<5.0	nm	0-20

Laboratory Code: 103342-52 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Hexavalent Chromium	mg/kg (ppm)	180	<5.0	109	75-125

Laboratory Code: 103342-52 (Matrix Spike) Insoluble Spike

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Lead Chromate	mg/kg (ppm)	6,100	<5.0	88	75-125

Laboratory Code: 103342-52 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium (III)	mg/kg (ppm)	190	<5.0	0	0-1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Hexavalent Chromium	mg/kg (ppm)	170	118	80-120

Date of Report: 04/20/11
Date Received: 03/25/11
Project: Crownhill 100094, F&BI 103342

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 103342-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	11	10-171
Chloromethane	mg/kg (ppm)	2.5	<0.5	33	10-162
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	34	10-166
Bromomethane	mg/kg (ppm)	2.5	<0.5	50	10-165
Chloroethane	mg/kg (ppm)	2.5	<0.5	66	10-161
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	48	10-168
Acetone	mg/kg (ppm)	12.5	<0.5	81	20-155
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	58	10-168
Methylene chloride	mg/kg (ppm)	2.5	<0.5	61	21-149
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	65	39-139
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	59	20-150
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	58	30-114
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	42	17-150
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	61	36-111
Chloroform	mg/kg (ppm)	2.5	<0.05	67	39-114
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	65	24-153
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	75	38-116
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	61	27-119
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	57	26-118
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	41	22-123
Benzene	mg/kg (ppm)	2.5	<0.03	58	33-113
Trichloroethene	mg/kg (ppm)	2.5	<0.03	62	36-113
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	60	40-113
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	62	43-118
Dibromomethane	mg/kg (ppm)	2.5	<0.05	67	43-113
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	69	34-154
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	57	43-117
Toluene	mg/kg (ppm)	2.5	<0.05	60	38-139
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	59	44-140
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	64	38-146
2-Hexanone	mg/kg (ppm)	12.5	<0.5	67	37-150
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	65	47-133
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	60	29-117
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	56	46-116
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	66	44-139
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	64	41-114
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	64	38-120
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	58	43-120
m,p-Xylene	mg/kg (ppm)	5	<0.1	63	37-122
o-Xylene	mg/kg (ppm)	2.5	<0.05	63	39-121
Styrene	mg/kg (ppm)	2.5	<0.05	63	43-121
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	66	38-126
Bromoform	mg/kg (ppm)	2.5	<0.05	53	44-120
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	63	34-127
Bromobenzene	mg/kg (ppm)	2.5	<0.05	61	42-115
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	66	34-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	63	41-113
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	69	45-134
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	65	40-120
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	66	41-119
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	66	37-125
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	65	34-129
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	64	35-127
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	64	35-128
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	62	39-115
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	62	39-114
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	64	43-115
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	64	30-147
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	55	37-121
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	55	29-121
Naphthalene	mg/kg (ppm)	2.5	<0.05	58	12-168
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	55	11-172

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	49	36	10-142	31 vo
Chloromethane	mg/kg (ppm)	2.5	63	53	25-121	17
Vinyl chloride	mg/kg (ppm)	2.5	70	63	29-135	11
Bromomethane	mg/kg (ppm)	2.5	80	77	33-123	4
Chloroethane	mg/kg (ppm)	2.5	93	96	10-281	3
Trichlorofluoromethane	mg/kg (ppm)	2.5	94	91	13-151	3
Acetone	mg/kg (ppm)	12.5	101	103	10-151	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	92	91	22-151	1
Methylene chloride	mg/kg (ppm)	2.5	86	87	42-144	1
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	90	89	62-124	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	87	88	60-125	1
1,1-Dichloroethane	mg/kg (ppm)	2.5	86	86	66-123	0
2,2-Dichloropropane	mg/kg (ppm)	2.5	72	73	53-134	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	88	86	72-118	2
Chloroform	mg/kg (ppm)	2.5	97	95	71-123	2
2-Butanone (MEK)	mg/kg (ppm)	12.5	92	87	10-150	6
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	106	100	60-124	6
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	98	98	68-128	0
1,1-Dichloropropene	mg/kg (ppm)	2.5	90	86	71-123	5
Carbon tetrachloride	mg/kg (ppm)	2.5	79	81	64-136	2
Benzene	mg/kg (ppm)	2.5	84	81	69-122	4
Trichloroethene	mg/kg (ppm)	2.5	90	87	71-122	3
1,2-Dichloropropane	mg/kg (ppm)	2.5	85	81	71-120	5
Bromodichloromethane	mg/kg (ppm)	2.5	93	89	68-140	4
Dibromomethane	mg/kg (ppm)	2.5	93	91	72-121	2
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	90	91	10-150	1
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	85	80	74-126	6
Toluene	mg/kg (ppm)	2.5	86	84	72-122	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	88	85	70-131	3
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	87	84	70-122	4
2-Hexanone	mg/kg (ppm)	12.5	90	86	10-152	5
1,3-Dichloropropane	mg/kg (ppm)	2.5	90	86	72-121	5
Tetrachloroethene	mg/kg (ppm)	2.5	88	87	69-125	1
Dibromochloromethane	mg/kg (ppm)	2.5	87	85	68-130	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	92	89	72-121	3
Chlorobenzene	mg/kg (ppm)	2.5	88	87	69-125	1
Ethylbenzene	mg/kg (ppm)	2.5	90	88	72-130	2
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	85	87	69-133	2
m,p-Xylene	mg/kg (ppm)	5	89	86	72-131	3
o-Xylene	mg/kg (ppm)	2.5	89	88	71-129	1
Styrene	mg/kg (ppm)	2.5	90	87	73-132	3
Isopropylbenzene	mg/kg (ppm)	2.5	91	89	73-134	2
Bromoform	mg/kg (ppm)	2.5	84	81	68-129	4
n-Propylbenzene	mg/kg (ppm)	2.5	88	84	72-136	5
Bromobenzene	mg/kg (ppm)	2.5	86	81	73-125	6
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	90	89	72-132	1
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	88	85	67-116	3
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	94	91	67-123	3
2-Chlorotoluene	mg/kg (ppm)	2.5	93	89	72-130	4
4-Chlorotoluene	mg/kg (ppm)	2.5	93	90	73-129	3
tert-Butylbenzene	mg/kg (ppm)	2.5	90	88	71-130	2
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	89	88	70-132	1
sec-Butylbenzene	mg/kg (ppm)	2.5	86	84	71-134	2
p-Isopropyltoluene	mg/kg (ppm)	2.5	86	85	71-135	1
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	88	87	70-124	1
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	87	86	68-126	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	89	88	71-125	1
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	93	92	63-122	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	79	81	69-132	2
Hexachlorobutadiene	mg/kg (ppm)	2.5	71	72	68-121	1
Naphthalene	mg/kg (ppm)	2.5	86	90	60-125	5
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	80	84	68-121	5

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 103342-51 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	17	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	48	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	47	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	60	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	62	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	49	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	78	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	57	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	72	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	75	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	67	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	71	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	76	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	72	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	75	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	75	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	76	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	72	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	69	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	72	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	67	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	66	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	74	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	80	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	75	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	83	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	81	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	70	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	80	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	74	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	84	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	74	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	64	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	80	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	74	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	72	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	73	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	78	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	73	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	76	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	78	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	77	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	84	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	73	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	72	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	75	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	76	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	76	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	73	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	74	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	75	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	74	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	75	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	75	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	72	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	71	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	72	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	76	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	72	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	72	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	78	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	74	20-144

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	59	64	10-146	8
Chloromethane	mg/kg (ppm)	2.5	82	85	27-133	4
Vinyl chloride	mg/kg (ppm)	2.5	90	98	22-139	9
Bromomethane	mg/kg (ppm)	2.5	78	82	38-114	5
Chloroethane	mg/kg (ppm)	2.5	93	94	20-153	1
Trichlorofluoromethane	mg/kg (ppm)	2.5	77	79	10-196	3
Acetone	mg/kg (ppm)	12.5	108	107	52-141	1
1,1-Dichloroethene	mg/kg (ppm)	2.5	91	91	47-128	0
Methylene chloride	mg/kg (ppm)	2.5	96	96	42-132	0
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	102	98	60-123	4
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	95	95	67-127	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	104	103	68-115	1
2,2-Dichloropropane	mg/kg (ppm)	2.5	107	107	57-133	0
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	108	107	72-113	1
Chloroform	mg/kg (ppm)	2.5	107	106	66-120	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	109	108	57-123	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	104	102	56-135	2
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	105	102	62-131	3
1,1-Dichloropropene	mg/kg (ppm)	2.5	106	106	69-128	0
Carbon tetrachloride	mg/kg (ppm)	2.5	105	105	60-139	0
Benzene	mg/kg (ppm)	2.5	100	99	68-114	1
Trichloroethene	mg/kg (ppm)	2.5	97	96	68-114	1
1,2-Dichloropropane	mg/kg (ppm)	2.5	108	107	72-127	1
Bromodichloromethane	mg/kg (ppm)	2.5	115	114	72-130	1
Dibromomethane	mg/kg (ppm)	2.5	109	107	70-120	2
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	114	112	45-145	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	116	115	75-136	1
Toluene	mg/kg (ppm)	2.5	103	102	66-126	1
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	116	114	72-132	2
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	107	106	75-113	1
2-Hexanone	mg/kg (ppm)	12.5	115	115	33-152	0
1,3-Dichloropropane	mg/kg (ppm)	2.5	106	105	72-130	1
Tetrachloroethene	mg/kg (ppm)	2.5	97	96	72-114	1
Dibromochloromethane	mg/kg (ppm)	2.5	119	117	74-125	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	111	110	74-132	1
Chlorobenzene	mg/kg (ppm)	2.5	106	104	76-111	2
Ethylbenzene	mg/kg (ppm)	2.5	106	105	64-123	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	111	110	69-135	1
m,p-Xylene	mg/kg (ppm)	5	106	104	78-122	2
o-Xylene	mg/kg (ppm)	2.5	110	109	77-124	1
Styrene	mg/kg (ppm)	2.5	114	112	74-126	2
Isopropylbenzene	mg/kg (ppm)	2.5	113	110	76-127	3
Bromoform	mg/kg (ppm)	2.5	126	123	56-132	2
n-Propylbenzene	mg/kg (ppm)	2.5	110	109	74-124	1
Bromobenzene	mg/kg (ppm)	2.5	107	106	72-122	1
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	111	109	76-126	2
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	111	110	56-143	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	108	106	61-137	2
2-Chlorotoluene	mg/kg (ppm)	2.5	108	107	74-121	1
4-Chlorotoluene	mg/kg (ppm)	2.5	110	107	75-122	3
tert-Butylbenzene	mg/kg (ppm)	2.5	110	108	73-130	2
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	111	109	76-125	2
sec-Butylbenzene	mg/kg (ppm)	2.5	110	109	71-130	1
p-Isopropyltoluene	mg/kg (ppm)	2.5	112	110	70-132	2
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	105	104	75-121	1
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	104	102	74-117	2
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	105	104	76-121	1
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	106	105	61-136	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	104	103	70-129	1
Hexachlorobutadiene	mg/kg (ppm)	2.5	100	100	50-153	0
Naphthalene	mg/kg (ppm)	2.5	110	108	60-125	2
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	105	104	62-130	1

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 103342-10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	<0.01	93	95	44-129	2
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	98	102	52-121	4
Acenaphthene	mg/kg (ppm)	0.17	<0.01	92	95	51-123	3
Fluorene	mg/kg (ppm)	0.17	<0.01	101	105	37-137	4
Phenanthrene	mg/kg (ppm)	0.17	<0.01	88	92	45-124	4
Anthracene	mg/kg (ppm)	0.17	<0.01	86	91	32-124	6
Fluoranthene	mg/kg (ppm)	0.17	<0.01	103	108	50-125	5
Pyrene	mg/kg (ppm)	0.17	<0.01	96	102	41-135	6
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	84	86	23-144	2
Chrysene	mg/kg (ppm)	0.17	<0.01	93	93	45-122	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	98	104	31-144	6
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	90	93	45-130	3
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	79	84	39-128	6
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	86	91	28-146	6
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	88	92	46-129	4
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	84	89	37-133	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	98	61-115
Acenaphthylene	mg/kg (ppm)	0.17	104	63-110
Acenaphthene	mg/kg (ppm)	0.17	98	60-115
Fluorene	mg/kg (ppm)	0.17	107	59-116
Phenanthrene	mg/kg (ppm)	0.17	96	60-113
Anthracene	mg/kg (ppm)	0.17	91	56-103
Fluoranthene	mg/kg (ppm)	0.17	111	60-116
Pyrene	mg/kg (ppm)	0.17	102	60-116
Benz(a)anthracene	mg/kg (ppm)	0.17	96	53-109
Chrysene	mg/kg (ppm)	0.17	99	61-116
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	114	57-118
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	96	61-118
Benzo(a)pyrene	mg/kg (ppm)	0.17	92	53-108
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	108	46-127
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	99	55-121
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	93	56-118

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 103242-52 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	<0.01	96	102	44-129	6
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	99	107	52-121	8
Acenaphthene	mg/kg (ppm)	0.17	<0.01	95	102	51-123	7
Fluorene	mg/kg (ppm)	0.17	<0.01	102	110	37-137	8
Phenanthrene	mg/kg (ppm)	0.17	<0.01	93	99	45-124	6
Anthracene	mg/kg (ppm)	0.17	<0.01	90	97	32-124	7
Fluoranthene	mg/kg (ppm)	0.17	<0.01	105	113	50-125	7
Pyrene	mg/kg (ppm)	0.17	<0.01	99	108	41-135	9
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	91	98	23-144	7
Chrysene	mg/kg (ppm)	0.17	<0.01	98	107	45-122	9
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	96	111	31-144	14
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	85	103	45-130	19
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	93	98	39-128	5
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	104	114	28-146	9
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	91	103	46-129	12
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	0.025	88	100	37-133	13

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	96	61-115
Acenaphthylene	mg/kg (ppm)	0.17	99	63-110
Acenaphthene	mg/kg (ppm)	0.17	96	60-115
Fluorene	mg/kg (ppm)	0.17	102	59-116
Phenanthrene	mg/kg (ppm)	0.17	93	60-113
Anthracene	mg/kg (ppm)	0.17	88	56-103
Fluoranthene	mg/kg (ppm)	0.17	102	60-116
Pyrene	mg/kg (ppm)	0.17	97	60-116
Benz(a)anthracene	mg/kg (ppm)	0.17	80	53-109
Chrysene	mg/kg (ppm)	0.17	85	61-116
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	88	57-118
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	86	61-118
Benzo(a)pyrene	mg/kg (ppm)	0.17	73	53-108
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	84	46-127
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	84	55-121
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	81	56-118

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: 103342-10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Phenol	mg/kg (ppm)	1.7	<0.3	100	104	50-150	4
Bis(2-chloroethyl) ether	mg/kg (ppm)	1.7	<0.03	94	96	50-150	2
2-Chlorophenol	mg/kg (ppm)	1.7	<0.3	96	97	50-150	1
1,3-Dichlorobenzene	mg/kg (ppm)	1.7	<0.03	93	97	50-150	4
1,4-Dichlorobenzene	mg/kg (ppm)	1.7	<0.03	94	96	50-150	2
1,2-Dichlorobenzene	mg/kg (ppm)	1.7	<0.03	95	97	50-150	2
Benzyl alcohol	mg/kg (ppm)	1.7	<0.03	94	89	50-150	5
Bis(2-chloroisopropyl) ether	mg/kg (ppm)	1.7	<0.03	83	86	50-150	4
2-Methylphenol	mg/kg (ppm)	1.7	<0.3	64	64	50-150	0
Hexachloroethane	mg/kg (ppm)	1.7	<0.03	95	96	50-150	1
N-Nitroso-di-n-propylamine	mg/kg (ppm)	1.7	<0.03	98	97	50-150	1
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	1.7	<0.6	98	97	50-150	1
Nitrobenzene	mg/kg (ppm)	1.7	<0.03	92	95	50-150	3
Isophorone	mg/kg (ppm)	1.7	<0.03	95	98	50-150	3
2-Nitrophenol	mg/kg (ppm)	1.7	<0.3	93	97	50-150	4
2,4-Dimethylphenol	mg/kg (ppm)	1.7	<0.3	89	91	50-150	2
Benzoic acid	mg/kg (ppm)	2.5	<3	101	97	50-150	4
Bis(2-chloroethoxy)methane	mg/kg (ppm)	1.7	<0.03	96	95	50-150	1
2,4-Dichlorophenol	mg/kg (ppm)	1.7	<0.3	96	98	50-150	2
1,2,4-Trichlorobenzene	mg/kg (ppm)	1.7	<0.03	92	95	50-150	3
Hexachlorobutadiene	mg/kg (ppm)	1.7	<0.03	93	95	50-150	2
4-Chloroaniline	mg/kg (ppm)	1.7	<3	50	69	50-150	32 vo
4-Chloro-3-methylphenol	mg/kg (ppm)	1.7	<0.3	98	99	50-150	1
2-Methylnaphthalene	mg/kg (ppm)	1.7	<0.03	97	98	50-150	1
Hexachlorocyclopentadiene	mg/kg (ppm)	1.7	<0.09	85	86	50-150	1
2,4,6-Trichlorophenol	mg/kg (ppm)	1.7	<0.3	98	101	50-150	3
2,4,5-Trichlorophenol	mg/kg (ppm)	1.7	<0.3	99	99	50-150	0
2-Chloronaphthalene	mg/kg (ppm)	1.7	<0.03	97	100	50-150	3
2-Nitroaniline	mg/kg (ppm)	1.7	<0.03	97	100	50-150	3
Dimethyl phthalate	mg/kg (ppm)	1.7	<0.03	98	99	50-150	1
2,6-Dinitrotoluene	mg/kg (ppm)	1.7	<0.03	99	101	50-150	2
3-Nitroaniline	mg/kg (ppm)	1.7	<0.9	56	69	50-150	21 vo
2,4-Dinitrophenol	mg/kg (ppm)	1.7	<0.9	103	106	50-150	3
Dibenzofuran	mg/kg (ppm)	1.7	<0.03	95	96	50-150	1
2,4-Dinitrotoluene	mg/kg (ppm)	1.7	<0.03	98	101	50-150	3
4-Nitrophenol	mg/kg (ppm)	1.7	<0.3	111	111	50-150	0
Diethyl phthalate	mg/kg (ppm)	1.7	<0.03	97	98	50-150	1
4-Chlorophenyl phenyl ether	mg/kg (ppm)	1.7	<0.03	96	96	50-150	0
N-Nitrosodiphenylamine	mg/kg (ppm)	1.7	<0.03	93	94	50-150	1
4-Nitroaniline	mg/kg (ppm)	1.7	<0.9	84	86	50-150	2
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	1.7	<0.9	100	104	50-150	4
4-Bromophenyl phenyl ether	mg/kg (ppm)	1.7	<0.03	94	94	50-150	0
Hexachlorobenzene	mg/kg (ppm)	1.7	<0.03	92	94	50-150	2
Pentachlorophenol	mg/kg (ppm)	1.7	<0.3	94	96	50-150	2
Carbazole	mg/kg (ppm)	1.7	<0.03	94	96	50-150	2
Di-n-butyl phthalate	mg/kg (ppm)	1.7	<0.03	96	98	50-150	2
Benzyl butyl phthalate	mg/kg (ppm)	1.7	<0.03	95	98	50-150	3
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	1.7	<0.3	94	97	50-150	3
Di-n-octyl phthalate	mg/kg (ppm)	1.7	<0.03	99	101	50-150	2

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Phenol	mg/kg (ppm)	1.7	102	60-108
Bis(2-chloroethyl) ether	mg/kg (ppm)	1.7	95	63-111
2-Chlorophenol	mg/kg (ppm)	1.7	98	64-109
1,3-Dichlorobenzene	mg/kg (ppm)	1.7	95	66-101
1,4-Dichlorobenzene	mg/kg (ppm)	1.7	95	63-105
1,2-Dichlorobenzene	mg/kg (ppm)	1.7	96	62-103
Benzyl alcohol	mg/kg (ppm)	1.7	99	48-120
Bis(2-chloroisopropyl) ether	mg/kg (ppm)	1.7	86	43-116
2-Methylphenol	mg/kg (ppm)	1.7	64	41-106
Hexachloroethane	mg/kg (ppm)	1.7	96	55-117
N-Nitroso-di-n-propylamine	mg/kg (ppm)	1.7	98	61-105
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	1.7	98	30-178
Nitrobenzene	mg/kg (ppm)	1.7	94	65-103
Isophorone	mg/kg (ppm)	1.7	97	65-116
2-Nitrophenol	mg/kg (ppm)	1.7	95	49-121
2,4-Dimethylphenol	mg/kg (ppm)	1.7	94	39-110
Benzoic acid	mg/kg (ppm)	2.5	105	56-125
Bis(2-chloroethoxy)methane	mg/kg (ppm)	1.7	95	59-103
2,4-Dichlorophenol	mg/kg (ppm)	1.7	97	53-113
1,2,4-Trichlorobenzene	mg/kg (ppm)	1.7	94	67-100
Hexachlorobutadiene	mg/kg (ppm)	1.7	94	66-104
4-Chloroaniline	mg/kg (ppm)	1.7	57	10-75
4-Chloro-3-methylphenol	mg/kg (ppm)	1.7	99	65-113
2-Methylnaphthalene	mg/kg (ppm)	1.7	97	56-114
Hexachlorocyclopentadiene	mg/kg (ppm)	1.7	92	39-119
2,4,6-Trichlorophenol	mg/kg (ppm)	1.7	101	48-126
2,4,5-Trichlorophenol	mg/kg (ppm)	1.7	100	53-119
2-Chloronaphthalene	mg/kg (ppm)	1.7	99	60-106
2-Nitroaniline	mg/kg (ppm)	1.7	100	53-121
Dimethyl phthalate	mg/kg (ppm)	1.7	98	67-101
2,6-Dinitrotoluene	mg/kg (ppm)	1.7	100	65-115
3-Nitroaniline	mg/kg (ppm)	1.7	71	18-91
2,4-Dinitrophenol	mg/kg (ppm)	1.7	107	38-127
Dibenzofuran	mg/kg (ppm)	1.7	96	48-114
2,4-Dinitrotoluene	mg/kg (ppm)	1.7	102	59-113
4-Nitrophenol	mg/kg (ppm)	1.7	121 vo	54-118
Diethyl phthalate	mg/kg (ppm)	1.7	98	66-105
4-Chlorophenyl phenyl ether	mg/kg (ppm)	1.7	96	69-111
N-Nitrosodiphenylamine	mg/kg (ppm)	1.7	95	51-104
4-Nitroaniline	mg/kg (ppm)	1.7	90	10-167
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	1.7	106	47-127
4-Bromophenyl phenyl ether	mg/kg (ppm)	1.7	97	72-102
Hexachlorobenzene	mg/kg (ppm)	1.7	96	52-116
Pentachlorophenol	mg/kg (ppm)	1.7	102	50-130
Carbazole	mg/kg (ppm)	1.7	96	73-105
Di-n-butyl phthalate	mg/kg (ppm)	1.7	99	67-107
Benzyl butyl phthalate	mg/kg (ppm)	1.7	100	61-117
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	1.7	98	65-118
Di-n-octyl phthalate	mg/kg (ppm)	1.7	102	71-120

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: 103342-52 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
N-Nitrosodimethylamine	mg/kg (ppm)	1.7	<0.03	0 vo	1 vo	50-150	0
Phenol	mg/kg (ppm)	1.7	<0.3	95	93	50-150	2
Bis(2-chloroethyl) ether	mg/kg (ppm)	1.7	<0.03	113	91	50-150	22 vo
2-Chlorophenol	mg/kg (ppm)	1.7	<0.3	90	94	50-150	4
1,3-Dichlorobenzene	mg/kg (ppm)	1.7	<0.03	92	95	50-150	3
1,4-Dichlorobenzene	mg/kg (ppm)	1.7	<0.03	91	98	50-150	7
1,2-Dichlorobenzene	mg/kg (ppm)	1.7	<0.03	94	96	50-150	2
Benzyl alcohol	mg/kg (ppm)	1.7	<0.03	84	85	50-150	1
Bis(2-chloroisopropyl) ether	mg/kg (ppm)	1.7	<0.03	86	95	50-150	10
2-Methylphenol	mg/kg (ppm)	1.7	<0.3	60	61	50-150	2
Hexachloroethane	mg/kg (ppm)	1.7	<0.03	93	99	50-150	6
N-Nitroso-di-n-propylamine	mg/kg (ppm)	1.7	<0.03	91	94	50-150	3
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	1.7	<0.6	90	91	50-150	1
Nitrobenzene	mg/kg (ppm)	1.7	<0.03	90	94	50-150	4
Isophorone	mg/kg (ppm)	1.7	<0.03	91	97	50-150	6
2-Nitrophenol	mg/kg (ppm)	1.7	<0.3	92	96	50-150	4
2,4-Dimethylphenol	mg/kg (ppm)	1.7	<0.3	85	89	50-150	5
Benzoic acid	mg/kg (ppm)	2.5	<3	96	97	50-150	1
Bis(2-chloroethoxy)methane	mg/kg (ppm)	1.7	<0.03	91	96	50-150	5
2,4-Dichlorophenol	mg/kg (ppm)	1.7	<0.3	95	100	50-150	5
1,2,4-Trichlorobenzene	mg/kg (ppm)	1.7	<0.03	92	97	50-150	5
Hexachlorobutadiene	mg/kg (ppm)	1.7	<0.03	93	99	50-150	6
4-Chloroaniline	mg/kg (ppm)	1.7	<3	54	47 vo	50-150	14
4-Chloro-3-methylphenol	mg/kg (ppm)	1.7	<0.3	93	100	50-150	7
2-Methylnaphthalene	mg/kg (ppm)	1.7	<0.03	94	100	50-150	6
Hexachlorocyclopentadiene	mg/kg (ppm)	1.7	<0.09	84	80	50-150	5
2,4,6-Trichlorophenol	mg/kg (ppm)	1.7	<0.3	107	98	50-150	9
2,4,5-Trichlorophenol	mg/kg (ppm)	1.7	<0.3	85	98	50-150	14
2-Chloronaphthalene	mg/kg (ppm)	1.7	<0.03	95	97	50-150	2
2-Nitroaniline	mg/kg (ppm)	1.7	<0.03	94	96	50-150	2
Dimethyl phthalate	mg/kg (ppm)	1.7	<0.03	94	98	50-150	4
2,6-Dinitrotoluene	mg/kg (ppm)	1.7	<0.03	100	99	50-150	1
3-Nitroaniline	mg/kg (ppm)	1.7	<0.9	61	61	50-150	0
2,4-Dinitrophenol	mg/kg (ppm)	1.7	<0.9	102	98	50-150	4
Dibenzofuran	mg/kg (ppm)	1.7	<0.03	92	95	50-150	3
2,4-Dinitrotoluene	mg/kg (ppm)	1.7	<0.03	61	101	50-150	49 vo
4-Nitrophenol	mg/kg (ppm)	1.7	<0.3	111	115	50-150	4
Diethyl phthalate	mg/kg (ppm)	1.7	<0.03	94	99	50-150	5
4-Chlorophenyl phenyl ether	mg/kg (ppm)	1.7	<0.03	93	97	50-150	4
N-Nitrosodiphenylamine	mg/kg (ppm)	1.7	<0.03	91	93	50-150	2
4-Nitroaniline	mg/kg (ppm)	1.7	<0.9	79	83	50-150	5
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	1.7	<0.9	99	98	50-150	1
4-Bromophenyl phenyl ether	mg/kg (ppm)	1.7	<0.03	93	96	50-150	3
Hexachlorobenzene	mg/kg (ppm)	1.7	<0.03	92	95	50-150	3
Pentachlorophenol	mg/kg (ppm)	1.7	<0.3	91	92	50-150	1
Carbazole	mg/kg (ppm)	1.7	<0.03	93	98	50-150	5
Di-n-butyl phthalate	mg/kg (ppm)	1.7	<0.03	92	100	50-150	8
Benzyl butyl phthalate	mg/kg (ppm)	1.7	<0.03	93	95	50-150	2
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	1.7	<0.3	97	101	50-150	4
Di-n-octyl phthalate	mg/kg (ppm)	1.7	<0.03	100	103	50-150	3

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
N-Nitrosodimethylamine	mg/kg (ppm)	1.7	105	70-130
Phenol	mg/kg (ppm)	1.7	103	60-108
Bis(2-chloroethyl) ether	mg/kg (ppm)	1.7	100	63-111
2-Chlorophenol	mg/kg (ppm)	1.7	100	64-109
1,3-Dichlorobenzene	mg/kg (ppm)	1.7	99	66-101
1,4-Dichlorobenzene	mg/kg (ppm)	1.7	97	63-105
1,2-Dichlorobenzene	mg/kg (ppm)	1.7	100	62-103
Benzyl alcohol	mg/kg (ppm)	1.7	101	48-120
Bis(2-chloroisopropyl) ether	mg/kg (ppm)	1.7	89	43-116
2-Methylphenol	mg/kg (ppm)	1.7	66	41-106
Hexachloroethane	mg/kg (ppm)	1.7	99	55-117
N-Nitroso-di-n-propylamine	mg/kg (ppm)	1.7	99	61-105
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	1.7	99	30-178
Nitrobenzene	mg/kg (ppm)	1.7	98	65-103
Isophorone	mg/kg (ppm)	1.7	101	65-116
2-Nitrophenol	mg/kg (ppm)	1.7	100	49-121
2,4-Dimethylphenol	mg/kg (ppm)	1.7	96	39-110
Benzoic acid	mg/kg (ppm)	2.5	105	56-125
Bis(2-chloroethoxy)methane	mg/kg (ppm)	1.7	98	59-103
2,4-Dichlorophenol	mg/kg (ppm)	1.7	101	53-113
1,2,4-Trichlorobenzene	mg/kg (ppm)	1.7	98	67-100
Hexachlorobutadiene	mg/kg (ppm)	1.7	99	66-104
4-Chloroaniline	mg/kg (ppm)	1.7	55	10-75
4-Chloro-3-methylphenol	mg/kg (ppm)	1.7	102	65-113
2-Methylnaphthalene	mg/kg (ppm)	1.7	100	56-114
Hexachlorocyclopentadiene	mg/kg (ppm)	1.7	89	39-119
2,4,6-Trichlorophenol	mg/kg (ppm)	1.7	105	48-126
2,4,5-Trichlorophenol	mg/kg (ppm)	1.7	103	53-119
2-Chloronaphthalene	mg/kg (ppm)	1.7	102	60-106
2-Nitroaniline	mg/kg (ppm)	1.7	104	53-121
Dimethyl phthalate	mg/kg (ppm)	1.7	102 vo	67-101
2,6-Dinitrotoluene	mg/kg (ppm)	1.7	106	65-115
3-Nitroaniline	mg/kg (ppm)	1.7	70	18-91
2,4-Dinitrophenol	mg/kg (ppm)	1.7	112	38-127
Dibenzofuran	mg/kg (ppm)	1.7	100	48-114
2,4-Dinitrotoluene	mg/kg (ppm)	1.7	107	59-113
4-Nitrophenol	mg/kg (ppm)	1.7	128 vo	54-118
Diethyl phthalate	mg/kg (ppm)	1.7	102	66-105
4-Chlorophenyl phenyl ether	mg/kg (ppm)	1.7	101	69-111
N-Nitrosodiphenylamine	mg/kg (ppm)	1.7	99	51-104
4-Nitroaniline	mg/kg (ppm)	1.7	90	10-167
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	1.7	110	47-127
4-Bromophenyl phenyl ether	mg/kg (ppm)	1.7	100	72-102
Hexachlorobenzene	mg/kg (ppm)	1.7	99	52-116
Pentachlorophenol	mg/kg (ppm)	1.7	102	50-130
Carbazole	mg/kg (ppm)	1.7	100	73-105
Di-n-butyl phthalate	mg/kg (ppm)	1.7	102	67-107
Benzyl butyl phthalate	mg/kg (ppm)	1.7	104	61-117
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	1.7	104	65-118
Di-n-octyl phthalate	mg/kg (ppm)	1.7	106	71-120

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 103342-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	<0.1	<0.1	nm
Aroclor 1260	mg/kg (ppm)	<0.1	<0.1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.8	106	104	60-142	2
Aroclor 1260	mg/kg (ppm)	0.8	119	123	63-144	3

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 103342-52 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.8	<0.1	114	106	68-127	7
Aroclor 1260	mg/kg (ppm)	0.8	<0.1	131	124	63-140	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.8	113	60-142
Aroclor 1260	mg/kg (ppm)	0.8	129	63-144

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

103342

SAMPLE CHAIN OF CUSTODY

Group A ME 03/25/11 VS3/BLY one #9 3/25

Page # ____ of ____

Send Report To Dana Cannon

Company Aspect Consulting LLC

Address ____

City, State, ZIP Seattle

Phone # ____ Fax # ____

SAMPLERS *(signature)*

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS
Total metals Group A
As, Pb

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH ____
- Rush charges authorized by ____

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel + Oil	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	cPAHs	SVOCs	PCBs	Total metals *			Notes
SG-JG-3	01 A-D	3-24-11	1020	soil	4				X									
SG-JG-0-3	02 A-B				2	X						X	X	X	X			
SG-JG-8	03 A-D		1025		4				X									
SG-JG-6-9	04 A-B		1025		2	X						X	X	X	X			
SG-JG-14	05 A-D		1040		4				X									
SG-JG-12-15	06 A-B		1040		2	X						X	X	X	X			
SG-G2-3	07 A-D		1030		4				X									
SG-G2-0-3	08 A-B		1030		2	X			*			X	X	X	X			
SG-G2-9	09 A-D		1040		4				(X)									(X) - analyze per DC 3/25/11 ms
SG-G2-6-9	10 A-B		1040		2	X			*			X	X	X	X			* cancel per DC 3/25/11 ms

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert Hanford	Aspect	3/24/11	1630
Received by:	Nhan Phan	FEBI	3/25/11	1300
Relinquished by:				
Received by:		Samples received at 2 °C		

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(206) 283-5044

103342

[redacted]

SAMPLE CHAIN OF CUSTODY

Group A
ME 3/25/11 [redacted]

Page # 2 of #9

Send Report To Dana Cannon
Company Aspect
Address
City, State, ZIP Seattle
Phone # ______ Fax # ______

SAMPLERS (signature) Robert R Hanford
PROJECT NAME/NO. Crownhill 100094
PO#
REMARKS Group A * As, Pb.

TURNAROUND TIME
☐ Standard (2 Weeks) VS3/BI4
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	cPAHs	PCB's	Total MTLS*				Notes
SG-G2-14	11 A-D	3/24	1045	S	4				X									Go per DC 3/25/11
SG-G2-12-15	12 A-B	3/24	1045	S	2	⊗				⊗		⊗	⊗	⊗				MG
SG-F3-2	13 A-D	3/24	1045	S	4				X									
SG-F3-0-3	14 A-B	3/24	1045	S	2	⊗				⊗		⊗	⊗	⊗				
SG-F3-7	15 A-D	3/24	1050	S	4				X									
SG-F3-6-9	16 A-B	3/24	1050	S	2	⊗				⊗		⊗	⊗	⊗				
SG-F3-12-15	17 A-B	3/24	1055	S	2	⊗				⊗		⊗	⊗	⊗				
SG-H3-2	18 A-D	3/24	1130	S	4				X									
SG-H3-0-3	19 A-B	3/24	1130	S	2	⊗				⊗		⊗	⊗	⊗				
SG-H3-8	20 A-D	3/24	1135	S	4				X									

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Robert R Hanford	Aspect	3/24/11	1630
Received by:	[signature]	Nhan Phan	FeBI	3/25/11	1300
Relinquished by:					
Received by:			Samples received at 2 °C		

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103342

SAMPLE CHAIN OF CUSTODY

Group A. VS3/BTEX

Page # 3 of 9 3/25

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle.

Phone # Fax #

SAMPLERS (signature) ME 03/25/11

PROJECT NAME/NO. Crowsnhill 100094

PO#

REMARKS Group A metals. Pb, As

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	cPAHs	PCBs	Total MTLS				Notes
SG-H3-6-9	21 A-B	3/24	1135	S	2	X				X		X	X	X				
SG-H3-13.5	22 A-D	3/24	1140		4				X									
SG-H3-12-15	23 A-B		1140		2	X				X		X	X	X				
NG-H9-2	24 A-D		1345		4				X									
NG-H9-0-3	25 A-D		1345		2	X				X		X	X	X				
NG-H9-8	26 A-D		1405		4				X									
NG-H9-6-9	27 A-B		1405		2	X				X		X	X	X				
NG-H9-12-15	28 A-B		1410		2	X				X		X	X	X				
NG-H9-13	29 A-D		1410		4				X									
NG-68-2	30 A-D	↓	1240	↓	4				X									

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R Hansen	Aspect	3/24/11	1630
Received by:		Nhan Pham	FEBT	3/25/11	1300
Relinquished by:					
Received by:			Samples received at 2 °C		

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SAMPLE CHAIN OF CUSTODY

Group A . VS3/BI4

Page # 4 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) ME 03/25/11

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS Total metal Group A As, Pb

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	cPAHs	PCBs	Total mtls				Notes
NG-G8-0-3	31 A-B		1240		2	X				X		X	X	X				
NG-G8-8	32 A-D		1245		4				X									
NG-G8-6-9	33 A-B		1245		2	X				X		X	X	X				
NG-G8-13	34 A-D		1250		4				X									
NG-G8-12-15	35 A-B		1250		2	X				X		X	X	X				
NG-E6-2	36 A-D		1400		4				X									
NG-E6-0-3	37 A-B		1400		2	X				X		X	X	X				
NG-E6-7	38 A-D		1405		4				X									
NG-E6-6-9	39 A-B		1405		2	X				X		X	X	X				
NG-E6-13	40 A-D		1410		4				X									

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R Hanford	Aspect	3/24/11	1630
Received by:		Nhan Phan	FEBI	3/25/11	1300
Relinquished by:					
Received by:			Samples received at 2 °C		

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SAMPLE CHAIN OF CUSTODY

Group A

VS3 / BF4

Send Report To: Dana Cannon

Company: Aspect

Address:

City, State, ZIP: Seattle

Phone #: Fax #:

SAMPLERS (signature): [illegible] | ME 03/25/11

PROJECT NAME/NO.: Crownhill 100094

PO#:

REMARKS: metals Group A Pb AS

Page # 5 of 9

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	CPAHs	PCBs	Total Metals				Notes
N6-E6-12-15	41 AB	3/24	1410	S	2	X				X		X	✓	✓				

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Robert Hanson	Aspect	3/24/11	1630
Received by: [signature]	Nhan Phan	FeBT	3/25/11	1300
Relinquished by:				
Received by:		Samples received at 2 °C		

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SAMPLE CHAIN OF CUSTODY

Group B MT 03/25/11

Page # 6 of 9

Send Report To Dana Cannon

Company Aztec

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS *(signature)*

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS * Total metals Group B As, Pb Antimony, Copper, Chromium, Selenium Vanadium, Zinc + Hex Chromium

TURNAROUND TIME
☐ Standard (2 Weeks) VS3/BT4
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals *						Notes
SG-I7-0-3	42 A-B	3/24	1135	S	2	X						X						
SG-I7-8.5-10	43 A-B		1140		2	X						X						
SG-I7-12-15	44 A-B		1145		2	X						X						
NG-F4-0-3	45 A-B		1205		2	X						X						
NG-F4-6-9	46 A-B		1210		2	X						X						
NG-F4-12-15	47 A-B		1215		2	X						X						
NG-F5-0-3	48 A-B		1530		2	X						X						
NG-F5-8-10	49 A-B		1535		2	X						X						
NG-F5 12-15	50 A-B		1540		2	X						X						

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aztec	3/24/11	1645
Received by:		Nhan Phan	FeBI	3/25/11	1300
Relinquished by:					
Received by:			Samples received at 2 °C		

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SAMPLE CHAIN OF CUSTODY

Group A & B

BI4 / VS3

Page # 7 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle.

Phone # Fax #

SAMPLERS (signature) ME 03/24/11

PROJECT NAME/NO. PO#

REMARKS * Group A & B Total metals As, Pb, Antimony, Cu, Cr, Se, Vanadium, Zinc + Hex Cr

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel 401	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	cPAHs	SVOCs	PCBs	Total metals			Notes
NG-C7-2	51 A-H	3-24-11	1235	S	8	X			X									MS/MSD
NG-C7-0-3	52 A-D		1235		4	X						X	X	X	X			MS/MSD.
NG-C7-7	53 A-D		1240		4				X									
NG-C7-6-9	54 A-B		1240		2	X						X	X	X	X			
NG-C7-13	55 A-D		1245		4				X									
NG-C7-12-15	56 A-B		1245		2	X						X	X	X	X			
NG-C7-18	57 A-D		1250		4				X									
NG-C7-17-20	58 A-B	"	1250	"	2	X						X	X	X	X			
SG-J7-3	59 A-D		1155		4				X									
SG-J7-0-3	60 AB	↓	1155	↓	2	X						X	X	X	X			

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert A Hanford	Aspect	3/24/11	1620
Received by:		Nhan Phan	Fe BI	3/25/11	1300
Relinquished by:					
Received by:			Samples received at 2 °C		

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SAMPLE CHAIN OF CUSTODY

Group A&B ME 03/25/11

Page # 8 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert R Hanford

PROJECT NAME/NO. 100094 Crowley

PO#

REMARKS * As, Ab, Antimony, Cu, Cr, Se, Vanadium, Zn, Hex Cr

TURNAROUND TIME
☐ Standard (2 Weeks) VS3/BE4
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	cMetals	PeBs	Total mtls *				Notes
SG-J7-9	61 A-D	3/24/11	1200	S	4	X			Y									⊗ - per BH
SC-J7-6-9	62 A-B		1200		2	Y				X		X	X	X				3/26/11
SG-J7-14	63 A-D		1205		4				Y									a1
SG-J7-12-15	64 A-B		1205		2	Y				X		X	X	X				
NG-A7-6-9	65 A-B		—		2	X				X		⊗	⊗	⊗				
NG-A7-7	66 A-D		—		4				Y			X	X	X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Robert R Hanford	Robert Hanford	Aspect	3/24	1620
Received by: Nhan Phan	Nhan Phan	FeBI	3/25/11	1300
Relinquished by:			2	
Received by:		Samples received at	°C	

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SAMPLE CHAIN OF CUSTODY

STD

Page # 9 of 9

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # _____ Fax # _____

SAMPLERS (signature) Robert R Hanford ME 03/25/11

PROJECT NAME/NO. Crownhill 100094

PO#

REMARKS

metals As, Pb.

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH VS3/BI4
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Metals As						Notes
NG-I9-0-3		3/24	1500	S	2	X						X						Duplicate listing DLC 3/25/11
NG-I9-6-9		3/24	1505		2	X						X						
NG-I9-12-15		3/24	1510		2	X						X						
NG-K3-0-3	76 A-B	3/24	1430	S	2	X						X						
NG-K3-6-9	77 68 AB		1435		2	X						X						
NG-K3-12-15	72 69 AB		1440		2	X						X						
NG-I9-0-3	70		1500		1	X						X						
NG-I9-6-9	71		1505		1	X						X						
NG-I9-12-15	72		1510		1	X						X						
SG-F3-13	73 A-D	3/24	1055		4				X									ND Added in Lab

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert R Hanford	Aspect	3/24/11	1645
Received by:	Khan Phan	FedEx	3/25/11	1300
Relinquished by:				
Received by:		Samples received at 2 °C		

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 11, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on March 31, 2011 from the Crownhill 100094, F&BI 103428 project. There are 161 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0411R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 31, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crownhill 100094, F&BI 103428 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
103428-01	NG-L4-0-3
103428-02	NG-L4-6-9
103428-03	NG-L4-12-15
103428-04	NG-L3-0-3
103428-05	NG-L3-6-9
103428-06	NG-L3-12-15
103428-07	NG-L2-0-3
103428-08	NG-L2-6-9
103428-09	NG-L2-12-15
103428-10	NG-L1-0-3
103428-11	NG-L1-6-9
103428-12	NG-L1-12-15
103428-13	NG-L5-0-3
103428-14	NG-L5-6-9
103428-15	NG-L5-12-15
103428-16	SG-L11-12-15
103428-17	SG-L1-0-3
103428-18	SG-L1-6-9
103428-19	SG-L1-12-15
103428-20	NG-E2-0-3
103428-21	NG-E2-6-9
103428-22	NG-E2-12-15
103428-23	NG-F2-0-3
103428-24	NG-F2-6-9
103428-25	NG-F2-12-15
103428-26	NG-F1-0-3
103428-27	NG-F1-6-9
103428-28	NG-F1-12-15
103428-29	NG-G1-0-3
103428-30	NG-G1-6-9
103428-31	NG-G1-12-15
103428-32	SG-F4-0-3
103428-33	SG-F4-6-9
103428-34	SG-F4-12-15
103428-35	SG-G3-0-3
103428-36	SG-G3-6-9
103428-37	SG-G3-12-15
103428-38	SG-G4-0-3

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103428-39	SG-G4-6-9
103428-40	SG-G4-12-15
103428-41	SG-H4-0-3
103428-42	SG-H4-6-9
103428-43	SG-H4-12-15
103428-44	SG-I4-0-3
103428-45	SG-I4-6-9
103428-46	SG-I4-12-15
103428-47	SG-F1-0-3
103428-48	SG-F1-6-9
103428-49	SG-F1-12-15
103428-50	SG-I6-0-3
103428-51	SG-I6-6-9
103428-52	SG-I6-12-15
103428-53	SG-H6-0-3
103428-54	SG-H6-6-9
103428-55	SG-H6-12-15
103428-56	SG-G6-0-3
103428-57	SG-G6-6-9
103428-58	SG-G6-12-15
103428-59	SG-F5-0-3
103428-60	SG-F5-6-9
103428-61	SG-F5-12-15
103428-62	SG-G5-0-3
103428-63	SG-G5-6-9
103428-64	SG-G5-12-15
103428-65	SG-H5-0-3
103428-66	SG-H5-6-9
103428-67	SG-H5-12-15
103428-68	SG-G1-0-3
103428-69	SG-G1-6-9
103428-70	SG-G1-12-15
103428-71	SG-H2-0-3
103428-72	SG-H2-6-9
103428-73	SG-H2-12-15
103428-74	SG-I2-0-3
103428-75	SG-I2-6-9
103428-76	SG-I2-12-15
103428-77	SG-I3-0-3
103428-78	SG-I3-6-9
103428-79	SG-I3-12-15
103428-80	SG-L4-0-3

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103428-81	SG-L4-6-9
103428-82	SG-L4-12-15
103428-83	SG-L5-0-3
103428-84	SG-L5-6-9
103428-85	SG-L5-12-15
103428-86	SG-L6-0-3
103428-87	SG-L6-6-9
103428-88	SG-L6-12-15
103428-89	SG-I5-0-3
103428-90	SG-I5-6-9
103428-91	SG-I5-12-15
103428-92	SG-I11-6-9
103428-93	SG-J5-0-3
103428-94	SG-J5-6-9
103428-95	SG-J5-12-15
103428-96	SG-K5-0-3
103428-97	SG-K5-6-9
103428-98	SG-K5-12-15
103428-99	SG-J4-0-3
103428-100	SG-J4-6-9
103428-101	SG-J4-12-15
103428-102	SG-K4-0-3
103428-103	SG-K4-6-9
103428-104	SG-K4-12-15
103428-105	SG-K3-0-3
103428-106	SG-K3-6-9
103428-107	SG-K3-12-15
103428-108	SG-L2-0-3
103428-109	SG-L2-6-9
103428-110	SG-L2-12-15
103428-111	SG-L3-0-3
103428-112	SG-L3-6-9
103428-113	SG-L3-12-15
103428-114	SG-H1-0-3
103428-115	SG-H1-6-9
103428-116	SG-H1-12-15
103428-117	SG-K6-0-3
103428-118	SG-K6-6-9
103428-119	SG-K6-12-15
103428-120	SG-J3-0-3

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103428-121	SG-J3-6-9
103428-122	SG-J3-12-15
103428-123	NG-L6 0-3

DRO/RRO by Method NWTPH-Dx, Extraction Method 3550B

Soil sample concentrations were reported on a dry weight basis. The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

Metals by Method 200.8, Extraction Method 200.8

Soil sample concentrations were reported on a dry weight basis. All quality control requirements were acceptable.

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428
Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-L4-0-3 103428-01	<50	<250	125
NG-L4-6-9 103428-02	<50	<250	123
NG-L4-12-15 103428-03	<50	<250	124
NG-L3-0-3 103428-04	<50	<250	121
NG-L3-6-9 103428-05	<50	<250	121
NG-L3-12-15 103428-06	<50	<250	125
NG-L2-0-3 103428-07	<50	<250	127
NG-L2-6-9 103428-08	<50	<250	123
NG-L2-12-15 103428-09	<50	<250	121
NG-L1-0-3 103428-10	<50	<250	124
NG-L1-6-9 103428-11	<50	<250	103

Date of Report: 04/11/11
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Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-L1-12-15 103428-12	<50	<250	105
NG-L5-0-3 103428-13	<50	<250	103
NG-L5-6-9 103428-14	<50	<250	104
NG-L5-12-15 103428-15	<50	<250	104
SG-L11-12-15 103428-16	<50	<250	104
SG-L1-0-3 103428-17	<50	<250	104
SG-L1-6-9 103428-18	<50	<250	104
SG-L1-12-15 103428-19	<50	<250	103
NG-E2-0-3 103428-20	140 x	440	104
NG-E2-6-9 103428-21	<50	<250	105
NG-E2-12-15 103428-22	<50	<250	104

Date of Report: 04/11/11
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Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-F2-0-3 103428-23	<50	<250	104
NG-F2-6-9 103428-24	<50	<250	103
NG-F2-12-15 103428-25	<50	<250	106
NG-F1-0-3 103428-26	550	1,600	106
NG-F1-6-9 103428-27	<50	<250	107
NG-F1-12-15 103428-28	<50	<250	106
NG-G1-0-3 103428-29	<50	<250	106
NG-G1-6-9 103428-30	<50	<250	105
NG-G1-12-15 103428-31	<50	<250	107
SG-F4-0-3 103428-32	<50	<250	105

Date of Report: 04/11/11
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Project: Crownhill 100094, F&BI 103428
Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-F4-6-9 103428-33	<50	<250	105
SG-F4-12-15 103428-34	<50	<250	107
SG-G3-0-3 103428-35	<50	<250	104
SG-G3-6-9 103428-36	<50	<250	106
SG-G3-12-15 103428-37	<50	<250	106
SG-G4-0-3 103428-38	<50	<250	104
SG-G4-6-9 103428-39	<50	<250	103
SG-G4-12-15 103428-40	<50	<250	105
SG-H4-0-3 103428-41	<50	<250	122
SG-H4-6-9 103428-42	<50	<250	121
SG-H4-12-15 103428-43	<50	<250	125

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Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-I4-0-3 103428-44	<50	<250	124
SG-I4-6-9 103428-45	<50	<250	127
SG-I4-12-15 103428-46	<50	<250	126
SG-F1-0-3 103428-47	<50	<250	129
SG-F1-6-9 103428-48	<50	<250	125
SG-F1-12-15 103428-49	<50	<250	108
SG-I6-0-3 103428-50	<50	400	108
SG-I6-6-9 103428-51	<50	<250	112
SG-I6-12-15 103428-52	<50	<250	111
SG-H6-0-3 103428-53	<50	650	112
SG-H6-6-9 103428-54	<50	<250	110

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Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-H6-12-15 103428-55	<50	<250	110
SG-G6-0-3 103428-56	<50	<250	109
SG-G6-6-9 103428-57	<50	<250	110
SG-G6-12-15 103428-58	<50	<250	110
SG-F5-0-3 103428-59	<50	<250	108
SG-F5-6-9 103428-60	190	280	110
SG-F5-12-15 103428-61	170 x	490 x	100
SG-G5-0-3 103428-62	<50	310	96
SG-G5-6-9 103428-63	<50	<250	96
SG-G5-12-15 103428-64	<50	<250	96
SG-H5-0-3 103428-65	<50	<250	98

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Date Extracted: 04/04/11
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RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-H5-6-9 103428-66	<50	<250	97
SG-H5-12-15 103428-67	<50	<250	96
SG-G1-0-3 103428-68	<50	<250	93
SG-G1-6-9 103428-69	<50	<250	96
SG-G1-12-15 103428-70	<50	<250	94
SG-H2-0-3 103428-71	160 x	1,400	94
SG-H2-6-9 103428-72	<50	330	95
SG-H2-12-15 103428-73	<50	<250	95
SG-I2-0-3 103428-74	<50	<250	95
SG-I2-6-9 103428-75	<50	<250	95
SG-I2-12-15 103428-76	<50	<250	94

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Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-I3-0-3 103428-77	<50	<250	94
SG-I3-6-9 103428-78	<50	<250	95
SG-I3-12-15 103428-79	<50	<250	95
SG-L4-0-3 103428-80	<50	360	95
SG-L4-6-9 103428-81	<50	<250	93
SG-L4-12-15 103428-82	<50	<250	96
SG-L5-0-3 103428-83	<50	<250	95
SG-L5-6-9 103428-84	<50	<250	94
SG-L5-12-15 103428-85	<50	<250	95
SG-L6-0-3 103428-86	<50	<250	90
SG-L6-6-9 103428-87	970 x	780 x	97

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RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-L6-12-15 103428-88	<50	<250	92
SG-I5-0-3 103428-89	<50	<250	94
SG-I5-6-9 103428-90	<50	<250	94
SG-I5-12-15 103428-91	<50	<250	94
SG-I11-6-9 103428-92	<50	<250	94
SG-J5-0-3 103428-93	<50	<250	96
SG-J5-6-9 103428-94	<50	<250	94
SG-J5-12-15 103428-95	<50	<250	96
SG-K5-0-3 103428-96	<50	<250	95
SG-K5-6-9 103428-97	<50	<250	93
SG-K5-12-15 103428-98	<50	<250	92

Date of Report: 04/11/11
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Project: Crownhill 100094, F&BI 103428
Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-J4-0-3 103428-99	<50	<250	101
NG-L1-0-30 103428-100	<50	<250	102
NG-L1-0-31 103428-101	<50	<250	95
NG-L1-0-32 103428-102	<50	380	97
NG-L1-0-33 103428-103	<50	<250	97
NG-L1-0-34 103428-104	<50	<250	98
NG-L1-0-35 103428-105	<50	520	98
NG-L1-0-36 103428-106	150	530	99
NG-L1-0-37 103428-107	97 x	980	97
NG-L1-0-38 103428-108	<50	<250	94
NG-L1-0-39 103428-109	<50	<250	95

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428
Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-L1-6-90 103428-110	<50	<250	97
NG-L1-6-91 103428-111	<50	<250	93
NG-L1-6-92 103428-112	<50	<250	95
NG-L1-6-93 103428-113	<50	<250	96
NG-L1-6-94 103428-114	<50	<250	96
NG-L1-6-95 103428-115	<50	<250	97
NG-L1-6-96 103428-116	<50	<250	97
NG-L1-6-97 103428-117	<50	580	94
NG-L1-6-98 103428-118	<50	<250	97
NG-L1-6-99 103428-119	<50	<250	97
NG-L1-12-150 103428-120	<50	680	96

Date of Report: 04/11/11
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Date Extracted: 04/04/11
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RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-L1-12-151 103428-121	<50	<250	100
NG-L1-12-152 103428-122	<50	350	99
NG-L1-12-153 103428-123	<50	<250	104
Method Blank 01-582 MB	<50	<250	122
Method Blank 01-583 MB	<50	<250	104
Method Blank 01-584 MB	<50	<250	128
Method Blank 01-585 MB	<50	<250	96
Method Blank 01-586 MB	<50	<250	101
Method Blank 01-587 MB	<50	<250	97
Method Blank 01-588 MB	<50	<250	98

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-01
Date Analyzed:	04/06/11	Data File:	103428-01.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	6.66

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-02
Date Analyzed:	04/06/11	Data File:	103428-02.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.55
Lead	1.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-03
Date Analyzed:	04/06/11	Data File:	103428-03.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.74

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L3-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-04
Date Analyzed:	04/06/11	Data File:	103428-04.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.42

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L3-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-05
Date Analyzed:	04/06/11	Data File:	103428-05.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.11

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L3-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-06
Date Analyzed:	04/06/11	Data File:	103428-06.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	1.95

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-07
Date Analyzed:	04/06/11	Data File:	103428-07.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.67
Lead	13.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-08
Date Analyzed:	04/06/11	Data File:	103428-08.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.02

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-09
Date Analyzed:	04/06/11	Data File:	103428-09.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-10
Date Analyzed:	04/06/11	Data File:	103428-10.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.41
Lead	23.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-11
Date Analyzed:	04/06/11	Data File:	103428-11.045
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.19

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-12
Date Analyzed:	04/06/11	Data File:	103428-12.046
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.22

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-13
Date Analyzed:	04/06/11	Data File:	103428-13.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.83
Lead	13.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-14
Date Analyzed:	04/06/11	Data File:	103428-14.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	1.35

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-15
Date Analyzed:	04/06/11	Data File:	103428-15.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.32
Lead	1.98

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L11-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-16
Date Analyzed:	04/06/11	Data File:	103428-16.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-17
Date Analyzed:	04/06/11	Data File:	103428-17.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.71
Lead	83.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-18
Date Analyzed:	04/06/11	Data File:	103428-18.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	3.08

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-19
Date Analyzed:	04/06/11	Data File:	103428-19.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-20
Date Analyzed:	04/06/11	Data File:	103428-20.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.74
Lead	73.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-21
Date Analyzed:	04/06/11	Data File:	103428-21.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	107	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.06
Lead	1.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-22
Date Analyzed:	04/06/11	Data File:	103428-22.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.71
Lead	2.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-23
Date Analyzed:	04/06/11	Data File:	103428-23.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.63
Lead	117

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-24
Date Analyzed:	04/06/11	Data File:	103428-24.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.17
Lead	1.84

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-25
Date Analyzed:	04/06/11	Data File:	103428-25.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.13
Lead	1.35

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-26
Date Analyzed:	04/06/11	Data File:	103428-26.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.51
Lead	29.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-27
Date Analyzed:	04/06/11	Data File:	103428-27.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	1.57

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-28
Date Analyzed:	04/06/11	Data File:	103428-28.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-29
Date Analyzed:	04/06/11	Data File:	103428-29.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.08
Lead	9.75

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-30
Date Analyzed:	04/06/11	Data File:	103428-30.071
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.74
Lead	4.27

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-31
Date Analyzed:	04/06/11	Data File:	103428-31.072
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	1.43

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-32
Date Analyzed:	04/06/11	Data File:	103428-32.073
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.87
Lead	102

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-33
Date Analyzed:	04/06/11	Data File:	103428-33.074
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	107	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.92
Lead	25.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-34
Date Analyzed:	04/06/11	Data File:	103428-34.081
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	2.14

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G3-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-35
Date Analyzed:	04/06/11	Data File:	103428-35.082
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.81
Lead	126

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G3-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-36
Date Analyzed:	04/06/11	Data File:	103428-36.077
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G3-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-37
Date Analyzed:	04/06/11	Data File:	103428-37.083
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.41

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-38
Date Analyzed:	04/06/11	Data File:	103428-38.084
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	111	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.95
Lead	105

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-39
Date Analyzed:	04/06/11	Data File:	103428-39.085
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.56
Lead	3.30

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-40
Date Analyzed:	04/06/11	Data File:	103428-40.086
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.30

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-41
Date Analyzed:	04/06/11	Data File:	103428-41.087
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.64
Lead	51.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-42
Date Analyzed:	04/06/11	Data File:	103428-42.088
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.18

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-43
Date Analyzed:	04/06/11	Data File:	103428-43.089
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-44
Date Analyzed:	04/06/11	Data File:	103428-44.090
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.09
Lead	109

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-45
Date Analyzed:	04/06/11	Data File:	103428-45.092
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.12

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-46
Date Analyzed:	04/06/11	Data File:	103428-46.093
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-47
Date Analyzed:	04/06/11	Data File:	103428-47.094
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	2.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-48
Date Analyzed:	04/06/11	Data File:	103428-48.095
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.13
Lead	1.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-49
Date Analyzed:	04/06/11	Data File:	103428-49.096
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.46

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I6-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-50
Date Analyzed:	04/06/11	Data File:	103428-50.097
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.78
Lead	32.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I6-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-51
Date Analyzed:	04/06/11	Data File:	103428-51.098
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.60

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I6-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-52
Date Analyzed:	04/06/11	Data File:	103428-52.099
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	3.05

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H6-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-53
Date Analyzed:	04/06/11	Data File:	103428-53.100
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.10
Lead	26.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H6-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-54
Date Analyzed:	04/06/11	Data File:	103428-54.107
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.45
Lead	2.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H6-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-55
Date Analyzed:	04/06/11	Data File:	103428-55.108
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.21
Lead	2.04

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G6-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-56
Date Analyzed:	04/06/11	Data File:	103428-56.109
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.10
Lead	43.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G6-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-57
Date Analyzed:	04/06/11	Data File:	103428-57.110
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.02
Lead	87.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G6-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-58
Date Analyzed:	04/06/11	Data File:	103428-58.111
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.49
Lead	17.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-59
Date Analyzed:	04/06/11	Data File:	103428-59.113
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.83
Lead	96.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-60
Date Analyzed:	04/06/11	Data File:	103428-60.114
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	3.02

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-61
Date Analyzed:	04/06/11	Data File:	103428-61.115
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.34
Lead	11.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-62
Date Analyzed:	04/06/11	Data File:	103428-62.116
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.01
Lead	71.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-63
Date Analyzed:	04/06/11	Data File:	103428-63.117
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.41
Lead	9.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-64
Date Analyzed:	04/06/11	Data File:	103428-64.118
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.31
Lead	138

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-65
Date Analyzed:	04/06/11	Data File:	103428-65.119
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.17
Lead	60.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-66
Date Analyzed:	04/06/11	Data File:	103428-66.120
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	66	60	125
Holmium	80	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.44
Lead	4.76

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-67
Date Analyzed:	04/06/11	Data File:	103428-67.121
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.24
Lead	1.29

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-68
Date Analyzed:	04/06/11	Data File:	103428-68.104
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	12.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-69
Date Analyzed:	04/06/11	Data File:	103428-68.122
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.82

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-70
Date Analyzed:	04/06/11	Data File:	103428-70.124
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.27
Lead	1.64

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-71
Date Analyzed:	04/06/11	Data File:	103428-71.125
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.34
Lead	56.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-72
Date Analyzed:	04/06/11	Data File:	103428-72.126
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	6.50

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-73
Date Analyzed:	04/06/11	Data File:	103428-73.127
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.24
Lead	1.48

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-74
Date Analyzed:	04/07/11	Data File:	103428-74.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.32
Lead	13.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-75
Date Analyzed:	04/07/11	Data File:	103428-75.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.31
Lead	1.44

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-76
Date Analyzed:	04/07/11	Data File:	103428-76.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.45

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I3-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-77
Date Analyzed:	04/07/11	Data File:	103428-77.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.97
Lead	15.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I3-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-78
Date Analyzed:	04/07/11	Data File:	103428-78.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.49
Lead	1.42

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I3-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-79
Date Analyzed:	04/07/11	Data File:	103428-79.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.28
Lead	1.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-80
Date Analyzed:	04/07/11	Data File:	103428-80.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.64
Lead	158

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-81
Date Analyzed:	04/07/11	Data File:	103428-81.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	2.45

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-82
Date Analyzed:	04/07/11	Data File:	103428-82.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-83
Date Analyzed:	04/07/11	Data File:	103428-83.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.51
Lead	16.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-84
Date Analyzed:	04/07/11	Data File:	103428-84.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.27

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-85
Date Analyzed:	04/07/11	Data File:	103428-85.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.10
Lead	1.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L6-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-86
Date Analyzed:	04/07/11	Data File:	103428-86.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.19
Lead	28.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L6-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-87
Date Analyzed:	04/07/11	Data File:	103428-87.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.69
Lead	24.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L6-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-88
Date Analyzed:	04/07/11	Data File:	103428-88.046
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.27

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-89
Date Analyzed:	04/07/11	Data File:	103428-89.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.73
Lead	27.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-90
Date Analyzed:	04/07/11	Data File:	103428-90.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-91
Date Analyzed:	04/07/11	Data File:	103428-91.048
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.05
Lead	1.65

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I11-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-92
Date Analyzed:	04/07/11	Data File:	103428-92.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-93
Date Analyzed:	04/07/11	Data File:	103428-93.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.32
Lead	46.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-94
Date Analyzed:	04/07/11	Data File:	103428-94.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.38
Lead	258

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-95
Date Analyzed:	04/07/11	Data File:	103428-95.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.26

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-96
Date Analyzed:	04/07/11	Data File:	103428-96.059
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	15.1
Lead	498

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-97
Date Analyzed:	04/07/11	Data File:	103428-97.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	76	60	125
Holmium	81	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	12.0
Lead	215

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-98
Date Analyzed:	04/07/11	Data File:	103428-98.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	98	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-99
Date Analyzed:	04/07/11	Data File:	103428-99.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.45
Lead	92.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-30	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-100
Date Analyzed:	04/07/11	Data File:	103428-100.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.51
Lead	106

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-31	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-101
Date Analyzed:	04/07/11	Data File:	103428-101.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-32	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-102
Date Analyzed:	04/07/11	Data File:	103428-102.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.65
Lead	82.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-33	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-103
Date Analyzed:	04/07/11	Data File:	103428-103.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.75
Lead	25.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-34	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-104
Date Analyzed:	04/07/11	Data File:	103428-104.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	48.2
Lead	1,530

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-35	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-105
Date Analyzed:	04/07/11	Data File:	103428-105.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.84
Lead	88.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-36	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-106
Date Analyzed:	04/07/11	Data File:	103428-106.070
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	99	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	24.0
Lead	1,420

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-37	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-107
Date Analyzed:	04/07/11	Data File:	103428-107.071
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	48.6
Lead	1,960

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-38	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-108
Date Analyzed:	04/07/11	Data File:	103428-108.072
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	71	60	125
Holmium	74	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.42
Lead	26.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-39	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-109
Date Analyzed:	04/08/11	Data File:	103428-109.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.07
Lead	5.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-90	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-110
Date Analyzed:	04/07/11	Data File:	103428-110.074
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	83	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.23

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-91	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-111
Date Analyzed:	04/07/11	Data File:	103428-111.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.52
Lead	229

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-92	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-112
Date Analyzed:	04/07/11	Data File:	103428-112.076
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.38

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-93	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-113
Date Analyzed:	04/07/11	Data File:	103428-113.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.20
Lead	1.73

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-94	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-114
Date Analyzed:	04/07/11	Data File:	103428-114.083
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.76
Lead	43.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-95	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-115
Date Analyzed:	04/07/11	Data File:	103428-115.084
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-96	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-116
Date Analyzed:	04/07/11	Data File:	103428-116.085
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.17
Lead	1.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-97	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-117
Date Analyzed:	04/07/11	Data File:	103428-117.086
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.73
Lead	59.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-98	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-118
Date Analyzed:	04/07/11	Data File:	103428-118.087
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.86
Lead	9.22

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-99	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-119
Date Analyzed:	04/07/11	Data File:	103428-119.089
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.22
Lead	1.75

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-12-150	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-120
Date Analyzed:	04/07/11	Data File:	103428-120.090
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	4.78

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-12-151	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-121
Date Analyzed:	04/07/11	Data File:	103428-121.091
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.95
Lead	52.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-12-152	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-122
Date Analyzed:	04/07/11	Data File:	103428-122.092
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	97	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	15.0
Lead	710

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-12-153	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-123
Date Analyzed:	04/07/11	Data File:	103428-123.080
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.12
Lead	1.69

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-240 mb
Date Analyzed:	04/06/11	Data File:	I1-240 mb.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-248 mb
Date Analyzed:	04/06/11	Data File:	I1-248 mb.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-249 mb
Date Analyzed:	04/06/11	Data File:	I1-249 mb.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-250 mb
Date Analyzed:	04/06/11	Data File:	I1-250 mb.102
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-251 mb
Date Analyzed:	04/07/11	Data File:	I1-251 mb.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-252 mb
Date Analyzed:	04/07/11	Data File:	I1-252 mb.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-253 mb
Date Analyzed:	04/07/11	Data File:	I1-253 mb.078
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	117	113	63-146	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	115	79-144

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-21 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	91	92	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-48 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	111	119	63-146	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	121	79-144

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-69 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	93	94	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	58-147

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-91 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	104	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	74-139

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-112 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	103	102	73-135	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	74-139

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-121 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	120	100	100	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	74-139

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	101	105	44-151	4
Lead	mg/kg (ppm)	20	1.11	103	106	65-126	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	102	80-120
Lead	mg/kg (ppm)	20	105	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-15 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	3.32	80 b	86 b	44-151	7 b
Lead	mg/kg (ppm)	20	1.98	108	99	65-126	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-36 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	107	99	44-151	8
Lead	mg/kg (ppm)	20	1.49	104	104	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	98	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-68 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	105	103	44-151	2
Lead	mg/kg (ppm)	20	12.6	101 b	102 b	65-126	1 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	96	80-120
Lead	mg/kg (ppm)	20	101	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-90 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	107	110	44-151	3
Lead	mg/kg (ppm)	20	1.47	103	102	65-126	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-113 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.20	101	100	44-151	1
Lead	mg/kg (ppm)	20	1.73	100	106	65-126	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-123 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.12	104	110	44-151	6
Lead	mg/kg (ppm)	20	1.69	97	97	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	105	80-120
Lead	mg/kg (ppm)	20	105	81-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BI4

Page # 1 of 13

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crouch III 100094

PO #

REMARKS

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
NG-L4-0-3	01	3/30/11	0845	S	1	X						X					
NG-L4-6-9	02		0850		1	X						X					
NG-L4-12-15	03 AB		0855		2	X						X					
NG-L3-0-3	04 A-B		0905		2	X						X					
NG-L3-6-9	05		0910		1	X						X					
NG-L3-12-15	06		0915 0935 DP		1	X						X					
NG-L2-0-3	07		0945		1	X						X					
NG-L2-6-9	08		0950		1	X						X					
NG-L2-12-15	09		0955		1	X						X					
NG-L1-0-3	10		10.10		1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FEBinc	1	0930
Relinquished by:					
Received by:					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

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Samples received at 2 °C

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11

BI4

Page # 2 of 13

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
NG-L1-6-9	11	3/30/11	1015	S	2	X						X					2nd jar label does not match ID on jar lid RB 3/31
NG-L1-12-15	12	"	1020		2	X						X					
NG-L5-0-3	13		0825		1	X						X					--
NG-L5-6-9	14		0830		2	X						X					
NG-L5-12-15	15		0835		1	X						X					
SG-L11-12-15	16		—		1	X						X					
SG-L1-0-3	17		1025		1	X						X					
SG-L1-6-9	18		1030		2	X						X					
SG-L1-12-15	19		1035		1	X						X					
~~NG-L6-0-3~~	20	Sample not received	—		1	X						X					RB 3/31 Sample not received

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert Hanford	Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FedEx	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

103428

SAMPLE CHAIN OF CUSTODY

MG 03/31/11

Page # 3 of 13 BD4

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Coastal 100294

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb						Notes
NG-E2-0-3	20	3-31-11	0955	SOIL	1	X						X						
6-9	21		1000		1	X						X						
12-15	22		1005		1	X						X						
NG-F2-0-3	23		0920		1	X						X						
6-9	24		0925		1	X						X						
12-15	25		0930		1	X						X						
NG-F1-0-3	26		0850		1	X						X						
6-9	27		0855		1	X						X						
12-15	28		0900		1	X						X						
NG-G1-0-3	29		0805		1	X						X						

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hartman	Aspect	3-31-11	10:30
Received by:		Michael E-Cahl	FB	↓	↓
Relinquished by:					
Received by:					

Samples received at 2 °C

10

103428

SAMPLE CHAIN OF CUSTODY

HE 03/31/11 Page # 4 of 13 BI4

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Pb+As					Notes
NG-G1-6-9	30	3-31-11	0810	SOIL	1	X						X					
12-15	31		0815		1												
SG-F4-0-3	32		0945		1												
6-9	33		0950		1												
12-15	34		0955		1												
SG-G3-0-3	35		0925		1												
6-9	36		0930		1												
12-15	37		0935		1												
SG-G4-0-3	38		0900		1												
6-9	39		0905		1												

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R. Hanford	Aspect	3-31-11	10 30
Received by:		Michael Erdahl	F&B	1	1
Relinquished by:					
Received by:					

Samples received at 2 °C 10

103428

SAMPLE CHAIN OF CUSTODY

ME 03/21/11

Page # 5 of 13

Send Report To Dana Cannon

Company Aspect

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City, State, ZIP Seattle

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SAMPLERS (signature)

PROJECT NAME/NO. Crawhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-G4-12-15	40	3-31-11	0910	soil	1	X						X					
SG-H4-0-3	41	"	0840	"	1	X						X					
-6-9	42 A-B	"	0845	"	2	X						X					
-12-15	43 A,B	"	0850	"	2	X						X					
SG-I4-0-3	44	"	0820	"	1	X						X					
-6-9	45	"	0825	"	1	X						X					
-12-15	46	"	0830	"	1	X						X					
SG-F1-0-3	47	"	1015	"	1	X						X					
6-9	48	"	1020	"	1	X						X					
12-15	49	"	1025	"	1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hansen	Aspect	3-31-11	11:00
Received by:		Michael Eccel	FedEx	1	1
Relinquished by:					
Received by:					

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Samples received at 2 °C

12

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BI4

Page # 6 of 13

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crowahill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-I6-0-3	50	3-30-11	1555	Soil	1	X						X					
-6-9	51	↓	1600	↓	1	X						X					
-12-15	52		1605		1	X						X					
SG-H6-03	53		1520		1	X						X					
-6-9	54 A-B		1525		2	X						X					
-12-15	55 A-B		1530		2	X						X					
SG-G6-0-3	56		1440		1	X						X					
-6-9	57		1445		1	X						X					
-12-15	58		1450		1	X						X					
SG-F5-0-3	59	↓	1415	↓	1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R. Hanfelt	Aspect	3-31-11	0930
Received by:		Michael Erdahl	FEBruya	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

12

103428
[redacted]

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 [redacted]

Page # 7 BI4 of 13

Send Report To Dana Cameron

Company Aspect

Address Ø

City, State, ZIP Seattle

Phone # ______ Fax # ______

SAMPLERS (signature) [signature]

PROJECT NAME/NO. Cornhill Aspect

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH______

Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-F5-6-9	60	3/30/11	1420	soil	1	X						X					
-12-15	61		1425		1	X						X					
SG-G5-0-3	62		1350		1	X						X					
-6-9	63		1355		1	X						X					
-12-15	64		1400		1	X						X					
SG-H5-0-3	65 A-B		1320		2	X						X					
-6-9	66 A-B		1325		2	X						X					
-12-15	67 A-B		1330		2	X						X					
SG-G1-0-3	68		1505		1	X						X					
-6-9	69	↓	1510	↓	1	X						X					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Robert R Hanford	Aspect	3-31-11	0930
Received by: [signature]	Michael Erdahl	F&Bine	↓	↓
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

Samples received at 2 °C

13

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BI4

Page # 8 of 13

Send Report To Dana Connor

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert R Hartman

PROJECT NAME/NO. Crown Hill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-G1-12-15	70	3/30/11	1515	Soil	1	X						X					
SG-H2-0-3	71	"	1445	"	1	X						X					
-6-9	72	"	1450	"	1	X						X					
-12-15	73	"	1455	"	1	X						X					
SG-I2-0-3	74	"	1405	"	1	X						X					
6-9	75	"	1410	"	1	X						X					
12-15	76	"	1415	"	1	X						X					
SG-I3-0-3	77	"	1330	"	1	X						X					
-6-9	78	"	1335	"	1	X						X					
-12-15	79	"	1340	"	1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert R Hartman	Robert Hartman	Aspect	3-31-11	0930
Received by:		Michael Erdahl	FEBruya	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

10

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BI4

Page # 9 of 13

Send Report To Dawn Connor

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert Hanford

PROJECT NAME/NO. Crowuh 111 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-L4-0-3	80 AB	3/30/11	0930	S	2	X						X					
6-9	81		0935		2	X						X					
12-15	82		0940		2	X						X					
SG-L5 0-3	83		0855		2	X						X					
6-9	84		0900		2	X						X					
12-15	85		0905		2	X						X					
SG-L6 0-3	86		0820		1	X						X					
6-9 AB	87 AB		0825		2	X						X					
12-15 3/31	88 AB		0830		2	X						X					
SG-I5-0-3	89		11:55		1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert Hanford	Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FEBrie	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

18

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11

Page # 10 of 63 BI4

Send Report To Dana Cameron

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert Hanford

PROJECT NAME/NO. Crowchild 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb					Notes
SG-I5-6-9	90	3-30-11	1200	soil	1	X						X					
SG-I5-12-15	91		1205		1	X						X					
SG-I11-6-9	92		—		1	X						X					--
SG-J5-03	93		1140		1	X						X					
SG-J5-6-9	94		1145		1	X						X					
SG-J5-12-15	95		1150		1	X						X					
SG-K5-03	96		1110		1	X						X					
SG-K5-6-9	97		1115		1	X						X					
SG-K5-12-15	98		1120		1	X						X					
SG-J4-0-3	99		1150		1												

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert Hanford	Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FEBnc	1	1
Relinquished by:					
Received by:					

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Samples received at 2 °C

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BIY

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crockhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-J4-6-9	100	3/30/11	1155	Soil	1	X						X					
SG-J4-12-15	101		1200		1	X						X					
SG-K4-0-3	102		1120		1	X						X					
6-9	103		1125		1	X						X					
12-15	104		1130		1	X						X					
SG-K3-0-3	105		1055		1	X						X					
-6-9	106		1100		1	X						X					
-12-15	107		1105		1	X						X					
SG-L2-0-3	108		1010		1	X						X					
6-9	109		1015		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FB	↓	↓
Relinquished by:					
Received by:					

Samples received at 2 °C

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11

Page # 12 of 13 BF4

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert Hanford

PROJECT NAME/NO. Crownhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-L2-12-15	110	3/30/11	1020	soil	1	X						X					
SG-L3-03	111		0955		1	X						X					
-6-9	112		1000		1	X						X					
-12-15	113		1005		1	X						X					
SG-H1-0-3	114		1550		1	X						X					
-6-9	115		1555		1	X						X					
-12-15	116		1600		1	X						X					
SG-K6-0-3	117		1615		1	X						X					
-6-9	118		1620		1	X						X					
-12-15	119		1625		1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FEDEX	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

10

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11

Page # 13 of 13 BI4 13

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-53-0-3	120	3/30	1300	Soil	1	X						X					
6-9	121		1305	"	1	X						X					
12-15	122		1310	"	1	X						X					--

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3-31-11	0930
Received by:		Michael Erdahl	Fbm	↓	↓
Relinquished by:					
Received by:					

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Ph. (206) 285-8282
Fax (206) 283-5044

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Samples received at 2 °C 3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 7, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on March 29, 2011 from the Crownhill Elementary, F&BI 103384 project. There are 114 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0407R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 29, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crownhill Elementary, F&BI 103384 project. The samples were received at 3 °C in good condition and were refrigerated upon receipt. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
103384-01	NG-D8-0-3
103384-02	NG-D8-6-9
103384-03	NG-D8-12-15
103384-04	NG-D7-0-3
103384-05	NG-D7-6-9
103384-06	NG-D7-12-15
103384-07	NG-D6-0-3
103384-08	NG-D6-6-9
103384-09	NG-D6-12-15
103384-10	NG-D5-0-3
103384-11	NG-D5-6-9
103384-12	NG-D5-12-15
103384-13	NG-D4-0-3
103384-14	NG-D4-6-9
103384-15	NG-D4-12-15
103384-16	NG-D3-0-3
103384-17	NG-D3-6-9
103384-18	NG-D3-12-15
103384-19	NG-C10-0-3
103384-20	NG-C10-6-9
103384-21	NG-C10-12-15
103384-22	NG-C9-0-3
103384-23	NG-C9-6-9
103384-24	NG-C9-12-15
103384-25	NG-E8-0-2
103384-26	NG-E8-6-9
103384-27	NG-E8-12-15
103384-28	NG-E7-0-3
103384-29	NG-E7-6-9
103384-30	NG-E7-12-15
103384-31	NG-E5-0-3
103384-32	NG-E5-6-9
103384-33	NG-E5-12-15
103384-34	NG-E4-0-3
103384-35	NG-E4-6-9
103384-36	NG-E4-12-15
103384-37	NG-E3-0-3

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103384-38	NG-E3-6-9
103384-39	NG-E3-12-15
103384-40	NG-B9-0-3
103384-41	NG-B9-6-9
103384-42	NG-B9-12-15
103384-43	NG-B8-0-3
103384-44	NG-B8-6-9
103384-45	NG-B8-12-15
103384-46	NG-B7-0-3
103384-47	NG-B7-6-9
103384-48	NG-B7-12-15
103384-49	NG-B6-0-3
103384-50	NG-B6-6-9
103384-51	NG-B6-12-15
103384-52	NG-B5-0-3
103384-53	NG-B5-6-9
103384-54	NG-B5-12-15
103384-55	NG-B4-0-3
103384-56	NG-B4-6-9
103384-57	NG-B4-12-15
103384-58	NG-B3-0-3
103384-59	NG-B3-6-9
103384-60	NG-B3-12-15
103384-61	NG-B10-0-3
103384-62	NG-B10-6-9
103384-63	NG-B10-12-15
103384-64	NG-A6-0-3
103384-65	NG-A6-6-9
103384-66	NG-A6-12-15
103384-67	NG-A8-0-3
103384-68	NG-A8-6-9
103384-69	NG-A8-12-15
103384-70	NG-C8-0-3
103384-71	NG-C8-6-9
103384-72	NG-C8-12-15
103384-73	NG-C6-0-3
103384-74	NG-C6-6-9
103384-75	NG-C6-12-15
103384-76	NG-C5-0-3
103384-77	NG-C5-6-9
103384-78	NG-C5-12-15

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103384-79	NG-C4-0-3
103384-80	NG-C4-6-9
103384-81	NG-C4-12-15
103384-82	NG-A4-0-3
103384-83	NG-A4-6-9
103384-84	NG-A4-12-15
103384-85	NG-A5-0-3
103384-86	NG-A5-6-9
103384-87	NG-A5-12-15

DRO/RRO by Method NWTPH-Dx, Extraction Method 3550B

Soil sample concentrations were reported on a dry weight basis. The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

Metals by Method 200.8, Extraction Method 200.8

Soil sample concentrations were reported on a dry weight basis. All quality control requirements were acceptable.

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384
Date Extracted: 03/31/11
Date Analyzed: 03/31/11, 04/01/11, 04/04/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-D8-0-3 103384-01	<50	<250	114
NG-D8-6-9 103384-02	<50	<250	115
NG-D8-12-15 103384-03	<50	<250	111
NG-D7-0-3 103384-04	<50	<250	114
NG-D7-6-9 103384-05	<50	<250	114
NG-D7-12-15 103384-06	<50	<250	113
NG-D6-0-3 103384-07	<50	<250	115
NG-D6-6-9 103384-08	<50	<250	116
NG-D6-12-15 103384-09	<50	<250	114
NG-D5-0-3 103384-10	<50	<250	115
NG-D5-6-9 103384-11	860	490	115
NG-D5-12-15 103384-12	210	390	114

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384
Date Extracted: 03/31/11
Date Analyzed: 03/31/11, 04/01/11, 04/04/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-D4-0-3 103384-13	<50	<250	115
NG-D4-6-9 103384-14	<50	<250	116
NG-D4-12-15 103384-15	<50	<250	114
NG-D3-0-3 103384-16	<50	<250	114
NG-D3-6-9 103384-17 1/10	27,000	72,000	260 ip
NG-D3-12-15 103384-18	1,300	2,300	117
NG-C10-0-3 103384-19	<50	<250	115
NG-C10-6-9 103384-20	<50	<250	115
NG-C10-12-15 103384-21	<50	<250	100
NG-C9-0-3 103384-22	<50	<250	101
NG-C9-6-9 103384-23	<50	<250	97
NG-C9-12-15 103384-24	<50	<250	95

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384
Date Extracted: 03/31/11
Date Analyzed: 03/31/11, 04/01/11, 04/04/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-E8-0-2 103384-25	<50	300	97
NG-E8-6-9 103384-26	<50	<250	96
NG-E8-12-15 103384-27	<50	<250	96
NG-E7-0-3 103384-28	<50	<250	96
NG-E7-6-9 103384-29	<50	<250	96
NG-E7-12-15 103384-30	<50	<250	115
NG-E5-0-3 103384-31	<50	<250	97
NG-E5-6-9 103384-32	350	2,200	93
NG-E5-12-15 103384-33	<50	<250	98
NG-E4-0-3 103384-34	<50	<250	93
NG-E4-6-9 103384-35	<50	<250	95
NG-E4-12-15 103384-36	<50	<250	95

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384
Date Extracted: 03/31/11
Date Analyzed: 03/31/11, 04/01/11, 04/04/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-E3-0-3 103384-37	<50	<250	95
NG-E3-6-9 103384-38	<50	<250	96
NG-E3-12-15 103384-39	<50	<250	94
NG-B9-0-3 103384-40	<50	<250	96
NG-B9-6-9 103384-41	<50	<250	100
NG-B9-12-15 103384-42	<50	<250	101
NG-B8-0-3 103384-43	<50	<250	104
NG-B8-6-9 103384-44	<50	<250	103
NG-B8-12-15 103384-45	<50	<250	98
NG-B7-0-3 103384-46	<50	<250	102
NG-B7-6-9 103384-47	<50	<250	102
NG-B7-12-15 103384-48	<50	<250	100

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384
Date Extracted: 03/31/11
Date Analyzed: 03/31/11, 04/01/11, 04/04/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-B6-0-3 103384-49	<50	<250	112
NG-B6-6-9 103384-50	<50	<250	104
NG-B6-12-15 103384-51	<50	<250	105
NG-B5-0-3 103384-52	<50	<250	103
NG-B5-6-9 103384-53	<50	<250	103
NG-B5-12-15 103384-54	<50	<250	102
NG-B4-0-3 103384-55	<50	<250	102
NG-B4-6-9 103384-56	<50	<250	103
NG-B4-12-15 103384-57	<50	<250	104
NG-B3-0-3 103384-58	<50	<250	101
NG-B3-6-9 103384-59	<50	<250	102
NG-B3-12-15 103384-60	<50	<250	108

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384
Date Extracted: 03/31/11
Date Analyzed: 03/31/11, 04/01/11, 04/04/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-B10-0-3 103384-61	<50	<250	113
NG-B10-6-9 103384-62	<50	<250	111
NG-B10-12-15 103384-63	<50	<250	112
NG-A6-0-3 103384-64	<50	<250	111
NG-A6-6-9 103384-65	<50	<250	112
NG-A6-12-15 103384-66	<50	<250	92
NG-A8-0-3 103384-67	<50	<250	91
NG-A8-6-9 103384-68	<50	<250	91
NG-A8-12-15 103384-69	<50	<250	91
NG-C8-0-3 103384-70	<50	<250	87
NG-C8-6-9 103384-71	<50	<250	89
NG-C8-12-15 103384-72	<50	<250	91

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384
Date Extracted: 03/31/11
Date Analyzed: 03/31/11, 04/01/11, 04/04/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-C6-0-3 103384-73	<50	<250	90
NG-C6-6-9 103384-74	<50	<250	98
NG-C6-12-15 103384-75	<50	<250	102
NG-C5-0-3 103384-76	<50	<250	99
NG-C5-6-9 103384-77	<50	<250	105
NG-C5-12-15 103384-78	<50	<250	103
NG-C4-0-3 103384-79	<50	<250	100
NG-C4-6-9 103384-80	<50	<250	116
NG-C4-12-15 103384-81	<50	<250	117
NG-A4-0-3 103384-82	<50	<250	119
NG-A4-6-9 103384-83	<50	<250	120
NG-A4-12-15 103384-84	<50	<250	116

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384
Date Extracted: 03/31/11
Date Analyzed: 03/31/11, 04/01/11, 04/04/11, and 04/06/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-A5-0-3 103384-85	<50	<250	118
NG-A5-6-9 103384-86	<50	<250	120
NG-A5-12-15 103384-87	<50	<250	122
Method Blank 01-553 MB	<50	<250	113
Method Blank 01-554 MB	<50	<250	90
Method Blank 01-555 MB	<50	<250	105
Method Blank 01-556 MB	<50	<250	106
Method Blank 01-557 MB	<50	<250	107

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D8-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-01
Date Analyzed:	04/01/11	Data File:	103384-01.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	77	60	125
Holmium	84	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.85
Lead	8.20

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D8-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-02
Date Analyzed:	04/01/11	Data File:	103384-02.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	84	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.81
Lead	3.23

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D8-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-03
Date Analyzed:	04/01/11	Data File:	103384-03.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	77	60	125
Holmium	85	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.36
Lead	7.40

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D7-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-04
Date Analyzed:	04/01/11	Data File:	103384-04.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	77	60	125
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.57
Lead	20.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D7-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-05
Date Analyzed:	04/01/11	Data File:	103384-05.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.57
Lead	106

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D7-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-06
Date Analyzed:	04/01/11	Data File:	103384-06.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	73	60	125
Holmium	80	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	24.3
Lead	2,730

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D6-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-07
Date Analyzed:	04/01/11	Data File:	103384-07.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	74	60	125
Holmium	79	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.09
Lead	45.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D6-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-08
Date Analyzed:	04/01/11	Data File:	103384-08.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	74	60	125
Holmium	78	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.12
Lead	7.00

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D6-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-09
Date Analyzed:	04/01/11	Data File:	103384-09.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	76	60	125
Holmium	82	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	31.6
Lead	4,740

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D5-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-10
Date Analyzed:	04/01/11	Data File:	103384-10.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	79	60	125
Holmium	85	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.45
Lead	17.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D5-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-11
Date Analyzed:	04/01/11	Data File:	103384-11.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	80	60	125
Holmium	83	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	25.6
Lead	4,700

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D5-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-12
Date Analyzed:	04/01/11	Data File:	103384-12.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	80	60	125
Holmium	79	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	26.8
Lead	2,960

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D4-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-13
Date Analyzed:	04/01/11	Data File:	103384-13.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	80	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.40
Lead	436

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D4-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-14
Date Analyzed:	04/01/11	Data File:	103384-14.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	80	60	125
Holmium	79	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	25.2
Lead	5,940

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D4-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-15
Date Analyzed:	04/01/11	Data File:	103384-15.071
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	79	60	125
Holmium	82	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	2.20

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D3-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-16
Date Analyzed:	04/01/11	Data File:	103384-16.072
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	82	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.55
Lead	7.33

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D3-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-17
Date Analyzed:	04/01/11	Data File:	103384-17.073
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	79	60	125
Holmium	83	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.17
Lead	2,000

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D3-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-18
Date Analyzed:	04/01/11	Data File:	103384-18.074
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	77	60	125
Holmium	84	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.52
Lead	16.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C10-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-19
Date Analyzed:	04/01/11	Data File:	103384-19.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.14
Lead	1.61

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C10-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-20
Date Analyzed:	04/01/11	Data File:	103384-20.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	82	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C10-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-21
Date Analyzed:	04/04/11	Data File:	103384-21.013
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.65

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C9-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-22
Date Analyzed:	04/04/11	Data File:	103384-22.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.90
Lead	5.18

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C9-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-23
Date Analyzed:	04/04/11	Data File:	103384-23.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.77

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C9-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-24
Date Analyzed:	04/04/11	Data File:	103384-24.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.42

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E8-0-2	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-25
Date Analyzed:	04/04/11	Data File:	103384-25.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.33
Lead	10.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E8-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-26
Date Analyzed:	04/04/11	Data File:	103384-26.028
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.62
Lead	13.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E8-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-27
Date Analyzed:	04/04/11	Data File:	103384-27.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.14
Lead	9.50

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E7-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-28
Date Analyzed:	04/04/11	Data File:	103384-28.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.73
Lead	11.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E7-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-29
Date Analyzed:	04/04/11	Data File:	103384-29.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.81
Lead	25.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E7-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-30
Date Analyzed:	04/04/11	Data File:	103384-30.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	13.8
Lead	1,060

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E5-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-31
Date Analyzed:	04/04/11	Data File:	103384-31.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.05
Lead	77.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E5-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-32 x10
Date Analyzed:	04/04/11	Data File:	103384-32 x10.048
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	63.1
Lead	17,500

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E5-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-33
Date Analyzed:	04/04/11	Data File:	103384-33.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	45.1
Lead	7,560

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E4-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-34
Date Analyzed:	04/04/11	Data File:	103384-34.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.50
Lead	33.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E4-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-35
Date Analyzed:	04/04/11	Data File:	103384-35.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	29.1
Lead	4,570

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E4-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-36
Date Analyzed:	04/04/11	Data File:	103384-36.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.85
Lead	66.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E3-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-37
Date Analyzed:	04/04/11	Data File:	103384-37.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.27
Lead	90.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E3-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-38
Date Analyzed:	04/04/11	Data File:	103384-38.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.70
Lead	114

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E3-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-39
Date Analyzed:	04/04/11	Data File:	103384-39.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	1.88

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B9-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	103384-40
Date Analyzed:	04/04/11	Data File:	103384-40.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	2.70

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B9-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-41
Date Analyzed:	04/04/11	Data File:	103384-41.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B9-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-42
Date Analyzed:	04/04/11	Data File:	103384-42.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	1.33

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B8-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-43
Date Analyzed:	04/04/11	Data File:	103384-43.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.30
Lead	8.59

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B8-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-44
Date Analyzed:	04/04/11	Data File:	103384-44.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.68
Lead	2.67

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B8-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-45
Date Analyzed:	04/04/11	Data File:	103384-45.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.60
Lead	5.52

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B7-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-46
Date Analyzed:	04/04/11	Data File:	103384-46.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.35
Lead	3.50

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B7-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-47
Date Analyzed:	04/04/11	Data File:	103384-47.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.67
Lead	2.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B7-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-48
Date Analyzed:	04/04/11	Data File:	103384-48.059
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.66
Lead	3.29

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B6-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-49
Date Analyzed:	04/04/11	Data File:	103384-49.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.26
Lead	8.36

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B6-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-50
Date Analyzed:	04/04/11	Data File:	103384-50.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.59
Lead	1.96

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B6-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-51
Date Analyzed:	04/04/11	Data File:	103384-51.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.11
Lead	105

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B5-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-52
Date Analyzed:	04/04/11	Data File:	103384-52.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.74
Lead	7.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B5-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-53
Date Analyzed:	04/04/11	Data File:	103384-53.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.53
Lead	12.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B5-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-54
Date Analyzed:	04/04/11	Data File:	103384-54.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	25.3
Lead	1,720

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B4-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-55
Date Analyzed:	04/04/11	Data File:	103384-55.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.63
Lead	4.07

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B4-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-56
Date Analyzed:	04/04/11	Data File:	103384-56.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	84	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	30.2
Lead	2,880

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B4-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-57
Date Analyzed:	04/04/11	Data File:	103384-57.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	31.7
Lead	921

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B3-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-58
Date Analyzed:	04/04/11	Data File:	103384-58.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.66
Lead	12.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B3-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-59
Date Analyzed:	04/05/11	Data File:	103384-59.012
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.13
Lead	1.44

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B3-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-60
Date Analyzed:	04/05/11	Data File:	103384-60.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.01
Lead	1.35

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B10-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-61
Date Analyzed:	04/05/11	Data File:	103384-61.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.43
Lead	11.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B10-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-62
Date Analyzed:	04/05/11	Data File:	103384-62.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	1.52

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B10-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-63
Date Analyzed:	04/05/11	Data File:	103384-63.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.24
Lead	1.79

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A6-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-64
Date Analyzed:	04/05/11	Data File:	103384-64.018
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.62
Lead	2.90

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A6-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-65
Date Analyzed:	04/05/11	Data File:	103384-65.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.81

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A6-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-66
Date Analyzed:	04/05/11	Data File:	103384-66.023
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.66
Lead	4.78

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A8-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-67
Date Analyzed:	04/05/11	Data File:	103384-67.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.78
Lead	11.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A8-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-68
Date Analyzed:	04/05/11	Data File:	103384-68.025
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.75
Lead	4.93

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A8-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-69
Date Analyzed:	04/05/11	Data File:	103384-69.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.06
Lead	4.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C8-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-70
Date Analyzed:	04/05/11	Data File:	103384-70.027
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.28
Lead	6.50

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C8-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-71
Date Analyzed:	04/05/11	Data File:	103384-71.028
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.00
Lead	3.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C8-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-72
Date Analyzed:	04/05/11	Data File:	103384-72.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.59
Lead	2.68

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C6-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-73
Date Analyzed:	04/05/11	Data File:	103384-73.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.02
Lead	35.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C6-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-74
Date Analyzed:	04/05/11	Data File:	103384-74.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.17
Lead	12.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C6-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-75
Date Analyzed:	04/05/11	Data File:	103384-75.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	23.8
Lead	3,130

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C5-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-76
Date Analyzed:	04/05/11	Data File:	103384-76.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.63
Lead	42.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C5-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-77
Date Analyzed:	04/05/11	Data File:	103384-77.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	33.7
Lead	1,620

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C5-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-78
Date Analyzed:	04/05/11	Data File:	103384-78.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	15.3
Lead	1,370

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C4-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-79
Date Analyzed:	04/05/11	Data File:	103384-79.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.69
Lead	390

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C4-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-80
Date Analyzed:	04/05/11	Data File:	103384-80.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	26.9
Lead	4,190

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C4-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-81
Date Analyzed:	04/05/11	Data File:	103384-81.045
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	47.4
Lead	4,390

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A4-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-82
Date Analyzed:	04/05/11	Data File:	103384-82.046
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.06
Lead	16.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A4-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-83
Date Analyzed:	04/05/11	Data File:	103384-83.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.40
Lead	2.30

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A4-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-84
Date Analyzed:	04/05/11	Data File:	103384-84.048
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	1.82

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A5-0-3	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-85
Date Analyzed:	04/05/11	Data File:	103384-85.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.76
Lead	6.83

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A5-6-9	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-86
Date Analyzed:	04/05/11	Data File:	103384-86.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.18
Lead	1.72

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-A5-12-15	Client:	Aspect Consulting
Date Received:	03/29/11	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	103384-87
Date Analyzed:	04/05/11	Data File:	103384-87.052
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.10
Lead	1.29

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	I1-224 mb
Date Analyzed:	04/01/11	Data File:	I1-224 mb.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	79	60	125
Holmium	79	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	03/31/11	Lab ID:	I1-226 mb
Date Analyzed:	04/04/11	Data File:	I1-226 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	I1-230 mb
Date Analyzed:	04/04/11	Data File:	I1-230 mb.045
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	I1-231 mb
Date Analyzed:	04/05/11	Data File:	I1-231 mb.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill Elementary, F&BI 103384
Date Extracted:	04/01/11	Lab ID:	I1-232 mb
Date Analyzed:	04/05/11	Data File:	I1-232 mb.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103384-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	114	113	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	114	79-144

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103384-21 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	79	86	64-133	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	83	58-147

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103384-58 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	97	98	73-135	1

Laboratory Code: 103384-59 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	101	100	73-135	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	103	74-139

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103384-60 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	88	91	64-133	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	90	58-147

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103384-84 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	88	90	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	87	58-147

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103384-19 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.14	81	79	44-151	2
Lead	mg/kg (ppm)	20	1.61	96	100	65-126	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	100	80-120
Lead	mg/kg (ppm)	20	109	81-120

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103384-23 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.03	108	105	44-151	3
Lead	mg/kg (ppm)	20	1.77	102	100	65-126	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	113	80-120
Lead	mg/kg (ppm)	20	106	81-120

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103384-58 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.66	118	116	44-151	2
Lead	mg/kg (ppm)	20	12.0	96 b	104 b	65-126	8 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	117	80-120
Lead	mg/kg (ppm)	20	103	81-120

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103384-59 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.13	102	104	44-151	2
Lead	mg/kg (ppm)	20	1.44	106	111	65-126	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	99	80-120
Lead	mg/kg (ppm)	20	113	81-120

Date of Report: 04/07/11
Date Received: 03/29/11
Project: Crownhill Elementary, F&BI 103384

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103384-60 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.01	100	101	44-151	1
Lead	mg/kg (ppm)	20	1.35	109	111	65-126	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	104	80-120
Lead	mg/kg (ppm)	20	110	81-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

103384

SAMPLE CHAIN OF CUSTODY

ME 03/29/11

BI4

Page # 1 of 9

Send Report To Dana Cannon

Company Aspect Consulting

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill Elementary

PO#

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
NG-D8-0-3	01	3/29/11	0947	Soil	1	X						X						
NG-D8-6-9	02		0955		1	X						X						
NG-D8-12-15	03		1000		1	X						X						
NG-D7-0-3	04		1010		1	X						X						
NG-D7-6-9	05		1015		1	X						X						
NG-D7-12-15	06		1020		1	X						X						
NG-D6-0-3	07		1030		1	X						X						
NG-D6-6-9	08		1035		1	X						X						
NG-D6-12-15	09		1040		1	X						X						
NG-D5-0-3	10	↓	1105	↓	1	X						X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Eric Markhofer	Aspect	3/29/11	1210
Received by:		Nhan Phan	FeBT	3/29/11	1500
Relinquished by:					
Received by:			Samples received at 3 °C		

103384

SAMPLE CHAIN OF CUSTODY ME 03/29/11

BI4

Page # 2 of 9

Send Report To Dana Cannon

Company Aspect Consulting

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill Elementary

PO#

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total (Metals (As, Pb))						Notes
NG-D5-6-9	11	3/28/11	1115	soil	1	X						X						
NG-D5-12-15	12		1120		1	X						X						
NG-D4-0-3	13		1135		1	X						X						
NG-D4-6-9	14 A B		1140		2	X						X						
NG-D4-12-15	15 A B		1145		2	X						X						
NG-D3-0-3	16		1200		1	X						X						
NG-D3-6-9	17		1205		1	X						X						
NG-D3-12-15	18 A B		1210		2	X						X						
NG-C10-0-3	19		1235		1	X						X						
NG-C10-6-9	20	↓	1240	↓	1	X						X						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Markofer	Aspect	3/29/11	1210
Received by:	Nhan Phan	FBI	3/29/11	1500
Relinquished by:				
Received by:		Samples received at 3 °C		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
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Fax (206) 283-5044

103384

SAMPLE CHAIN OF CUSTODY

ME 03/29/11

BIY

Page # 3 of 9

Send Report To Dana Cannon

Company Aspect Consulting

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crowley Elementary

PO#

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
NG-C10-12-15	21	3/28/11	1245	Soil	1	X						X						
NG-C9-0-3	22		1250		1	X						X						
NG-C9-6-9	23		1255		1	X						X						
NG-C9-12-15	24		1300		1	X						X						
NG-E8-0-2	25		0950		1	X						X						
NG-E8-6-9	26		0955		1	X						X						
NG-E8-12-15	27		1000		1	X						X						
NG-E7-0-3	28		1010		1	X						X						
NG-E7-6-9	29		1015		1	X						X						
NG-E7-12-15	30	↓	1020	↓	1	X						X						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Markeley	Aspect	3/29/11	1210
Received by:	Nhan Pham	FeBI	3/29/11	1500
Relinquished by:				
Received by:		Samples received at ____ °C		

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SAMPLE CHAIN OF CUSTODY ME 03/29/11

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Page # 4 of 9

Send Report To Dana Cannon

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Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Brownhill Elementary

PO#

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
NG-E5-0-3	31	3/28/11	1050	soil	1	X						X						
NG-E5-6-9	32		1055	soil	1	X						X						
NG-E5-12-15	33		1100	soil	1	X						X						
NG-E4-0-3	34		1130		1	X						X						
NG-E4-6-9	35		1135		1	X						X						
NG-E4-12-15	36		1140		1	X						X						
NG-E3-0-3	37		1200		1	X						X						
NG-E3-6-9	38		1205		1	X						X						
NG-E3-12-15	39		1210		1	X						X						
NG-B9-0-3	40		1230		1	X						X						

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Eric Mayhofer	Aspect	3/29/11	1210
Received by:		Nhan Phan	FEBI	3/29/11	1500
Relinquished by:					
Received by:			Samples received at 3 °C		

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SAMPLE CHAIN OF CUSTODY ME 03/29/11

BI4

Page # 5 of 9

Send Report To Dana Cannon

Company Aspect Consulting

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill Bleachery

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
NG-B9-6-9	41	3/28/11	1235	Soil	1	X						X						
NG-B9-12-15	42		1240		1	X						X						
NG-B8-0-3	43		1325		1	X						X						
NG-B8-6-9	44		1330		1	X						X						
NG-B8-12-15	45		1335		1	X						X						
NG-B7-0-3	46		1355		1	X						X						
NG-B7-6-9	47		1400		1	X						X						
NG-B7-12-15	48		1405		1	X						X						
NG-B6-0-3	49		1415		1	X						X						
NG-B6-6-9	50	↓	1420	↓	1	X						X						

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Eric Markstahler	Aspect	3/29/11	1210
Received by:		Nhan Phan	FEBI	3/29/11	1500
Relinquished by:					
Received by:			Samples received at 3 °C		

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SAMPLE CHAIN OF CUSTODY ME 03/29/11

BIY

Page # 6 of 9

Send Report To Dana Cannon

Company Aspect Consulting

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PROJECT NAME/NO. Crownhill Elementary

PO#

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
NG-B6-12-15	51	3/28/11	1425	soil	1	X						X						
NG-B5-0-3	52		1445		1	X						X						
NG-B5-6-9	53 AB		1450		2	X						X						
NG-B5-12-15	54		1455		1	X						X						
NG-B4-0-3	55		1505		1	X						X						
NG-B4-6-9	56		1510		1	X						X						
NG-B4-12-15	57 AB		1515		2	X						X						
NG-B3-0-3	58		1535		1	X						X						+ MS/MSD
NG-B3-6-9	59		1540		1	X						X						+ MS/MSD
NG-B3-12-15	60	↓	1545	↓	1	X						X						+ MS/MSD

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Markle	Aspect	3/29/11	1210
Received by:	Nhan Phan	FEBI	3/29/11	BIS
Relinquished by:				
Received by:		Samples received at 3 °C		

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SAMPLE CHAIN OF CUSTODY ME 03/29/11

BI4

Page # 7 of 9

Send Report To Dana Canares

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PROJECT NAME/NO.: Crownhill Elementary

PO#

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
NG-B10-0-3	61	3/28/11	1550	Soil	1	X						X						
NG-B10-6-9	62		1555		1	X						X						
NG-B10-12-15	63		1600		1	X						X						
NG-A6-0-3	64		1610		1	X						X						
NG-A6-6-9	65 A-B		1615		2	X						X						
NG-A6-12-15	66 A-B		1620		(2)	X						X						
NG-A8-0-3	67		1635		1	X						X						
NG-A8-6-9	68		1640		1	X						X						
NG-A8-12-15	69		1645		1	X						X						
NG-C8-0-3	70		1350		1	X						X						

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Eric Markham	Aspect	3/29/11	1210
Received by:		Nhan Phan	FEBI	3/29/11	1500
Relinquished by:					
Received by:			Samples received at 3 °C		

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SAMPLE CHAIN OF CUSTODY ME 03/29/11

BT4

Page # 8 of 9

Send Report To Dana Cannon

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Address

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Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill Remedy

PO#

REMARKS

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☑ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
NG-C8-0-9	71	3/28/11	1355	soil	1	X						X						
NG-C8-12-15	72		1400		1	X						X						
NG-C6-0-3	73		1455		1	X						X						
NG-C6-6-9	74		1500		1	X						X						
NG-C6-12-15	75		1505		1	X						X						
NG-C5-0-3	76		1530		1	X						X						
NG-C5-6-9	77		1535		1	X						X						
NG-C5-12-15	78		1540		1	X						X						
NG-C4-0-3	79		1550		1	X						X						
NG-C4-6-9	80	↓	1555	↓	1	X						X						

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Eric Markle	Aspect	3/29/11	1210
Received by:		Nhan Phan	FeBI	3/29/11	1500
Relinquished by:					
Received by:			Samples received at 3 °C		

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SAMPLE CHAIN OF CUSTODY ME 03/29/11

BI4

Page # 9 of 9

Send Report To Dana Cannon

Company Aspect Consulting

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Lowenhill Remodel

PO#

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals (As, Pb)						Notes
NG-C4-12-15	81	3/28/11	1600	soil	1	X						X						
NG-A4-0-3	82		1620		1	X						X						
NG-A4-6-9	83 AB		1625		2	X						X						
NG-A4-12-15	84		1630		1	X						X						
NG-A5-0-3	85		1650		1	X						X						
NG-A5-6-9	86 AB		1655		2	X						X						
NG-A5-12-15	87 AB		1700		2	X						X						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Markoff	Aspect	3/29/11	1210
Received by:	Nhan Phan	FeBI	3/29/11	1500
Relinquished by:				
Received by:		Samples received at 3 °C		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
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e-mail: fbi@isomedia.com

April 28, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included is the amended report from the testing of material submitted on April 1, 2011 from the 100094 Crownhill, F&BI 104011 project. The incorrect sample IDs have been corrected.

We apologize for the inconvenience and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0414R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
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3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 14, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on April 1, 2011 from the 100094 Crownhill, F&BI 104011 project. There are 151 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0414R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 1, 2011 by Friedman & Bruya, Inc. from the 100094 Crownhill, F&BI 104011 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
104011-01	NG-B2-0-3
104011-02	NG-B2-6-9
104011-03	NG-B2-12-15
104011-04	NG-C3-0-3
104011-05	NG-C3-6-9
104011-06	NG-C3-12-15
104011-07	NG-C2-0-3
104011-08	NG-C2-6-9
104011-09	NG-C2-12-15
104011-10	NG-D2-0-3
104011-11	NG-D2-6-9
104011-12	NG-D2-12-15
104011-13	NG-G2-0-3
104011-14	NG-G2-6-9
104011-15	NG-G2-12-15
104011-16	NG-D1-0-3
104011-17	NG-D1-6-9
104011-18	NG-D1-12-15
104011-19	NG-E1-0-3
104011-20	NG-E1-6-9
104011-21	NG-E1-12-15
104011-22	SG-L7-0-3
104011-23	SG-L7-6-9
104011-24	SG-L7-12-15
104011-25	SG-L8-0-3
104011-26	SG-L8-6-9
104011-27	SG-L8-12-15
104011-28	SG-L9-0-3
104011-29	SG-L9-6-9
104011-30	SG-L9-12-15
104011-31	SG-L10-0-3
104011-32	SG-L10-6-9
104011-33	SG-L10-12-15
104011-34	OG-10-0-3
104011-35	OG-10-6-9
104011-36	OG-10-12-15
104011-37	SG-K10-0-3
104011-38	SG-K10-6-9
104011-39	SG-K10-12-15

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
104011-40	SG-K9-0-3
104011-41	SG-K9-6-9
104011-42	SG-K9-12-15
104011-43	SG-K8-0-3
104011-44	SG-K8-6-9
104011-45	SG-K8-12-15
104011-46	SG-K7-0-3
104011-47	SG-K7-6-9
104011-48	SG-K7-12-15
104011-49	SG-J8-0-3
104011-50	SG-J8-6-9
104011-51	SG-J8-12-15
104011-52	SG-J9-0-3
104011-53	SG-J9-6-9
104011-54	SG-J9-12-15
104011-55	SG-J10-0-3
104011-56	SG-J10-6-9
104011-57	SG-J10-12-15
104011-58	SG-I8-0-3
104011-59	SG-I8-6-9
104011-60	SG-I8-12-15
104011-61	OG-3-0-3
104011-62	OG-3-6-9
104011-63	OG-3-12-15
104011-64	OG-1-0-3
104011-65	OG-1-6-9
104011-66	OG-1-12-15
104011-67	OG-9-0-3
104011-68	OG-9-6-9
104011-69	OG-9-12-15
104011-70	OG-12-0-3
104011-71	OG-12-6-9
104011-72	OG-12-12-15
104011-73	OG-8-0-3
104011-74	OG-8-6-9
104011-75	OG-8-12-15
104011-76	OG-13-0-3
104011-77	OG-13-6-9
104011-78	OG-13-12-15
104011-79	OG-2-0-3
104011-80	OG-2-6-9
104011-81	OG-2-12-15

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
104011-82	OG-5-0-3
104011-83	OG-5-6-9
104011-84	OG-5-12-15
104011-85	OG-6-0-3
104011-86	OG-6-6-9
104011-87	OG-6-12-15
104011-88	OG-7-0-3
104011-89	OG-7-6-9
104011-90	OG-7-12-15
104011-91	SG-H9-0-3
104011-92	SG-H9-6-9
104011-93	SG-H9-12-15
104011-94	NG-F3-0-3
104011-95	NG-F3-6-9
104011-96	NG-F3-12-15
104011-97	OG-11-0-3
104011-98	SG-H10-0-3
104011-99	SG-H10-6-9
104011-100	SG-H10-12-15
104011-101	SG-I9-0-3
104011-102	SG-I9-6-9
104011-103	SG-I9-12-15
104011-104	SG-I10-0-3
104011-105	SG-I10-6-9
104011-106	SG-I10-12-15
104011-107	OG-14-0-3
104011-108	OG-14-6-9
104011-109	OG-14-12-15
104011-110	OG-15-0-3
104011-111	OG-15-6-9
104011-112	OG-15-12-15
104011-113	RB-033111

DRO/RRO by Method NWTPH-Dx, Extraction Method 3510C/3550B

Soil sample concentrations were reported on a dry weight basis. The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

Metals by Method 200.8, Extraction Method 200.8

Soil sample concentrations were reported on a dry weight basis. All quality control requirements were acceptable.

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-B2-0-3 104011-01	<50	<250	117
NG-B2-6-9 104011-02	<50	<250	119
NG-B2-12-15 104011-03	<50	<250	117
NG-C3-0-3 104011-04	<50	<250	125
NG-C3-6-9 104011-05	<50	<250	118
NG-C3-12-15 104011-06	<50	<250	98
NG-C2-0-3 104011-07	<50	<250	96
NG-C2-6-9 104011-08	<50	<250	97
NG-C2-12-15 104011-09	<50	<250	98
NG-D2-0-3 104011-10	<50	280	96
NG-D2-6-9 104011-11	<50	<250	97
NG-D2-12-15 104011-12	<50	<250	98

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-G2-0-3 104011-13	<50	270	96
NG-G2-6-9 104011-14	<50	<250	96
NG-G2-12-15 104011-15	<50	<250	98
NG-D1-0-3 104011-16	<50	270	97
NG-D1-6-9 104011-17	<50	<250	98
NG-D1-12-15 104011-18	<50	<250	97
NG-E1-0-3 104011-19	<50	820	99
NG-E1-6-9 104011-20	<50	<250	97
NG-E1-12-15 104011-21	<50	<250	100
SG-L7-0-3 104011-22	<50	<250	98
SG-L7-6-9 104011-23	<50	<250	99
SG-L7-12-15 104011-24	<50	<250	96

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-L8-0-3 104011-25	<50	<250	96
SG-L8-6-9 104011-26	<50	<250	99
SG-L8-12-15 104011-27	<50	<250	95
SG-L9-0-3 104011-28	<50	<250	96
SG-L9-6-9 104011-29	<50	<250	97
SG-L9-12-15 104011-30	<50	<250	97
SG-L10-0-3 104011-31	<50	<250	97
SG-L10-6-9 104011-32	<50	<250	94
SG-L10-12-15 104011-33	<50	<250	96
OG-10-0-3 104011-34	<50	<250	97
OG-10-6-9 104011-35	<50	<250	96
OG-10-12-15 104011-36	<50	<250	96

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-K10-0-3 104011-37	<50	<250	92
SG-K10-6-9 104011-38	<50	<250	94
SG-K10-12-15 104011-39	<50	<250	97
SG-K9-0-3 104011-40	<50	<250	95
SG-K9-6-9 104011-41	<50	<250	100
SG-K9-12-15 104011-42	<50	<250	101
SG-K8-0-3 104011-43	<50	<250	100
SG-K8-6-9 104011-44	<50	<250	102
SG-K8-12-15 104011-45	<50	<250	100
SG-K7-0-3 104011-46	58 x	1,700	100
SG-K7-6-9 104011-47	<50	<250	100
SG-K7-12-15 104011-48	<50	310	98

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-J8-0-3 104011-49	<50	<250	95
SG-J8-6-9 104011-50	<50	<250	99
SG-J8-12-15 104011-51	<50	<250	99
SG-J9-0-3 104011-52	<50	<250	103
SG-J9-6-9 104011-53	<50	<250	98
SG-J9-12-15 104011-54	<50	<250	100
SG-J10-0-3 104011-55	<50	<250	99
SG-J10-6-9 104011-56	<50	<250	101
SG-J10-12-15 104011-57	<50	<250	98
SG-I8-0-3 104011-58	<50	<250	100
SG-I8-6-9 104011-59	<50	<250	102
SG-I8-12-15 104011-60	<50	<250	100

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-3-0-3 104011-61	<50	<250	96
OG-3-6-9 104011-62	<50	<250	96
OG-3-12-15 104011-63	<50	<250	98
OG-1-0-3 104011-64	<50	<250	97
OG-1-6-9 104011-65	<50	<250	96
OG-1-12-15 104011-66	<50	<250	96
OG-9-0-3 104011-67	<50	<250	98
OG-9-6-9 104011-68	<50	<250	95
OG-9-12-15 104011-69	<50	<250	97
OG-12-0-3 104011-70	<50	<250	102
OG-12-6-9 104011-71	<50	<250	101
OG-12-12-15 104011-72	<50	<250	100

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-8-0-3 104011-73	<50	<250	97
OG-8-6-9 104011-74	<50	<250	98
OG-8-12-15 104011-75	<50	<250	96
OG-13-0-3 104011-76	<50	<250	98
OG-13-6-9 104011-77	<50	<250	96
OG-13-12-15 104011-78	<50	<250	98
OG-2-0-3 104011-79	<50	<250	99
OG-2-6-9 104011-80	<50	<250	98
OG-2-12-15 104011-81	<50	<250	98
OG-5-0-3 104011-82	<50	<250	98
OG-5-6-9 104011-83	<50	<250	97
OG-5-12-15 104011-84	<50	<250	97

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-6-0-3 104011-85	<50	<250	98
OG-6-6-9 104011-86	<50	<250	98
OG-6-12-15 104011-87	<50	<250	97
OG-7-0-3 104011-88	<50	<250	99
OG-7-6-9 104011-89	<50	<250	98
OG-7-12-15 104011-90	<50	<250	97
SG-H9-0-3 104011-91	<50	<250	97
SG-H9-6-9 104011-92	<50	<250	97
SG-H9-12-15 104011-93	<50	<250	96
NG-F3-0-3 104011-94	<50	<250	99
NG-F3-6-9 104011-95	230	340	99
NG-F3-12-15 104011-96	<50	<250	99

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-11-0-3 104011-97	<50	<250	99
SG-H10-0-3 104011-98	<50	<250	96
SG-H10-6-9 104011-99	<50	<250	98
SG-H10-12-15 104011-100	<50	<250	98
SG-I9-0-3 104011-101	<50	<250	104
SG-I9-6-9 104011-102	<50	<250	106
SG-I9-12-15 104011-103	<50	<250	106
SG-I10-0-3 104011-104	<50	<250	105
SG-I10-6-9 104011-105	<50	<250	102
SG-I10-12-15 104011-106	<50	<250	104
OG-14-0-3 104011-107	<50	<250	100
OG-14-6-9 104011-108	<50	<250	106

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/05/11
Date Analyzed: 04/06/11, 04/07/11, 04/08/11, 04/09/11, and 04/12/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
OG-14-12-15 104011-109	<50	<250	105
OG-15-0-3 104011-110	<50	<250	105
OG-15-6-9 104011-111	<50	<250	104
OG-15-12-15 104011-112	<50	<250	104
Method Blank 01-592 MB	<50	<250	116
Method Blank 01-593 MB	<50	<250	98
Method Blank 01-594 MB	<50	<250	102
Method Blank 01-595 MB	<50	<250	97
Method Blank 01-596 MB	<50	<250	97
Method Blank 01-588 MB	<50	<250	98

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011
Date Extracted: 04/07/11
Date Analyzed: 04/09/11

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 47-140)
RB-033111 104011-113	<50	<250	86
Method Blank 01-615 MB	<50	<250	90

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-01
Date Analyzed:	04/07/11	Data File:	104011-01.093
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.69
Lead	7.81

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-02
Date Analyzed:	04/07/11	Data File:	104011-02.094
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.43
Lead	2.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-B2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-03
Date Analyzed:	04/07/11	Data File:	104011-03.095
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.05
Lead	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C3-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-04
Date Analyzed:	04/07/11	Data File:	104011-04.096
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.53
Lead	20.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C3-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-05
Date Analyzed:	04/07/11	Data File:	104011-05.097
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.04
Lead	1.21

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C3-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-06
Date Analyzed:	04/07/11	Data File:	104011-06.098
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	85	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-07
Date Analyzed:	04/07/11	Data File:	104011-07.100
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.23
Lead	72.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-08
Date Analyzed:	04/07/11	Data File:	104011-08.101
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.06
Lead	1.30

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-C2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-09
Date Analyzed:	04/07/11	Data File:	104011-09.102
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.08

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	104011-10
Date Analyzed:	04/07/11	Data File:	104011-10.103
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.94
Lead	12.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-11
Date Analyzed:	04/07/11	Data File:	104011-11.110
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.30
Lead	1.78

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-12
Date Analyzed:	04/07/11	Data File:	104011-12.111
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.12
Lead	1.58

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-13
Date Analyzed:	04/07/11	Data File:	104011-13.112
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.55
Lead	34.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-14
Date Analyzed:	04/07/11	Data File:	104011-14.106
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.10
Lead	1.56

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-15
Date Analyzed:	04/07/11	Data File:	104011-15.113
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.14

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D1-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-16
Date Analyzed:	04/07/11	Data File:	104011-16.114
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	16.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D1-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-17
Date Analyzed:	04/07/11	Data File:	104011-17.115
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.26

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-D1-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-18
Date Analyzed:	04/07/11	Data File:	104011-18.116
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.57

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E1-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-19
Date Analyzed:	04/07/11	Data File:	104011-19.117
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	63	60	125
Holmium	61	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.79
Lead	26.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E1-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-20
Date Analyzed:	04/07/11	Data File:	104011-20.118
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	1.93

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E1-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-21
Date Analyzed:	04/07/11	Data File:	104011-21.119
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	79	60	125
Holmium	77	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	1.91

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L7-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-22
Date Analyzed:	04/07/11	Data File:	104011-22.121
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.42
Lead	13.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L7-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-23
Date Analyzed:	04/07/11	Data File:	104011-23.122
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.10
Lead	1.87

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L7-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-24
Date Analyzed:	04/07/11	Data File:	104011-24.123
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.01
Lead	2.18

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-25
Date Analyzed:	04/07/11	Data File:	104011-25.124
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.21
Lead	2.73

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-26
Date Analyzed:	04/07/11	Data File:	104011-26.125
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.33

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-27
Date Analyzed:	04/07/11	Data File:	104011-27.126
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.47
Lead	1.86

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-28
Date Analyzed:	04/07/11	Data File:	104011-28.127
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.03
Lead	17.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-29
Date Analyzed:	04/08/11	Data File:	104011-29.011
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-30
Date Analyzed:	04/07/11	Data File:	104011-30.129
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.31
Lead	1.50

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-31
Date Analyzed:	04/07/11	Data File:	104011-31.136
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.24
Lead	9.40

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-32
Date Analyzed:	04/07/11	Data File:	104011-32.137
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	1.70

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-33
Date Analyzed:	04/07/11	Data File:	104011-33.133
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.58

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-34
Date Analyzed:	04/07/11	Data File:	104011-34.138
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.06
Lead	2.16

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-35
Date Analyzed:	04/07/11	Data File:	104011-35.139
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.34

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-36
Date Analyzed:	04/07/11	Data File:	104011-36.140
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.32

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-37
Date Analyzed:	04/07/11	Data File:	104011-37.142
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.24
Lead	10.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-38
Date Analyzed:	04/07/11	Data File:	104011-38.143
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.05
Lead	1.67

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-39
Date Analyzed:	04/07/11	Data File:	104011-39.144
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.36

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-40
Date Analyzed:	04/07/11	Data File:	104011-40.145
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.69
Lead	30.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-41
Date Analyzed:	04/07/11	Data File:	104011-41.146
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.68
Lead	8.13

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-42
Date Analyzed:	04/07/11	Data File:	104011-42.147
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-43
Date Analyzed:	04/07/11	Data File:	104011-43.148
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.59
Lead	8.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-44
Date Analyzed:	04/07/11	Data File:	104011-44.149
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	8.85

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-45
Date Analyzed:	04/07/11	Data File:	104011-45.150
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.33
Lead	14.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K7-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-46
Date Analyzed:	04/07/11	Data File:	104011-46.151
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.43
Lead	12.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K7-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-47
Date Analyzed:	04/07/11	Data File:	104011-47.153
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.90
Lead	16.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K7-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-48
Date Analyzed:	04/07/11	Data File:	104011-48.154
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	37.9
Lead	2,140

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-49
Date Analyzed:	04/07/11	Data File:	104011-49.155
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.06
Lead	25.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-50
Date Analyzed:	04/07/11	Data File:	104011-50.156
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	19.5
Lead	7,360

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-51
Date Analyzed:	04/08/11	Data File:	104011-51.018
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	2.26

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-52
Date Analyzed:	04/08/11	Data File:	104011-52.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.32
Lead	65.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-53
Date Analyzed:	04/08/11	Data File:	104011-53.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	26.3
Lead	3,800

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-54
Date Analyzed:	04/08/11	Data File:	104011-54.021
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.37
Lead	323

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-55
Date Analyzed:	04/08/11	Data File:	104011-55.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	21.8
Lead	98.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-56
Date Analyzed:	04/08/11	Data File:	104011-56.023
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.05
Lead	42.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-57
Date Analyzed:	04/08/11	Data File:	104011-57.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	3.64

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-58
Date Analyzed:	04/08/11	Data File:	104011-58.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.79

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-59
Date Analyzed:	04/08/11	Data File:	104011-59.025
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-60
Date Analyzed:	04/08/11	Data File:	104011-60.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-3-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-61
Date Analyzed:	04/08/11	Data File:	104011-61.027
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	2.74

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-3-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-62
Date Analyzed:	04/08/11	Data File:	104011-62.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.68
Lead	1.99

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-3-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-63
Date Analyzed:	04/08/11	Data File:	104011-63.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	1.63

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-1-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-64
Date Analyzed:	04/08/11	Data File:	104011-64.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.16
Lead	2.76

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-1-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-65
Date Analyzed:	04/08/11	Data File:	104011-65.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.70
Lead	3.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-1-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-66
Date Analyzed:	04/08/11	Data File:	104011-66.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.35
Lead	2.10

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-67
Date Analyzed:	04/08/11	Data File:	104011-67.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-68
Date Analyzed:	04/08/11	Data File:	104011-68.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.21

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-69
Date Analyzed:	04/08/11	Data File:	104011-69.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.19

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-12-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-70
Date Analyzed:	04/08/11	Data File:	104011-70.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.26

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-12-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-71
Date Analyzed:	04/11/11	Data File:	104011-71.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	98	60	125
Holmium	108	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.09

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-12-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-72
Date Analyzed:	04/11/11	Data File:	104011-72.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	97	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.10

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-8-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-73
Date Analyzed:	04/11/11	Data File:	104011-73.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	98	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.58
Lead	3.00

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-8-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-74
Date Analyzed:	04/11/11	Data File:	104011-74.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.33
Lead	1.48

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-8-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-75
Date Analyzed:	04/11/11	Data File:	104011-75.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.57
Lead	1.52

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-13-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-76
Date Analyzed:	04/11/11	Data File:	104011-76.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.65
Lead	3.27

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-13-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-77
Date Analyzed:	04/11/11	Data File:	104011-77.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	97	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.46
Lead	1.54

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-13-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-78
Date Analyzed:	04/11/11	Data File:	104011-78.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	99	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.21
Lead	1.57

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-2-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-79
Date Analyzed:	04/11/11	Data File:	104011-79.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.65
Lead	7.84

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-2-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-80
Date Analyzed:	04/11/11	Data File:	104011-80.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	1.60

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-2-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-81
Date Analyzed:	04/11/11	Data File:	104011-81.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.04
Lead	1.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-5-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-82
Date Analyzed:	04/11/11	Data File:	104011-82.059
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.00
Lead	12.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-5-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-83
Date Analyzed:	04/11/11	Data File:	104011-83.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.83
Lead	1.84

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-5-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-84
Date Analyzed:	04/11/11	Data File:	104011-84.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.05
Lead	2.01

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-6-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-85
Date Analyzed:	04/11/11	Data File:	104011-85.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.04
Lead	1.44

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-6-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-86
Date Analyzed:	04/11/11	Data File:	104011-86.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	2.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-6-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-87
Date Analyzed:	04/11/11	Data File:	104011-87.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	107	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.29
Lead	1.93

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-7-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-88
Date Analyzed:	04/11/11	Data File:	104011-88.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.28
Lead	2.78

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-7-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-89
Date Analyzed:	04/11/11	Data File:	104011-89.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.58

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-7-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-90
Date Analyzed:	04/11/11	Data File:	104011-90.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.26
Lead	1.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-91
Date Analyzed:	04/11/11	Data File:	104011-91.071
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.52

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-92
Date Analyzed:	04/11/11	Data File:	104011-92.083
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.12
Lead	1.60

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-93
Date Analyzed:	04/11/11	Data File:	104011-93.084
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.10
Lead	1.81

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F3-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-94
Date Analyzed:	04/11/11	Data File:	104011-94.086
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.60
Lead	82.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F3-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-95
Date Analyzed:	04/11/11	Data File:	104011-95.087
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.14
Lead	703

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F3-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-96
Date Analyzed:	04/11/11	Data File:	104011-96.088
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.34
Lead	1.89

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-11-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-97
Date Analyzed:	04/11/11	Data File:	104011-97.089
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.18
Lead	2.00

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-98
Date Analyzed:	04/11/11	Data File:	104011-98.090
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.74
Lead	18.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-99
Date Analyzed:	04/11/11	Data File:	104011-99.091
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-100
Date Analyzed:	04/11/11	Data File:	104011-100.092
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.07
Lead	1.38

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I9-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-101
Date Analyzed:	04/11/11	Data File:	104011-101.093
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.58
Lead	16.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I9-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-102
Date Analyzed:	04/11/11	Data File:	104011-102.094
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.41

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I9-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-103
Date Analyzed:	04/11/11	Data File:	104011-103.095
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	107	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I10-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-104
Date Analyzed:	04/11/11	Data File:	104011-104.097
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.30
Lead	6.80

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I10-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-105
Date Analyzed:	04/11/11	Data File:	104011-105.098
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.82

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I10-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-106
Date Analyzed:	04/11/11	Data File:	104011-106.099
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.32
Lead	1.83

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-14-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-107
Date Analyzed:	04/11/11	Data File:	104011-107.100
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.35
Lead	2.99

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-14-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-108
Date Analyzed:	04/11/11	Data File:	104011-108.101
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.18
Lead	1.93

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-14-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-109
Date Analyzed:	04/11/11	Data File:	104011-109.102
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.32

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-15-0-3	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-110
Date Analyzed:	04/11/11	Data File:	104011-110.103
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.02
Lead	1.62

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-15-6-9	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-111
Date Analyzed:	04/07/11	Data File:	104011-111.013
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.01
Lead	1.88

Analysis For Total Metals By EPA Method 200.8

Client ID:	OG-15-12-15	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	104011-112
Date Analyzed:	04/07/11	Data File:	104011-112.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.02
Lead	1.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/06/11	Lab ID:	I1-253 mb
Date Analyzed:	04/07/11	Data File:	I1-253 mb.078
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-254 mb
Date Analyzed:	04/08/11	Data File:	I1-254 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-255 mb
Date Analyzed:	04/07/11	Data File:	I1-255 mb.131
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-256 mb
Date Analyzed:	04/08/11	Data File:	I1-256 mb.012
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-257 mb
Date Analyzed:	04/11/11	Data File:	I1-257 mb.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	102	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-258 mb
Date Analyzed:	04/11/11	Data File:	I1-258 mb.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/07/11	Lab ID:	I1-259 mb
Date Analyzed:	04/07/11	Data File:	I1-259 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	RB-033111	Client:	Aspect Consulting
Date Received:	04/01/11	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/08/11	Lab ID:	104011-113
Date Analyzed:	04/08/11	Data File:	104011-113.057
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	100094 Crownhill, F&BI 104011
Date Extracted:	04/08/11	Lab ID:	I1-263 mb
Date Analyzed:	04/08/11	Data File:	I1-263 mb.039
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	121	116	63-146	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	119	79-144

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-21 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	95	96	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-59 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	95	96	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	58-147

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-63 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	103	103	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	74-139

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 104011-85 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	103	106	73-135	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	115	74-139

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-121 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	120	100	100	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	74-139

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	101	101	61-133	0

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-123 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.12	104	110	44-151	6
Lead	mg/kg (ppm)	20	1.69	97	97	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	105	80-120
Lead	mg/kg (ppm)	20	105	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-14 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.10	97	101	44-151	4
Lead	mg/kg (ppm)	20	1.56	104	104	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	98	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-33 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	100	98	44-151	2
Lead	mg/kg (ppm)	20	1.58	102	106	65-126	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	107	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-58 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.03	96	94	44-151	2
Lead	mg/kg (ppm)	20	1.79	100	102	65-126	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	103	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-71 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.03	96	96	44-151	0
Lead	mg/kg (ppm)	20	1.09	88	90	65-126	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	103	80-120
Lead	mg/kg (ppm)	20	90	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-91 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	95	95	44-151	0
Lead	mg/kg (ppm)	20	1.52	94	94	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	95	80-120
Lead	mg/kg (ppm)	20	98	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104011-112 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.02	94	97	44-151	3
Lead	mg/kg (ppm)	20	1.51	100	101	65-126	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	100	81-120

Date of Report: 04/14/11
Date Received: 04/01/11
Project: 100094 Crownhill, F&BI 104011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104006-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	106	104	56-167	2
Lead	ug/L (ppb)	10	<1	98	92	76-125	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	99	55-128
Lead	ug/L (ppb)	10	104	67-135

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Page # 1 of 12

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. | PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
NG-B2-0-3	01	3/31/11	1215	SOIL	1	X						X					
6-9	02		1220	SOIL	1	X						X					
12-15	03		1225	SOIL	1	X						X					
NG-C3-0-3	04		1145		1	X						X					
6-9	05		1150		1	X						X					
12-15	06		1155		1	X						X					
NG-C2 0-3	07		1120		1	X						X					
6-9	08		1125		1	X						X					
12-15	09		1130		1	X						X					
(NP) NG NG-D2-0-3	10		1025		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amy Tilg	Aspect	4/1/11	1510
Received by:		Nhan Phan	FEBI	4/1/11	V
Relinquished by:					
Received by:					

Samples received at 5 °C

10

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Page # 2 of 12

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) [signature]

PROJECT NAME/NO. 100094 Cornhill

PO #

REMARKS

TURNAROUND TIME

- ☐ Standard (2 Weeks)
- ☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb	Notes
NG-D2-6-9	11	3/31/11	1030	Soil	1	X						X	
-12-15	12		1035		1	X						X	
NG-G2-0-3	13		1035		1	X						X	
6-9	14		1040		1	X						X	
12-15	15 A-B		1045		2	X						X	
NG-D1-0-3	16		1310		1	X						X	
6-9	17		1315		1	X						X	
12-15	18		1320		1	X						X	
NG-E1-0-3	19		1335		1	X						X	
6-9	20	↓	1340	↓	1	X						X	

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Molly Ravits	Aspect	4/1/11	1510
Received by: [signature]	Nhan Phan	F-BI	4/1/11	✓
Relinquished by:				
Received by:				

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Samples received at 5 °C

(11

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Page # 3 of 12

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Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 100094 Crawford

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb					Notes
NG-E1 - 12-15	21	3-31-11	1345	SOIL	1	X						X					
SG-L7 - 0-3	22		1245		1	X						X					
6-9	23 A-B		1250		2	X						X					
12-15	24 A-B		1255		2	X						X					
SG-L8 - 0-3	25		1300		1	X						X					
6-9	26 A-B		1305		2	X						X					
12-15	27 A B		1310		2	X						X					
SG-L9 - 0-3	28		1325		1	X						X					
6-9	29		1330		1	X						X					
12-15	30		1335		1	X						X					

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Pavitt	Aspect	4/1/11	1510
Received by:	Nhan Phan	Fe BI	4/1/11	V
Relinquished by:				
Received by:				

Samples received at 5 °C

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1 of

104011

SAMPLE CHAIN OF CUSTODY MG 04/01/11

Page # 4 of 12

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SAMPLERS (signature)

PROJECT NAME/NO. Clearwell 1000904

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	HFs, Pb					Notes
SG ~~MG~~-L10 -0-3	31	3-31-11	1350	Soil	1	X						X					
w BL 4/4/11 MG -6-9	32		1355		1	X						X					
-12-15	33		1400		1	X						X					
OG-10 -0-3	34		1410		1	X						X					
6-9	35		1415		1	X						X					
12-15	36		1420		1	X						X					
SG-K10-0-3	37		1430		1	X						X					
SG-K10-6-9	38		1435		1	X						X					
12-15	39		1440		1	X						X					
SG-K9 -0-3	40	~~1545~~	1545		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amy Tice	Aspect	4/1/11	1510
Received by:		Nhan Phan	FedEx	4/1/11	V
Relinquished by:					
Received by:					

Samples received at 5 °C

(10)

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Page # 5 of 12

Send Report To Dana Cannon

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PROJECT NAME/NO. 100094 Council

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb					Notes
SG-K9 - 6-9	41	3/31/11	1450	SOIL	1	X						X					
- 12-15	42 A,B		1455		2	X						X					
SG-K8 - 0-3	43		1525		1	X						X					
- 6-9	44		1530		1	X						X					
- 12-15	45		1535		1	X						X					
SG-K7 - 0-3	46	~~1545~~	1545		1	X						X					
- 6-9	47	~~1550~~	1550		1	X						X					
- 12-15	48	~~1555~~	1555		1	X						X					
SG-K8 - 0-3	49		1435		1	X						X					
- 6-9	50		~~1440~~ 1445 (DP)		1	X						X					

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Amy Tick	Aspect	4/1/11	1510
Received by:	Nhan Phan	FeBI	4/1/11	V
Relinquished by:				
Received by:				

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Samples received at 5 °C

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SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Page # 4 of 12

Send Report To Dana Cannon

Company Aspect

Address

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Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 100094 Graduhill

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-J8-12-15	51	3-31-11	1445	Soil	1	X						X					
SG-J9-0-3	52		1455		1	X						X					
-6-9	53		1500		1	X						X					
-12-15	54		1505		1	X						X					
SG-J10-0-3	55		1515		1	X						X					
-6-9	56		1520		1	X						X					
-12-15	57		1525		1	X						X					
SG-I8-0-3	58		1600		1	X						X					
-6-9	59		1605		1	X						X					
-12-15	60		1610		1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amy Tice	Aspect	4/1/11	1510
Received by:		Nhan Phan	FeBI	4/1/11	V
Relinquished by:					
Received by:					

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Samples received at 5 °C

(10)

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Send Report To Dana Cannon
Company Aspect
Address
City, State, ZIP Seattle
Phone # Fax #

SAMPLERS (signature)
PROJECT NAME/NO. 100094 Crown Hill
PO #
REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb					Notes
06-3-0-3	61	4/1/11	0935	Soil	1	X						X					
6-9	62		0940		1	X						X					
12-15	63		0945		1	X						X					
06-1-0-3	64		1000		1	X						X					
6-9	65		1005		1	X						X					
12-15	66		1010		1	X						X					
06-9-0-3	67		0815		1	X						X					
6-9	68		0820		1	X						X					
12-15	69		0825		1	X						X					
06-12-03	70	↓	—	↓	1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ravits	Molly Ravits	Aspect	4/1/11	1510
Received by:		Khan Phan	FedEx	4/1/11	
Relinquished by:					
Received by:					

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Samples received at 5 °C

SAMPLE CHAIN OF CUSTODY

104011

MO 04/01/11

Page # 6 of

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Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Molly Ravits

PROJECT NAME/NO. 100094 Crown III

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	PAHs, PB					Notes
OG-12-6-9	71	4/1/11	—	Soil	1	X						X					
OG-12-12-15	72		—		1	X						X					
OG-8-0-3	73		0845		1	X						X					
8-6-9	74		0850		1	X						X					
-12-15	75		0855		1	X						X					
OG-13-0-3	76		—		1	X						X					
-6-9	77		—		1	X						X					
-12-15	78		—		1	X						X					
OG-2-0-3	79		1000		1	X						X					
6-9	80A-B	↓	1005	↓	2	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ravits	Molly Ravits	Aspect	4/1/11	1510
Received by:		Nhan Phan	FEBI	4/1/11	V
Relinquished by:					
Received by:					

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Samples received at 5 °C

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Page # 9 of 12

Send Report To Dana Canaan

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 10009 + Crawl'l

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
06-2-12-15	81A-B	4/1/11	1080	SOIL	2	X						X					
06-5-0-3	82		0940		1	X						X					
6-9	83		0945		1	X						X					
12-15	84		0950		1	X						X					
06-6-0-3	85		0905		1	X						X					
6-9	86		0910		1	X						X					
12-15	87		0915		1	X						X					
06-7-0-3	88		0845		1	X						X					
6-9	89		0850		1	X						X					
12-15	90		0855		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Perrits	Molly Perrits	Aspect	4/1/11	1510
Received by:		Nhan Pham	FEBI	4/1/11	V
Relinquished by:					
Received by:					

Samples received at 5 °C

(11)

104011

SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 100094 Crownhill

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-H9-0-3	91	3-31-11	—	SOIL	1	X						X					
SG-H9-6-9	92		—		1	X						X					
SG-H9-12-15	93		—		1	X						X					
NG-F3-0-3	94		1130		1	X						X					
-6-9	95		1135		1	X						X					
-12-15	96		1140		1	X						X					
06-11-0-3	97		—		1	X						X					
SG-H10-0-3	98		—		1	X						X					
-6-9	99		—		1	X						X					
-12-15	100		—		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amy Tice	ASPECT	4/1/11	1510
Received by:		Nhan Phan	FedEx	4/1/11	V
Relinquished by:					
Received by:					

Samples received at 5 °C

(10)

104011

SAMPLE CHAIN OF CUSTODY ME 04/01/11

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Company Aspect
Address
City, State, ZIP Seattle
Phone # Fax #

SAMPLERS (signature)
PROJECT NAME/NO. 100044 Crosshill
PO #
REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-I9-0-3	101	3-31-11	1605	SOIL	1	X						X					
-6-9	102		1610		1	X						X					
-12-15	103		1615		1	X						X					
SG-I10-0-3	104		1545		1	X						X					
-6-9	105		1550		1	X						X		✓			
-12-15	106		1555		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amytice	Aspect	4/1/11	1510
Received by:		Nhan Phan	FEBI	4/1/11	V
Relinquished by:					
Received by:					

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Samples received at 5 °C

(6)

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SAMPLE CHAIN OF CUSTODY

ME 04/01/11

Page # 12 of 12

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SAMPLERS (signature)
PROJECT NAME/NO. 100094 Crawhill
PO #
REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
06-14-0-3	107	4/1/11	—	soil	1	X						X					
-6-9	108	↓	—	↓	1	X						X					
-12-15	109	↓	—	↓	1	X						X					
06-15-0-3	110	↓	—	↓	1	X						X					
-6-9	111	↓	—	↓	1	X						X					
-12-15	112	↓	—	↓	1	X						X					
RB-033111	113	3/31/11	—	water	2	X						X					-Added per BH 4/4/11 mg

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: M. Ravitz	Molly Ravitz	Aspect	4/1/11	1510
Received by: [signature]	Nhan Phan	F&BI	4/1/11	✓
Relinquished by:				
Received by:				

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Samples received at 5 °C

6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 28, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the amended results from the testing of material submitted on March 31, 2011 from the Crownhill 100094, F&BI 103428 project. The incorrect sample IDs have been corrected.

We apologize for the inconvenience and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0411R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 11, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on March 31, 2011 from the Crownhill 100094, F&BI 103428 project. There are 161 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
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CASE NARRATIVE

This case narrative encompasses samples received on March 31, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crownhill 100094, F&BI 103428 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
103428-01	NG-L4-0-3
103428-02	NG-L4-6-9
103428-03	NG-L4-12-15
103428-04	NG-L3-0-3
103428-05	NG-L3-6-9
103428-06	NG-L3-12-15
103428-07	NG-L2-0-3
103428-08	NG-L2-6-9
103428-09	NG-L2-12-15
103428-10	NG-L1-0-3
103428-11	NG-L1-6-9
103428-12	NG-L1-12-15
103428-13	NG-L5-0-3
103428-14	NG-L5-6-9
103428-15	NG-L5-12-15
103428-16	SG-L11-12-15
103428-17	SG-L1-0-3
103428-18	SG-L1-6-9
103428-19	SG-L1-12-15
103428-20	NG-E2-0-3
103428-21	NG-E2-6-9
103428-22	NG-E2-12-15
103428-23	NG-F2-0-3
103428-24	NG-F2-6-9
103428-25	NG-F2-12-15
103428-26	NG-F1-0-3
103428-27	NG-F1-6-9
103428-28	NG-F1-12-15
103428-29	NG-G1-0-3
103428-30	NG-G1-6-9
103428-31	NG-G1-12-15
103428-32	SG-F4-0-3
103428-33	SG-F4-6-9
103428-34	SG-F4-12-15
103428-35	SG-G3-0-3
103428-36	SG-G3-6-9
103428-37	SG-G3-12-15
103428-38	SG-G4-0-3

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103428-39	SG-G4-6-9
103428-40	SG-G4-12-15
103428-41	SG-H4-0-3
103428-42	SG-H4-6-9
103428-43	SG-H4-12-15
103428-44	SG-I4-0-3
103428-45	SG-I4-6-9
103428-46	SG-I4-12-15
103428-47	SG-F1-0-3
103428-48	SG-F1-6-9
103428-49	SG-F1-12-15
103428-50	SG-I6-0-3
103428-51	SG-I6-6-9
103428-52	SG-I6-12-15
103428-53	SG-H6-0-3
103428-54	SG-H6-6-9
103428-55	SG-H6-12-15
103428-56	SG-G6-0-3
103428-57	SG-G6-6-9
103428-58	SG-G6-12-15
103428-59	SG-F5-0-3
103428-60	SG-F5-6-9
103428-61	SG-F5-12-15
103428-62	SG-G5-0-3
103428-63	SG-G5-6-9
103428-64	SG-G5-12-15
103428-65	SG-H5-0-3
103428-66	SG-H5-6-9
103428-67	SG-H5-12-15
103428-68	SG-G1-0-3
103428-69	SG-G1-6-9
103428-70	SG-G1-12-15
103428-71	SG-H2-0-3
103428-72	SG-H2-6-9
103428-73	SG-H2-12-15
103428-74	SG-I2-0-3
103428-75	SG-I2-6-9
103428-76	SG-I2-12-15
103428-77	SG-I3-0-3
103428-78	SG-I3-6-9
103428-79	SG-I3-12-15
103428-80	SG-L4-0-3

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103428-81	SG-L4-6-9
103428-82	SG-L4-12-15
103428-83	SG-L5-0-3
103428-84	SG-L5-6-9
103428-85	SG-L5-12-15
103428-86	SG-L6-0-3
103428-87	SG-L6-6-9
103428-88	SG-L6-12-15
103428-89	SG-I5-0-3
103428-90	SG-I5-6-9
103428-91	SG-I5-12-15
103428-92	SG-I11-6-9
103428-93	SG-J5-0-3
103428-94	SG-J5-6-9
103428-95	SG-J5-12-15
103428-96	SG-K5-0-3
103428-97	SG-K5-6-9
103428-98	SG-K5-12-15
103428-99	SG-J4-0-3
103428-100	SG-J4-6-9
103428-101	SG-J4-12-15
103428-102	SG-K4-0-3
103428-103	SG-K4-6-9
103428-104	SG-K4-12-15
103428-105	SG-K3-0-3
103428-106	SG-K3-6-9
103428-107	SG-K3-12-15
103428-108	SG-L2-0-3
103428-109	SG-L2-6-9
103428-110	SG-L2-12-15
103428-111	SG-L3-0-3
103428-112	SG-L3-6-9
103428-113	SG-L3-12-15
103428-114	SG-H1-0-3
103428-115	SG-H1-6-9
103428-116	SG-H1-12-15
103428-117	SG-K6-0-3
103428-118	SG-K6-6-9
103428-119	SG-K6-12-15
103428-120	SG-J3-0-3

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting
103428-121	SG-J3-6-9
103428-122	SG-J3-12-15
103428-123	NG-L6 0-3

DRO/RRO by Method NWTPH-Dx, Extraction Method 3550B
Soil sample concentrations were reported on a dry weight basis. The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

Metals by Method 200.8, Extraction Method 200.8
Soil sample concentrations were reported on a dry weight basis. All quality control requirements were acceptable.

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428
Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-L4-0-3 103428-01	<50	<250	125
NG-L4-6-9 103428-02	<50	<250	123
NG-L4-12-15 103428-03	<50	<250	124
NG-L3-0-3 103428-04	<50	<250	121
NG-L3-6-9 103428-05	<50	<250	121
NG-L3-12-15 103428-06	<50	<250	125
NG-L2-0-3 103428-07	<50	<250	127
NG-L2-6-9 103428-08	<50	<250	123
NG-L2-12-15 103428-09	<50	<250	121
NG-L1-0-3 103428-10	<50	<250	124
NG-L1-6-9 103428-11	<50	<250	103

Date of Report: 04/11/11
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RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-L1-12-15 103428-12	<50	<250	105
NG-L5-0-3 103428-13	<50	<250	103
NG-L5-6-9 103428-14	<50	<250	104
NG-L5-12-15 103428-15	<50	<250	104
SG-L11-12-15 103428-16	<50	<250	104
SG-L1-0-3 103428-17	<50	<250	104
SG-L1-6-9 103428-18	<50	<250	104
SG-L1-12-15 103428-19	<50	<250	103
NG-E2-0-3 103428-20	140 x	440	104
NG-E2-6-9 103428-21	<50	<250	105
NG-E2-12-15 103428-22	<50	<250	104

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RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-F2-0-3 103428-23	<50	<250	104
NG-F2-6-9 103428-24	<50	<250	103
NG-F2-12-15 103428-25	<50	<250	106
NG-F1-0-3 103428-26	550	1,600	106
NG-F1-6-9 103428-27	<50	<250	107
NG-F1-12-15 103428-28	<50	<250	106
NG-G1-0-3 103428-29	<50	<250	106
NG-G1-6-9 103428-30	<50	<250	105
NG-G1-12-15 103428-31	<50	<250	107
SG-F4-0-3 103428-32	<50	<250	105

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Project: Crownhill 100094, F&BI 103428
Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-F4-6-9 103428-33	<50	<250	105
SG-F4-12-15 103428-34	<50	<250	107
SG-G3-0-3 103428-35	<50	<250	104
SG-G3-6-9 103428-36	<50	<250	106
SG-G3-12-15 103428-37	<50	<250	106
SG-G4-0-3 103428-38	<50	<250	104
SG-G4-6-9 103428-39	<50	<250	103
SG-G4-12-15 103428-40	<50	<250	105
SG-H4-0-3 103428-41	<50	<250	122
SG-H4-6-9 103428-42	<50	<250	121
SG-H4-12-15 103428-43	<50	<250	125

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RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-I4-0-3 103428-44	<50	<250	124
SG-I4-6-9 103428-45	<50	<250	127
SG-I4-12-15 103428-46	<50	<250	126
SG-F1-0-3 103428-47	<50	<250	129
SG-F1-6-9 103428-48	<50	<250	125
SG-F1-12-15 103428-49	<50	<250	108
SG-I6-0-3 103428-50	<50	400	108
SG-I6-6-9 103428-51	<50	<250	112
SG-I6-12-15 103428-52	<50	<250	111
SG-H6-0-3 103428-53	<50	650	112
SG-H6-6-9 103428-54	<50	<250	110

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Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-H6-12-15 103428-55	<50	<250	110
SG-G6-0-3 103428-56	<50	<250	109
SG-G6-6-9 103428-57	<50	<250	110
SG-G6-12-15 103428-58	<50	<250	110
SG-F5-0-3 103428-59	<50	<250	108
SG-F5-6-9 103428-60	190	280	110
SG-F5-12-15 103428-61	170 x	490 x	100
SG-G5-0-3 103428-62	<50	310	96
SG-G5-6-9 103428-63	<50	<250	96
SG-G5-12-15 103428-64	<50	<250	96
SG-H5-0-3 103428-65	<50	<250	98

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Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-H5-6-9 103428-66	<50	<250	97
SG-H5-12-15 103428-67	<50	<250	96
SG-G1-0-3 103428-68	<50	<250	93
SG-G1-6-9 103428-69	<50	<250	96
SG-G1-12-15 103428-70	<50	<250	94
SG-H2-0-3 103428-71	160 x	1,400	94
SG-H2-6-9 103428-72	<50	330	95
SG-H2-12-15 103428-73	<50	<250	95
SG-I2-0-3 103428-74	<50	<250	95
SG-I2-6-9 103428-75	<50	<250	95
SG-I2-12-15 103428-76	<50	<250	94

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Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-I3-0-3 103428-77	<50	<250	94
SG-I3-6-9 103428-78	<50	<250	95
SG-I3-12-15 103428-79	<50	<250	95
SG-L4-0-3 103428-80	<50	360	95
SG-L4-6-9 103428-81	<50	<250	93
SG-L4-12-15 103428-82	<50	<250	96
SG-L5-0-3 103428-83	<50	<250	95
SG-L5-6-9 103428-84	<50	<250	94
SG-L5-12-15 103428-85	<50	<250	95
SG-L6-0-3 103428-86	<50	<250	90
SG-L6-6-9 103428-87	970 x	780 x	97

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RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-L6-12-15 103428-88	<50	<250	92
SG-I5-0-3 103428-89	<50	<250	94
SG-I5-6-9 103428-90	<50	<250	94
SG-I5-12-15 103428-91	<50	<250	94
SG-I11-6-9 103428-92	<50	<250	94
SG-J5-0-3 103428-93	<50	<250	96
SG-J5-6-9 103428-94	<50	<250	94
SG-J5-12-15 103428-95	<50	<250	96
SG-K5-0-3 103428-96	<50	<250	95
SG-K5-6-9 103428-97	<50	<250	93
SG-K5-12-15 103428-98	<50	<250	92

Date of Report: 04/11/11
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Project: Crownhill 100094, F&BI 103428
Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-J4-0-3 103428-99	<50	<250	101
SG-J4-6-9 103428-100	<50	<250	102
SG-J4-12-15 103428-101	<50	<250	95
SG-K4-0-3 103428-102	<50	380	97
SG-K4-6-9 103428-103	<50	<250	97
SG-K4-12-15 103428-104	<50	<250	98
SG-K3-0-3 103428-105	<50	520	98
SG-K3-6-9 103428-106	150	530	99
SG-K3-12-15 103428-107	97 x	980	97
SG-L2-0-3 103428-108	<50	<250	94
SG-L2-6-9 103428-109	<50	<250	95

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Project: Crownhill 100094, F&BI 103428
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RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-L2-12-15 103428-110	<50	<250	97
SG-L3-0-3 103428-111	<50	<250	93
SG-L3-6-9 103428-112	<50	<250	95
SG-L3-12-15 103428-113	<50	<250	96
SG-H1-0-3 103428-114	<50	<250	96
SG-H1-6-9 103428-115	<50	<250	97
SG-H1-12-15 103428-116	<50	<250	97
SG-K6-0-3 103428-117	<50	580	94
SG-K6-6-9 103428-118	<50	<250	97
SG-K6-12-15 103428-119	<50	<250	97
SG-J3-0-3 103428-120	<50	680	96

Date of Report: 04/11/11
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Project: Crownhill 100094, F&BI 103428
Date Extracted: 04/04/11
Date Analyzed: 04/04/11, 04/05/11, 04/06/11, 04/07/11, and 04/08/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SG-J3-6-9 103428-121	<50	<250	100
SG-J3-12-15 103428-122	<50	350	99
NG-L6 0-3 103428-123	<50	<250	104
Method Blank 01-582 MB	<50	<250	122
Method Blank 01-583 MB	<50	<250	104
Method Blank 01-584 MB	<50	<250	128
Method Blank 01-585 MB	<50	<250	96
Method Blank 01-586 MB	<50	<250	101
Method Blank 01-587 MB	<50	<250	97
Method Blank 01-588 MB	<50	<250	98

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-01
Date Analyzed:	04/06/11	Data File:	103428-01.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.37
Lead	6.66

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-02
Date Analyzed:	04/06/11	Data File:	103428-02.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.55
Lead	1.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-03
Date Analyzed:	04/06/11	Data File:	103428-03.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.74

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L3-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-04
Date Analyzed:	04/06/11	Data File:	103428-04.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.42

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L3-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-05
Date Analyzed:	04/06/11	Data File:	103428-05.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.11

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L3-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-06
Date Analyzed:	04/06/11	Data File:	103428-06.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	1.95

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-07
Date Analyzed:	04/06/11	Data File:	103428-07.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.67
Lead	13.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-08
Date Analyzed:	04/06/11	Data File:	103428-08.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.02

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-09
Date Analyzed:	04/06/11	Data File:	103428-09.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-10
Date Analyzed:	04/06/11	Data File:	103428-10.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.41
Lead	23.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-11
Date Analyzed:	04/06/11	Data File:	103428-11.045
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.19

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-12
Date Analyzed:	04/06/11	Data File:	103428-12.046
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	1.22

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-13
Date Analyzed:	04/06/11	Data File:	103428-13.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.83
Lead	13.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-14
Date Analyzed:	04/06/11	Data File:	103428-14.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	1.35

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-15
Date Analyzed:	04/06/11	Data File:	103428-15.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.32
Lead	1.98

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L11-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-16
Date Analyzed:	04/06/11	Data File:	103428-16.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-17
Date Analyzed:	04/06/11	Data File:	103428-17.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.71
Lead	83.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-18
Date Analyzed:	04/06/11	Data File:	103428-18.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	3.08

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-19
Date Analyzed:	04/06/11	Data File:	103428-19.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-20
Date Analyzed:	04/06/11	Data File:	103428-20.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.74
Lead	73.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-21
Date Analyzed:	04/06/11	Data File:	103428-21.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	107	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.06
Lead	1.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-E2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-22
Date Analyzed:	04/06/11	Data File:	103428-22.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.71
Lead	2.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-23
Date Analyzed:	04/06/11	Data File:	103428-23.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.63
Lead	117

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-24
Date Analyzed:	04/06/11	Data File:	103428-24.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.17
Lead	1.84

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-25
Date Analyzed:	04/06/11	Data File:	103428-25.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.13
Lead	1.35

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-26
Date Analyzed:	04/06/11	Data File:	103428-26.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.51
Lead	29.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-27
Date Analyzed:	04/06/11	Data File:	103428-27.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.15
Lead	1.57

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-F1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-28
Date Analyzed:	04/06/11	Data File:	103428-28.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-29
Date Analyzed:	04/06/11	Data File:	103428-29.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.08
Lead	9.75

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-30
Date Analyzed:	04/06/11	Data File:	103428-30.071
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.74
Lead	4.27

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-G1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-31
Date Analyzed:	04/06/11	Data File:	103428-31.072
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.09
Lead	1.43

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-32
Date Analyzed:	04/06/11	Data File:	103428-32.073
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.87
Lead	102

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-33
Date Analyzed:	04/06/11	Data File:	103428-33.074
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	107	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.92
Lead	25.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-34
Date Analyzed:	04/06/11	Data File:	103428-34.081
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	2.14

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G3-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-35
Date Analyzed:	04/06/11	Data File:	103428-35.082
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.81
Lead	126

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G3-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-36
Date Analyzed:	04/06/11	Data File:	103428-36.077
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G3-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-37
Date Analyzed:	04/06/11	Data File:	103428-37.083
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.41

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-38
Date Analyzed:	04/06/11	Data File:	103428-38.084
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	111	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.95
Lead	105

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-39
Date Analyzed:	04/06/11	Data File:	103428-39.085
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.56
Lead	3.30

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-40
Date Analyzed:	04/06/11	Data File:	103428-40.086
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.30

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-41
Date Analyzed:	04/06/11	Data File:	103428-41.087
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.64
Lead	51.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-42
Date Analyzed:	04/06/11	Data File:	103428-42.088
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.18

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-43
Date Analyzed:	04/06/11	Data File:	103428-43.089
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-44
Date Analyzed:	04/06/11	Data File:	103428-44.090
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.09
Lead	109

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-45
Date Analyzed:	04/06/11	Data File:	103428-45.092
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.12

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-46
Date Analyzed:	04/06/11	Data File:	103428-46.093
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-47
Date Analyzed:	04/06/11	Data File:	103428-47.094
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	2.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-48
Date Analyzed:	04/06/11	Data File:	103428-48.095
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.13
Lead	1.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-49
Date Analyzed:	04/06/11	Data File:	103428-49.096
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.46

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I6-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-50
Date Analyzed:	04/06/11	Data File:	103428-50.097
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.78
Lead	32.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I6-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-51
Date Analyzed:	04/06/11	Data File:	103428-51.098
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.60

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I6-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-52
Date Analyzed:	04/06/11	Data File:	103428-52.099
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	3.05

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H6-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-53
Date Analyzed:	04/06/11	Data File:	103428-53.100
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.10
Lead	26.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H6-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-54
Date Analyzed:	04/06/11	Data File:	103428-54.107
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.45
Lead	2.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H6-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-55
Date Analyzed:	04/06/11	Data File:	103428-55.108
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.21
Lead	2.04

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G6-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-56
Date Analyzed:	04/06/11	Data File:	103428-56.109
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.10
Lead	43.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G6-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-57
Date Analyzed:	04/06/11	Data File:	103428-57.110
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.02
Lead	87.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G6-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-58
Date Analyzed:	04/06/11	Data File:	103428-58.111
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.49
Lead	17.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-59
Date Analyzed:	04/06/11	Data File:	103428-59.113
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.83
Lead	96.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-60
Date Analyzed:	04/06/11	Data File:	103428-60.114
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	3.02

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-F5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-61
Date Analyzed:	04/06/11	Data File:	103428-61.115
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.34
Lead	11.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-62
Date Analyzed:	04/06/11	Data File:	103428-62.116
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.01
Lead	71.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-63
Date Analyzed:	04/06/11	Data File:	103428-63.117
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.41
Lead	9.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-64
Date Analyzed:	04/06/11	Data File:	103428-64.118
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.31
Lead	138

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-65
Date Analyzed:	04/06/11	Data File:	103428-65.119
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.17
Lead	60.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-66
Date Analyzed:	04/06/11	Data File:	103428-66.120
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	66	60	125
Holmium	80	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.44
Lead	4.76

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-67
Date Analyzed:	04/06/11	Data File:	103428-67.121
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.24
Lead	1.29

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-68
Date Analyzed:	04/06/11	Data File:	103428-68.104
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	105	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	12.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-69
Date Analyzed:	04/06/11	Data File:	103428-68.122
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.82

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-G1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-70
Date Analyzed:	04/06/11	Data File:	103428-70.124
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.27
Lead	1.64

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-71
Date Analyzed:	04/06/11	Data File:	103428-71.125
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.34
Lead	56.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-72
Date Analyzed:	04/06/11	Data File:	103428-72.126
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	6.50

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-73
Date Analyzed:	04/06/11	Data File:	103428-73.127
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.24
Lead	1.48

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-74
Date Analyzed:	04/07/11	Data File:	103428-74.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.32
Lead	13.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-75
Date Analyzed:	04/07/11	Data File:	103428-75.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.31
Lead	1.44

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-76
Date Analyzed:	04/07/11	Data File:	103428-76.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.45

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I3-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-77
Date Analyzed:	04/07/11	Data File:	103428-77.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.97
Lead	15.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I3-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-78
Date Analyzed:	04/07/11	Data File:	103428-78.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.49
Lead	1.42

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I3-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-79
Date Analyzed:	04/07/11	Data File:	103428-79.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.28
Lead	1.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-80
Date Analyzed:	04/07/11	Data File:	103428-80.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.64
Lead	158

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-81
Date Analyzed:	04/07/11	Data File:	103428-81.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	2.45

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-82
Date Analyzed:	04/07/11	Data File:	103428-82.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-83
Date Analyzed:	04/07/11	Data File:	103428-83.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.51
Lead	16.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-84
Date Analyzed:	04/07/11	Data File:	103428-84.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.27

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-85
Date Analyzed:	04/07/11	Data File:	103428-85.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.10
Lead	1.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L6-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-86
Date Analyzed:	04/07/11	Data File:	103428-86.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.19
Lead	28.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L6-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-87
Date Analyzed:	04/07/11	Data File:	103428-87.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.69
Lead	24.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L6-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-88
Date Analyzed:	04/07/11	Data File:	103428-88.046
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.11
Lead	1.27

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-89
Date Analyzed:	04/07/11	Data File:	103428-89.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.73
Lead	27.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-90
Date Analyzed:	04/07/11	Data File:	103428-90.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-91
Date Analyzed:	04/07/11	Data File:	103428-91.048
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.05
Lead	1.65

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-I11-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-92
Date Analyzed:	04/07/11	Data File:	103428-92.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-93
Date Analyzed:	04/07/11	Data File:	103428-93.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.32
Lead	46.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-94
Date Analyzed:	04/07/11	Data File:	103428-94.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.38
Lead	258

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-95
Date Analyzed:	04/07/11	Data File:	103428-95.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.26

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K5-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-96
Date Analyzed:	04/07/11	Data File:	103428-96.059
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	15.1
Lead	498

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K5-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-97
Date Analyzed:	04/07/11	Data File:	103428-97.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	76	60	125
Holmium	81	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	12.0
Lead	215

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K5-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-98
Date Analyzed:	04/07/11	Data File:	103428-98.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	98	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.28

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-99
Date Analyzed:	04/07/11	Data File:	103428-99.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.45
Lead	92.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-100
Date Analyzed:	04/07/11	Data File:	103428-100.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.51
Lead	106

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-101
Date Analyzed:	04/07/11	Data File:	103428-101.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K4-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-102
Date Analyzed:	04/07/11	Data File:	103428-102.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.65
Lead	82.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K4-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-103
Date Analyzed:	04/07/11	Data File:	103428-103.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.75
Lead	25.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K4-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-104
Date Analyzed:	04/07/11	Data File:	103428-104.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	48.2
Lead	1,530

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K3-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-105
Date Analyzed:	04/07/11	Data File:	103428-105.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.84
Lead	88.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K3-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-106
Date Analyzed:	04/07/11	Data File:	103428-106.070
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	99	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	24.0
Lead	1,420

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K3-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-107
Date Analyzed:	04/07/11	Data File:	103428-107.071
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	48.6
Lead	1,960

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L2-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-108
Date Analyzed:	04/07/11	Data File:	103428-108.072
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	71	60	125
Holmium	74	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.42
Lead	26.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L2-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-109
Date Analyzed:	04/08/11	Data File:	103428-109.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.07
Lead	5.37

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L2-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-110
Date Analyzed:	04/07/11	Data File:	103428-110.074
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	83	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.23

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L3-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-111
Date Analyzed:	04/07/11	Data File:	103428-111.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.52
Lead	229

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L3-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-112
Date Analyzed:	04/07/11	Data File:	103428-112.076
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.38

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-L3-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-113
Date Analyzed:	04/07/11	Data File:	103428-113.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.20
Lead	1.73

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H1-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-114
Date Analyzed:	04/07/11	Data File:	103428-114.083
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.76
Lead	43.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H1-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-115
Date Analyzed:	04/07/11	Data File:	103428-115.084
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-H1-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-116
Date Analyzed:	04/07/11	Data File:	103428-116.085
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.17
Lead	1.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K6-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-117
Date Analyzed:	04/07/11	Data File:	103428-117.086
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.73
Lead	59.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K6-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-118
Date Analyzed:	04/07/11	Data File:	103428-118.087
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.86
Lead	9.22

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-K6-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-119
Date Analyzed:	04/07/11	Data File:	103428-119.089
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.22
Lead	1.75

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J3-0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-120
Date Analyzed:	04/07/11	Data File:	103428-120.090
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	4.78

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J3-6-9	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-121
Date Analyzed:	04/07/11	Data File:	103428-121.091
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.95
Lead	52.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J3-12-15	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-122
Date Analyzed:	04/07/11	Data File:	103428-122.092
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	97	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	15.0
Lead	710

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-L6 0-3	Client:	Aspect Consulting
Date Received:	03/31/11	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	103428-123
Date Analyzed:	04/07/11	Data File:	103428-123.080
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.12
Lead	1.69

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-240 mb
Date Analyzed:	04/06/11	Data File:	I1-240 mb.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-248 mb
Date Analyzed:	04/06/11	Data File:	I1-248 mb.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-249 mb
Date Analyzed:	04/06/11	Data File:	I1-249 mb.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-250 mb
Date Analyzed:	04/06/11	Data File:	I1-250 mb.102
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-251 mb
Date Analyzed:	04/07/11	Data File:	I1-251 mb.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-252 mb
Date Analyzed:	04/07/11	Data File:	I1-252 mb.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crownhill 100094, F&BI 103428
Date Extracted:	04/06/11	Lab ID:	I1-253 mb
Date Analyzed:	04/07/11	Data File:	I1-253 mb.078
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	117	113	63-146	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	115	79-144

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-21 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	91	92	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-48 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	111	119	63-146	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	121	79-144

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-69 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	93	94	64-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	58-147

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-91 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	104	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	74-139

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-112 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	103	102	73-135	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	74-139

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103428-121 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	120	100	100	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	74-139

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	101	105	44-151	4
Lead	mg/kg (ppm)	20	1.11	103	106	65-126	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	102	80-120
Lead	mg/kg (ppm)	20	105	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-15 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	3.32	80 b	86 b	44-151	7 b
Lead	mg/kg (ppm)	20	1.98	108	99	65-126	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-36 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	107	99	44-151	8
Lead	mg/kg (ppm)	20	1.49	104	104	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	98	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-68 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	105	103	44-151	2
Lead	mg/kg (ppm)	20	12.6	101 b	102 b	65-126	1 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	96	80-120
Lead	mg/kg (ppm)	20	101	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-90 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	107	110	44-151	3
Lead	mg/kg (ppm)	20	1.47	103	102	65-126	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-113 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.20	101	100	44-151	1
Lead	mg/kg (ppm)	20	1.73	100	106	65-126	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Lead	mg/kg (ppm)	20	104	81-120

Date of Report: 04/11/11
Date Received: 03/31/11
Project: Crownhill 100094, F&BI 103428

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103428-123 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.12	104	110	44-151	6
Lead	mg/kg (ppm)	20	1.69	97	97	65-126	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	105	80-120
Lead	mg/kg (ppm)	20	105	81-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BI4

Page # 1 of 13

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crouch III 100094

PO #

REMARKS

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
NG-L4-0-3	01	3/30/11	0845	S	1	X						X					
NG-L4-6-9	02		0850		1	X						X					
NG-L4-12-15	03 AB		0855		2	X						X					
NG-L3-0-3	04 A-B		0905		2	X						X					
NG-L3-6-9	05		0910		1	X						X					
NG-L3-12-15	06		0915 0935 DP		1	X						X					
NG-L2-0-3	07		0945		1	X						X					
NG-L2-6-9	08		0950		1	X						X					
NG-L2-12-15	09		0955		1	X						X					
NG-L1-0-3	10		10.10		1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FEBinc	1	0930
Relinquished by:					
Received by:					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

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Samples received at 2 °C

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11

BI4

Page # 2 of 13

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
NG-L1-6-9	11	3/30/11	1015	S	2	X						X					2nd jar label does not match ID on jar lid RB 3/31
NG-L1-12-15	12	"	1020		2	X						X					
NG-L5-0-3	13		0825		1	X						X					--
NG-L5-6-9	14		0830		2	X						X					
NG-L5-12-15	15		0835		1	X						X					
SG-L11-12-15	16		—		1	X						X					
SG-L1-0-3	17		1025		1	X						X					
SG-L1-6-9	18		1030		2	X						X					
SG-L1-12-15	19		1035		1	X						X					
~~NG-L6-0-3~~	20	Sample not received	—		1	X						X					RB 3/31 Sample not received

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert Hanford	Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FedEx	↓	↓
Relinquished by:					
Received by:					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

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Samples received at 2 °C

103428

SAMPLE CHAIN OF CUSTODY

MG 03/31/11

Page # 3 of 13 BD4

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Coastal 100294

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb						Notes
NG-E2-0-3	20	3-31-11	0955	SOIL	1	X						X						
6-9	21		1000		1	X						X						
12-15	22		1005		1	X						X						
NG-F2-0-3	23		0920		1	X						X						
6-9	24		0925		1	X						X						
12-15	25		0930		1	X						X						
NG-F1-0-3	26		0850		1	X						X						
6-9	27		0855		1	X						X						
12-15	28		0900		1	X						X						
NG-G1-0-3	29		0805		1	X						X						

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Seattle, WA 98119-2029
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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hartman	Aspect	3-31-11	10:30
Received by:		Michael E-Cahl	FB	↓	↓
Relinquished by:					
Received by:					

Samples received at 2 °C

10

103428

SAMPLE CHAIN OF CUSTODY

HE 03/31/11 Page # 4 of 13 BI4

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Pb+As					Notes
NG-G1-6-9	30	3-31-11	0810	SOIL	1	X						X					
12-15	31		0815		1												
SG-F4-0-3	32		0945		1												
6-9	33		0950		1												
12-15	34		0955		1												
SG-G3-0-3	35		0925		1												
6-9	36		0930		1												
12-15	37		0935		1												
SG-G4-0-3	38		0900		1												
6-9	39		0905		1												

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3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R. Hanford	Aspect	3-31-11	10 30
Received by:		Michael Erdahl	F&B	1	1
Relinquished by:					
Received by:					

Samples received at 2 °C 10

103428

SAMPLE CHAIN OF CUSTODY

ME 03/21/11

Page # 5 of 13

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crawhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-G4-12-15	40	3-31-11	0910	soil	1	X						X					
SG-H4-0-3	41	"	0840	"	1	X						X					
-6-9	42 A-B	"	0845	"	2	X						X					
-12-15	43 A,B	"	0850	"	2	X						X					
SG-I4-0-3	44	"	0820	"	1	X						X					
-6-9	45	"	0825	"	1	X						X					
-12-15	46	"	0830	"	1	X						X					
SG-F1-0-3	47	"	1015	"	1	X						X					
6-9	48	"	1020	"	1	X						X					
12-15	49	"	1025	"	1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hansen	Aspect	3-31-11	11:00
Received by:		Michael Eccel	FedEx	1	1
Relinquished by:					
Received by:					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

Samples received at 2 °C

12

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BI4

Page # 6 of 13

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crowahill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-I6-0-3	50	3-30-11	1555	Soil	1	X						X					
-6-9	51	↓	1600	↓	1	X						X					
-12-15	52		1605		1	X						X					
SG-H6-03	53		1520		1	X						X					
-6-9	54 A-B		1525		2	X						X					
-12-15	55 A-B		1530		2	X						X					
SG-G6-0-3	56		1440		1	X						X					
-6-9	57		1445		1	X						X					
-12-15	58		1450		1	X						X					
SG-F5-0-3	59	↓	1415	↓	1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert R. Hanfelt	Aspect	3-31-11	0930
Received by:		Michael Erdahl	FEBruya	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

12

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 7BI4

Page # 7 of 13

Send Report To Dana Cameron

Company Aspect

Address

City, State, ZIP Seattle

Phone # ______ Fax # ______

SAMPLERS (signature) Robert R Harkin

PROJECT NAME/NO. Crownhill Aspect

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH______

Rush charges authorized by: ______

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-F5-6-9	60	3/30/11	1420	soil	1	X						X					
-12-15	61		1425		1	X						X					
SG-G5-0-3	62		1350		1	X						X					
-6-9	63		1355		1	X						X					
-12-15	64		1400		1	X						X					
SG-H5-0-3	65 A-B		1320		2	X						X					
-6-9	66 A-B		1325		2	X						X					
-12-15	67 A-B		1330		2	X						X					
SG-G1-0-3	68		1505		1	X						X					
-6-9	69	↓	1510	↓	1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Robert R Harkin	Aspect	3-31-11	0930
Received by:	[signature]	Michael Erdahl	F&B inc	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

13

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BI4

Page # 8 of 13

Send Report To Dana Connor

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert R Hartman

PROJECT NAME/NO. Crown Hill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-G1-12-15	70	3/30/11	1515	Soil	1	X						X					
SG-H2-0-3	71	"	1445	"	1	X						X					
-6-9	72	"	1450	"	1	X						X					
-12-15	73	"	1455	"	1	X						X					
SG-I2-0-3	74	"	1405	"	1	X						X					
6-9	75	"	1410	"	1	X						X					
12-15	76	"	1415	"	1	X						X					
SG-I3-0-3	77	"	1330	"	1	X						X					
-6-9	78	"	1335	"	1	X						X					
-12-15	79	"	1340	"	1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert R Hartman	Robert Hartman	Aspect	3-31-11	0930
Received by:		Michael Erdahl	FEBruya	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

10

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BI4

Page # 9 of 13

Send Report To Dawn Connor

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert Hanford

PROJECT NAME/NO. Crowuh 111 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-L4-0-3	80 AB	3/30/11	0930	S	2	X						X					
6-9	81		0935		2	X						X					
12-15	82		0940		2	X						X					
SG-L5 0-3	83		0855		2	X						X					
6-9	84		0900		2	X						X					
12-15	85		0905		2	X						X					
SG-L6 0-3	86		0820		1	X						X					
6-9 AB	87 AB		0825		2	X						X					
12-15 3/31	88 AB		0830		2	X						X					
SG-I5-0-3	89		11:55		1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert Hanford	Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FEBrie	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

18

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11

Page # 10 of 63 BI4

Send Report To Dana Cameron

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert Hanford

PROJECT NAME/NO. Crowchild 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As Pb					Notes
SG-I5-6-9	90	3-30-11	1200	soil	1	X						X					
SG-I5-12-15	91		1205		1	X						X					
SG-I11-6-9	92		—		1	X						X					--
SG-J5-03	93		1140		1	X						X					
SG-J5-6-9	94		1145		1	X						X					
SG-J5-12-15	95		1150		1	X						X					
SG-K5-03	96		1110		1	X						X					
SG-K5-6-9	97		1115		1	X						X					
SG-K5-12-15	98		1120		1	X						X					
SG-J4-0-3	99		1150		1												

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert Hanford	Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FEBnc	1	1
Relinquished by:					
Received by:					

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Samples received at 2 °C

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11 BIY

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crockhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-J4-6-9	100	3/30/11	1155	Soil	1	X						X					
SG-J4-12-15	101		1200		1	X						X					
SG-K4-0-3	102		1120		1	X						X					
6-9	103		1125		1	X						X					
12-15	104		1130		1	X						X					
SG-K3-0-3	105		1055		1	X						X					
-6-9	106		1100		1	X						X					
-12-15	107		1105		1	X						X					
SG-L2-0-3	108		1010		1	X						X					
6-9	109		1015		1	X						X					

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FB	↓	↓
Relinquished by:					
Received by:					

Samples received at 2 °C

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11

Page # 12 of 13 BF4

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature) Robert Hanford

PROJECT NAME/NO. Crownhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-L2-12-15	110	3/30/11	1020	soil	1	X						X					
SG-L3-03	111		0955		1	X						X					
-6-9	112		1000		1	X						X					
-12-15	113		1005		1	X						X					
SG-H1-0-3	114		1550		1	X						X					
-6-9	115		1555		1	X						X					
-12-15	116		1600		1	X						X					
SG-K6-0-3	117		1615		1	X						X					
-6-9	118		1620		1	X						X					
-12-15	119		1625		1	X						X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3/31/11	0930
Received by:		Michael Erdahl	FEDEX	↓	↓
Relinquished by:					
Received by:					

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Samples received at 2 °C

10

103428

SAMPLE CHAIN OF CUSTODY

ME 03/31/11

Page # 13 of 13 BI4 13

Send Report To Dana Cannon

Company Aspect

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100094

PO #

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	As, Pb					Notes
SG-53-0-3	120	3/30	1300	Soil	1	X						X					
6-9	121		1305	"	1	X						X					
12-15	122		1310	"	1	X						X					--

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert Hanford	Aspect	3-31-11	0930
Received by:		Michael Erdahl	Fbm	↓	↓
Relinquished by:					
Received by:					

Friedman & Bruya, Inc.
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Samples received at 2 °C 3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 23, 2011

Dana Cannon, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on November 14, 2011 from the Crownhill, PO 100094, F&BI 111177 project. There are 49 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Bob Hanford, Parker Wittman
ASP1123R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 14, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill, PO 100094, F&BI 111177 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
111177-01	PCA-SS-1
111177-02	PCA-SS-2
111177-03	PCA-SS-3
111177-04	PCA-SS-4
111177-05	PCA-SS-5
111177-06	PCA-SS-6
111177-07	PCA-SS-7
111177-08	PCA-SS-8
111177-09	PCA-SS-9
111177-10	PCA-SS-10
111177-11	PCA-SS-11
111177-12	PCA-SS-12
111177-13	PCA-SS-13
111177-14	SPL-SS-1
111177-15	SPL-SS-2
111177-16	SPL-SS-3
111177-17	SPL-SS-4
111177-18	SPL-SS-5
111177-19	SPL-SS-6
111177-20	SPL-SS-7
111177-21	SPL-SS-8
111177-22	SPL-SS-9
111177-23	SPL-SS-10
111177-24	SPL-SS-11
111177-25	SPL-SS-12
111177-26	SPL-SS-13
111177-27	SPL-SS-14
111177-28	SPL-SS-15
111177-29	SPL-SS-16
111177-30	SPL-SS-17
111177-31	SPL-SS-18
111177-32	SPL-SS-19
111177-33	SPL-SS-20
111177-34	SPL-SS-21
111177-35	SPL-SS-22

The 8270D SPL-SS-18 calibration standard failed the acceptance criteria for fluorene. The data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 11/23/11
Date Received: 11/14/11
Project: Crownhill, PO 100094, F&BI 111177
Date Extracted: 11/15/11
Date Analyzed: 11/16/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SPL-SS-14 111177-27	<50	<250	95
SPL-SS-15 111177-28	<50	<250	96
SPL-SS-17 111177-30	<50	<250	96
SPL-SS-18 111177-31	60 x	690	101
Method Blank 01-2069 MB2	<50	<250	88

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-1	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-01
Date Analyzed:	11/15/11	Data File:	111177-01.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.32
Lead	6.55

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-2	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-02
Date Analyzed:	11/15/11	Data File:	111177-02.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.86
Lead	7.56

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-3	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-03
Date Analyzed:	11/15/11	Data File:	111177-03.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.06
Lead	8.49

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-4	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-04
Date Analyzed:	11/15/11	Data File:	111177-04.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.64
Lead	10.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-5	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-05
Date Analyzed:	11/15/11	Data File:	111177-05.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.20
Lead	19.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-6	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-06
Date Analyzed:	11/15/11	Data File:	111177-06.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.71
Lead	8.14

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-7	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-07
Date Analyzed:	11/15/11	Data File:	111177-07.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.78
Lead	17.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-8	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-08
Date Analyzed:	11/15/11	Data File:	111177-08.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.53
Lead	16.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-9	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-09
Date Analyzed:	11/15/11	Data File:	111177-09.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.89
Lead	15.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-10	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-10
Date Analyzed:	11/15/11	Data File:	111177-10.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.97
Lead	25.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-11	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-11
Date Analyzed:	11/15/11	Data File:	111177-11.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.63
Lead	9.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-12	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-12
Date Analyzed:	11/15/11	Data File:	111177-12.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.84
Lead	20.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	PCA-SS-13	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-13
Date Analyzed:	11/15/11	Data File:	111177-13.044
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.87
Lead	127

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-1	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-14
Date Analyzed:	11/15/11	Data File:	111177-14.045
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.42
Lead	41.2

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-2	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-15
Date Analyzed:	11/15/11	Data File:	111177-15.046
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.30
Lead	21.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-3	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-16
Date Analyzed:	11/15/11	Data File:	111177-16.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.07
Lead	59.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-4	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-17
Date Analyzed:	11/15/11	Data File:	111177-17.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.02
Lead	52.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-5	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-18
Date Analyzed:	11/15/11	Data File:	111177-18.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.05
Lead	53.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-6	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-19
Date Analyzed:	11/15/11	Data File:	111177-19.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.15
Lead	143

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-7	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-20
Date Analyzed:	11/15/11	Data File:	111177-20.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.78
Lead	22.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-8	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-21
Date Analyzed:	11/15/11	Data File:	111177-21.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.44
Lead	63.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-9	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-22
Date Analyzed:	11/15/11	Data File:	111177-22.059
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.96
Lead	66.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-10	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-23
Date Analyzed:	11/15/11	Data File:	111177-23.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.49
Lead	26.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-11	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-24
Date Analyzed:	11/15/11	Data File:	111177-24.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	102	60	125
Holmium	106	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.60
Lead	254

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-12	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-25
Date Analyzed:	11/15/11	Data File:	111177-25.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.02
Lead	54.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-13	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-26
Date Analyzed:	11/15/11	Data File:	111177-26.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.76
Lead	67.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-14	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-27
Date Analyzed:	11/15/11	Data File:	111177-27.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	104	60	125
Indium	96	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Copper	370
Arsenic	5.26
Antimony	29.6
Lead	725

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-15	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-28 x10
Date Analyzed:	11/15/11	Data File:	111177-28 x10.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Copper	113	60	125
Indium	107	60	125
Holmium	104	60	125

Analyte:	Concentration mg/kg (ppm)
Copper	6,160
Arsenic	24.7
Antimony	729
Lead	5,290

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-16	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-29
Date Analyzed:	11/15/11	Data File:	111177-29.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.43
Lead	34.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-17	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-30
Date Analyzed:	11/15/11	Data File:	111177-30.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	107	60	125
Indium	92	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Copper	2,180
Arsenic	7.00
Antimony	114
Lead	1,640

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-18	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-31
Date Analyzed:	11/15/11	Data File:	111177-31.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	105	60	125
Indium	97	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Copper	423
Arsenic	3.11
Antimony	48.4
Lead	152

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-19	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-32
Date Analyzed:	11/15/11	Data File:	111177-32.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	99	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.52
Lead	3.45

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-20	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-33
Date Analyzed:	11/15/11	Data File:	111177-33.071
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	96	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.38
Lead	477

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-21	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-34
Date Analyzed:	11/15/11	Data File:	111177-34.072
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	15.5
Lead	146

Analysis For Total Metals By EPA Method 200.8

Client ID:	SPL-SS-22	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-35
Date Analyzed:	11/15/11	Data File:	111177-35.073
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	78	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.28
Lead	25.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/14/11	Lab ID:	I1-786 mb
Date Analyzed:	11/15/11	Data File:	I1-786 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	97	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	I1-790 mb
Date Analyzed:	11/15/11	Data File:	I1-790 mb.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	93	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Copper	<1
Arsenic	<1
Antimony	<1
Lead	<1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SPL-SS-14	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-27 1/5
Date Analyzed:	11/17/11	Data File:	111711.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	95	50	150
Benzo(a)anthracene-d12	109	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.033
Anthracene	<0.01
Fluoranthene	0.11
Pyrene	0.19
Benz(a)anthracene	0.059
Chrysene	0.094
Benzo(a)pyrene	0.10
Benzo(b)fluoranthene	0.13
Benzo(k)fluoranthene	0.033
Indeno(1,2,3-cd)pyrene	0.093
Dibenz(a,h)anthracene	0.016
Benzo(g,h,i)perylene	0.10

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SPL-SS-15	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-28 1/5
Date Analyzed:	11/17/11	Data File:	111712.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	97	50	150
Benzo(a)anthracene-d12	100	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.011
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.029
Anthracene	<0.01
Fluoranthene	0.061
Pyrene	0.096
Benz(a)anthracene	0.033
Chrysene	0.052
Benzo(a)pyrene	0.054
Benzo(b)fluoranthene	0.070
Benzo(k)fluoranthene	0.018
Indeno(1,2,3-cd)pyrene	0.050
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	0.057

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SPL-SS-17	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-30 1/5
Date Analyzed:	11/17/11	Data File:	111713.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	100	50	150
Benzo(a)anthracene-d12	105	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.016
Anthracene	<0.01
Fluoranthene	0.030
Pyrene	0.036
Benz(a)anthracene	0.024
Chrysene	0.057
Benzo(a)pyrene	0.063
Benzo(b)fluoranthene	0.11
Benzo(k)fluoranthene	0.034
Indeno(1,2,3-cd)pyrene	0.10
Dibenz(a,h)anthracene	0.022
Benzo(g,h,i)perylene	0.13

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SPL-SS-18	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	111177-31 1/5
Date Analyzed:	11/18/11	Data File:	111818.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	111	50	150
Benzo(a)anthracene-d12	119	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	0.011
Acenaphthene	<0.01
Fluorene	<0.01 ca
Phenanthrene	0.027
Anthracene	<0.01
Fluoranthene	0.043
Pyrene	0.091
Benz(a)anthracene	0.034
Chrysene	0.079
Benzo(a)pyrene	0.051
Benzo(b)fluoranthene	0.060
Benzo(k)fluoranthene	0.015
Indeno(1,2,3-cd)pyrene	0.041
Dibenz(a,h)anthracene	0.015
Benzo(g,h,i)perylene	0.058

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	11/15/11	Lab ID:	01-2067 mb2 1/5
Date Analyzed:	11/17/11	Data File:	111703.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	95	50	150
Benzo(a)anthracene-d12	105	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Date of Report: 11/23/11
Date Received: 11/14/11
Project: Crownhill, PO 100094, F&BI 111177

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 111175-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	97	105	63-146	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	79-144

Date of Report: 11/23/11
Date Received: 11/14/11
Project: Crownhill, PO 100094, F&BI 111177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 111144-07-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.97	94	93	44-151	1
Lead	mg/kg (ppm)	50	18.7	115 b	93 b	65-126	21 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	97	80-120
Lead	mg/kg (ppm)	50	103	81-120

Date of Report: 11/23/11
Date Received: 11/14/11
Project: Crownhill, PO 100094, F&BI 111177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 111177-29 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	mg/kg (ppm)	50	32.5	85 b	148 b	53-123	54 b
Arsenic	mg/kg (ppm)	10	2.43	92 b	93 b	44-151	1 b
Antimony	mg/kg (ppm)	20	2.42	89	94	27-158	5
Lead	mg/kg (ppm)	50	34.3	85 b	94 b	65-126	10 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	mg/kg (ppm)	50	97	86-114
Arsenic	mg/kg (ppm)	10	94	80-120
Antimony	mg/kg (ppm)	20	89	42-156
Lead	mg/kg (ppm)	50	99	81-120

Date of Report: 11/23/11
Date Received: 11/14/11
Project: Crownhill, PO 100094, F&BI 111177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 111170-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	0.027	83	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	80	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	73	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	83	37-137
Phenanthrene	mg/kg (ppm)	0.17	0.069	88 b	45-124
Anthracene	mg/kg (ppm)	0.17	0.011	77	32-124
Fluoranthene	mg/kg (ppm)	0.17	0.10	113 b	50-125
Pyrene	mg/kg (ppm)	0.17	0.12	149 b	41-135
Benz(a)anthracene	mg/kg (ppm)	0.17	0.063	103 b	23-144
Chrysene	mg/kg (ppm)	0.17	0.083	112 b	45-122
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	0.12	119 b	31-144
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	0.033	93	45-130
Benzo(a)pyrene	mg/kg (ppm)	0.17	0.095	131 b	39-128
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	0.087	143 b	28-146
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	0.019	80	46-129
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	0.092	127 b	37-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	74	86	61-115	15
Acenaphthylene	mg/kg (ppm)	0.17	73	85	63-110	15
Acenaphthene	mg/kg (ppm)	0.17	70	83	60-115	17
Fluorene	mg/kg (ppm)	0.17	77	90	59-116	16
Phenanthrene	mg/kg (ppm)	0.17	71	85	60-113	18
Anthracene	mg/kg (ppm)	0.17	68	81	56-103	17
Fluoranthene	mg/kg (ppm)	0.17	73	88	60-116	19
Pyrene	mg/kg (ppm)	0.17	77	93	60-116	19
Benz(a)anthracene	mg/kg (ppm)	0.17	69	83	53-109	18
Chrysene	mg/kg (ppm)	0.17	73	88	61-116	19
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	77	93	57-118	19
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	74	88	61-118	17
Benzo(a)pyrene	mg/kg (ppm)	0.17	73	86	53-108	16
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	81	95	46-127	16
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	77	92	55-121	18
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	75	90	56-118	18

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

111177

SAMPLE CHAIN OF CUSTODY ME 11-14-11 BI2

Page # 1 of 4

Send Report To Dana Cannon

Company Aspect Consulting

Address 401 2nd Ave S, Suite 201

City, State, ZIP Seattle, WA 98104

Phone # (206) 328-5830 Fax # (206) 838-5853

SAMPLERS *(signature)* Molly Ravits

PROJECT NAME/NO. Crownhill

PO # 100094

REMARKS

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NWTPH-Dx	Lead and Arsenic	PAHs	Antimony	Copper						Notes
PCA-SS-1	01	11/11/11	0910	Soil	1		X									
PCA-SS-2	02	"	0915	"	1		X									
PCA-SS-3	03		0920		1		X									
PCA-SS-4	04		0925		1		X									
PCA-SS-5	05		0930		1		X									
PCA-SS-6	06		0935		1		X									
PCA-SS-7	07		0940		1		X									
PCA-SS-8	08		0945		1		X									
PCA-SS-9	09		0950		1		X									
PCA-SS-10	10	↓	0955	↓	1		X									

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Molly Ravits	Molly Ravits	Aspect	11/14/11	1100
Received by: Dave	Dave	F&BE	11	13:45
Relinquished by:		Samples received at 4 °C		
Received by:		Samples received at [illegible] °C		

SAMPLE CHAIN OF CUSTODY

Send Report To Dana Cannon

SAMPLERS *(signature)*

Page # 1 of 24

TURNAROUND TIME

111177

Company Aspect Consulting

Address 401 2nd Ave S, Suite 201

City, State, ZIP Seattle, WA 98104

Phone # (206) 328-5830 Fax # (206) 838-5853

PROJECT NAME/NO.	PO #
ME-11-4-11 Crownhill	100094

REMARKS

☒ Standard (2 Weeks) BI 2
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NWTPH-Dx	Lead and Arsenic	PAHs	Antimony	Copper						Notes
PCA-SS-11	11	11/11/11	10:00	Soil	1		X									
PCA-SS-12	12	"	10 05	"	1		X									
PCA-SS-13	13	"	10:10	"	1		X									
SPL-SS-1	14		1025		1		X									
SPL-SS-2	15		1030		1		X									
SPL-SS-3	16		1035		1		X									
SPL-SS-4	17		1040		1		X									
SPL-SS-5	18		1045		1		X									
SPL-SS-6	19		1050		1		X									
SPL-SS-7	20	"	1055	"	1		X									

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3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ravits	Molly Ravits	Aspect	11/14/11	1100
Received by:	Dana	DO DO	F&BI	"	13:45
Relinquished by:					
Received by:			Samples received at 4 °C		

SAMPLE CHAIN OF CUSTODY

Send Report To Dana Cannon

Company Aspect Consulting

SAMPLERS (signature) Molly Ravits	
PROJECT NAME/NO.	PO #

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH

111177

Address 401 2nd Ave S, Suite 201

City, State, ZIP Seattle, WA 98104

Phone # (206) 328-5830 Fax # (206) 838-5853

Crownhill | 100094

REMARKS ME 11-14-11 BIZ

Rush charges authorized by:

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NWTPH-Dx	Lead and Arsenic	PAHs	Antimony	Copper						Notes
SPL-SS-8	21	11/11/11	1100	Soil	1		X									
SPL-SS-9	22		1105		1		X									
SPL-SS-10	23		1110		1		X									
SPL-SS-11	24		1111		1		X									
SPL-SS-12	25		1115		1		X									
SPL-SS-13	26		1120		1		X									
SPL-SS-14	27 A-B		1125		2	X	X	X	X	X						
SPL-SS-15	28 A-B		1130		2	X	X	X	X	X						
SPL-SS-16	29		1135		1		X									
SPL-SS-17	30 A-B		1140		2	X	X	X	X	X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ravits	Molly Ravits	Aspect	11/14/11	1100
Received by:	Dana	DD VO	F&BI	11	13-45
Relinquished by:					
Received by:					

Samples received at 4 °C

SAMPLE CHAIN OF CUSTODY

Send Report To Dana Cannon

Company Aspect Consulting

Address 401 2nd Ave S, Suite 201

SAMPLERS *(signature)* Molly Ravits

PROJECT NAME/NO.	PO #
Crownhill	100094

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH

Rush charges authorized by:

111177

City, State, ZIP Seattle, WA 98104

Phone # (206) 328-5830 Fax # (206) 838-5853

REMARKS ME 11-14-11 BI

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NWTPH-Dx	Lead and Arsenic	PAHs	Antimony	Copper						Notes
SPL-SS-18	31 A-B	11/11/11	1145	soil	2		X	X	X	X						
SPL-SS-19	32	"	1150	"	1		X									
SPL-SS-20	33	"	1155	"	1		X									
SPL-SS-21	34	"	1200	"	1		X									
SPL-SS-22	35	"	1205	"	1		X									

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Seattle, WA 98119-2029
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Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ravits	Molly Ravits	Aspect	11/14/11	1100
Received by:	Dana	DD VB	F+BI	11	13-45
Relinquished by:					
Received by:					

Samples received at 4 °C

SAMPLE CHAIN OF CUSTODY

Send Report To Dana Cannon

Company Aspect Consulting

Address 401 2nd Ave S, Suite 201

SAMPLERS *(signature)* Molly Ravits

PROJECT NAME/NO.	PO #
Crownhill	100094

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH

Rush charges authorized by:

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

December 15, 2011

Dana Cannon, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the additional results from the testing of material submitted on November 14, 2011 from the Crownhill, PO 100094, F&BI 111177 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman, Bob Hanford
ASP1215R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 14, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill, PO 100094, F&BI 111177 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
111177 -01	PCA-SS-1
111177 -02	PCA-SS-2
111177 -03	PCA-SS-3
111177 -04	PCA-SS-4
111177 -05	PCA-SS-5
111177 -06	PCA-SS-6
111177 -07	PCA-SS-7
111177 -08	PCA-SS-8
111177 -09	PCA-SS-9
111177 -10	PCA-SS-10
111177 -11	PCA-SS-11
111177 -12	PCA-SS-12
111177 -13	PCA-SS-13
111177 -14	SPL-SS-1
111177 -15	SPL-SS-2
111177 -16	SPL-SS-3
111177 -17	SPL-SS-4
111177 -18	SPL-SS-5
111177 -19	SPL-SS-6
111177 -20	SPL-SS-7
111177 -21	SPL-SS-8
111177 -22	SPL-SS-9
111177 -23	SPL-SS-10
111177 -24	SPL-SS-11
111177 -25	SPL-SS-12
111177 -26	SPL-SS-13
111177 -27	SPL-SS-14
111177 -28	SPL-SS-15
111177 -29	SPL-SS-16
111177 -30	SPL-SS-17
111177 -31	SPL-SS-18
111177 -32	SPL-SS-19
111177 -33	SPL-SS-20
111177 -34	SPL-SS-21
111177 -35	SPL-SS-22

All quality control requirements were acceptable.

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SPL-SS-15	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	12/09/11	Lab ID:	111177-28
Date Analyzed:	12/13/11	Data File:	111177-28.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	93	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	92.2	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SPL-SS-17	Client:	Aspect Consulting, LLC
Date Received:	11/14/11	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	12/09/11	Lab ID:	111177-30
Date Analyzed:	12/13/11	Data File:	111177-30.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	88	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	7.33	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Crownhill, PO 100094, F&BI 111177
Date Extracted:	12/09/11	Lab ID:	I1-836 mb
Date Analyzed:	12/13/11	Data File:	I1-836 mb.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	93	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Date of Report: 12/15/11
Date Received: 11/14/11
Project: Crownhill, PO 100094, F&BI 111177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS USING EPA METHOD 200.8 AND 40 CFR PART 261

Laboratory Code: 111177-28 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	92.2	131 b	996 b	50-150	154 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	95	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

111177

SAMPLE CHAIN OF CUSTODY ME 11-14-11 BI2

Page # 1 of 4

Send Report To Dana Cannon

Company Aspect Consulting

Address 401 2nd Ave S, Suite 201

City, State, ZIP Seattle, WA 98104

Phone # (206) 328-5830 Fax # (206) 838-5853

SAMPLERS *(signature)* Molly Ravits

PROJECT NAME/NO. Crownhill

PO # 100094

REMARKS

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NWTPH-Dx	Lead and Arsenic	PAHs	Antimony	Copper						Notes
PCA-SS-1	01	11/11/11	0910	soil	1		X									
PCA-SS-2	02		0915		1		X									
PCA-SS-3	03		0920		1		X									
PCA-SS-4	04		0925		1		X									
PCA-SS-5	05		0930		1		X									
PCA-SS-6	06		0935		1		X									
PCA-SS-7	07		0940		1		X									
PCA-SS-8	08		0945		1		X									
PCA-SS-9	09		0950		1		X									
PCA-SS-10	10		0955		1		X									

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ravits	Molly Ravits	Aspect	11/14/11	1100
Received by:	Dave	Dave	F&BI	11	13:45
Relinquished by:					
Received by:			Samples received at 4 °C		

SAMPLE CHAIN OF CUSTODY

Page # 1 of 2

Send Report To Dana Cannon

SAMPLERS *(signature)*

TURNAROUND TIME

11177

Company Aspect Consulting

Address 401 2nd Ave S, Suite 201

City, State, ZIP Seattle, WA 98104

Phone # (206) 328-5830 Fax # (206) 838-5853

PROJECT NAME/NO.	PO #
ME-11-4-11 Crownhill	100094

REMARKS

☒ Standard (2 Weeks) BL2
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NWTPH-Dx	Lead and Arsenic	PAHs	Antimony	Copper						Notes
PCA-SS-11	11	11/11/11	10:00	Soil	1		X									
PCA-SS-12	12	"	1005	"	1		X									
PCA-SS-13	13	"	1010	"	1		X									
SPL-SS-1	14		1025		1		X									
SPL-SS-2	15		1030		1		X									
SPL-SS-3	16		1035		1		X									
SPL-SS-4	17		1040		1		X									
SPL-SS-5	18		1045		1		X									
SPL-SS-6	19		1050		1		X									
SPL-SS-7	20	"	1055	"	1		X									

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044
FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ranits	Molly Ranits	Aspect	11/14/11	1100
Received by:	Dana	DO DO	F&BI	"	13:45
Relinquished by:					
Received by:			Samples received at 4 °C		

SAMPLE CHAIN OF CUSTODY

Send Report To Dana Cannon

Company Aspect Consulting

SAMPLERS (signature) Molly Ranits	
PROJECT NAME/NO.	PO #

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH

111177

Address 401 2nd Ave S, Suite 201

City, State, ZIP Seattle, WA 98104

Phone # (206) 328-5830 Fax # (206) 838-5853

Crownhill | 100094

REMARKS ME 11-14-11 BIZ

Rush charges authorized by:

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NWTPH-Dx	Lead and Arsenic	PAHs	Antimony	Copper	TCLP-Pb					Notes
SPL-SS-8	21	11/11/11	1100	Soil	1		X									⊗-per BH 12/9/11
SPL-SS-9	22		1105		1		X									
SPL-SS-10	23		1110		1		X									
SPL-SS-11	24		1111		1		X									
SPL-SS-12	25		1115		1		X									
SPL-SS-13	26		1120		1		X									
SPL-SS-14	27 A-B		1125		2	X	X	X	X	X						
SPL-SS-15	28 A-B		1130		2	X	X	X	X	X	⊗					
SPL-SS-16	29		1135		1		X									
SPL-SS-17	30 A-B	↓	1140	↓	2	X	X	X	X	X	⊗					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ravits	Molly Ravits	Aspect	11/14/11	1100
Received by:	Dana	DA VO	F&BI	11	13-41
Relinquished by:					
Received by:					

Samples received at 4 °C

SAMPLE CHAIN OF CUSTODY

Send Report To Dana Cannon

Company Aspect Consulting

Address 401 2nd Ave S, Suite 201

SAMPLERS *(signature)* Molly Ravits

PROJECT NAME/NO.	PO #
Crownhill	100094

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH

Rush charges authorized by:

111177

City, State, ZIP Seattle, WA 98104

Phone # (206) 328-5830 Fax # (206) 838-5853

REMARKS ME 11-14-11 PIZ

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NWTPH-Dx	Lead and Arsenic	PAHs	Antimony	Copper						Notes
SPL-SS-18	31 A-B	11/11/11	1145	SOIL	2		X	X	X	X						
SPL-SS-19	32	"	1150	"	1		X									
SPL-SS-20	33		1155		1		X									
SPL-SS-21	34		1200		1		X									
SPL-SS-22	35	↓	1205	↓	1		X									

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3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Molly Ravits	Molly Ravits	Aspect	11/14/11	1100
Received by:	Dano	DO VO	F+BI	11	13.45
Relinquished by:					
Received by:					

Samples received at 4 °C

SAMPLE CHAIN OF CUSTODY

Send Report To Dana Cannon

Company Aspect Consulting

Address 401 2nd Ave S, Suite 201

SAMPLERS (signature) Molly Ravits	
PROJECT NAME/NO. Crownhill	PO # 100094

Page # 4 of 4

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH

Rush charges authorized by:

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 3, 2012

Doug Hillman, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Hillman:

Included are the results from the testing of material submitted on December 23, 2011 from the Crown Hill 100094, F&BI 112353 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0103R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 23, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crown Hill 100094, F&BI 112353 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
112353 -01	MW-10-135
112353 -02	MW-11-20
112353 -03	MW-11-70
112353 -04	MW-11-135
112353 -05	MW-8-122311

All quality control requirements were acceptable.

Date of Report: 01/03/12
Date Received: 12/23/11
Project: Crown Hill 100094, F&BI 112353
Date Extracted: 12/28/11
Date Analyzed: 12/29/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-10-135 112353-01	<50	<250	116
MW-11-20 112353-02	<50	<250	110
MW-11-70 112353-03	<50	<250	110
MW-11-135 112353-04	<50	<250	109
Method Blank 01-2298 MB	<50	<250	120

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-135	Client:	Aspect Consulting, LLC
Date Received:	12/23/11	Project:	Crown Hill 100094, F&BI 112353
Date Extracted:	12/28/11	Lab ID:	112353-01
Date Analyzed:	12/28/11	Data File:	112353-01.025
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-20	Client:	Aspect Consulting, LLC
Date Received:	12/23/11	Project:	Crown Hill 100094, F&BI 112353
Date Extracted:	12/28/11	Lab ID:	112353-02
Date Analyzed:	12/28/11	Data File:	112353-02.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.72
Lead	4.43

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-70	Client:	Aspect Consulting, LLC
Date Received:	12/23/11	Project:	Crown Hill 100094, F&BI 112353
Date Extracted:	12/28/11	Lab ID:	112353-03
Date Analyzed:	12/28/11	Data File:	112353-03.027
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	3.29

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-135	Client:	Aspect Consulting, LLC
Date Received:	12/23/11	Project:	Crown Hill 100094, F&BI 112353
Date Extracted:	12/28/11	Lab ID:	112353-04
Date Analyzed:	12/28/11	Data File:	112353-04.028
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.44

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill 100094, F&BI 112353
Date Extracted:	12/28/11	Lab ID:	I1-863 mb
Date Analyzed:	12/28/11	Data File:	I1-863 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 01/03/12
Date Received: 12/23/11
Project: Crown Hill 100094, F&BI 112353

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 112356-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	106	63-146	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	79-144

Date of Report: 01/03/12
Date Received: 12/23/11
Project: Crown Hill 100094, F&BI 112353

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 112320-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	10.9	91 b	88 b	44-151	3 b
Lead	mg/kg (ppm)	50	10.7	106 b	106 b	65-126	0 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	99	80-120
Lead	mg/kg (ppm)	50	103	81-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

112353

SAMPLE CHAIN OF CUSTODY ME 12/23/11

DOI 1

Page # 1 of 1

Send Report To Doug Hillman

Company Aspect Consulting

Address dhillman@aspectconsulting.com

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill 100097

PO#

REMARKS

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	AS	Pb					Notes
						ANALYSES REQUESTED												
MW-10-135	01	12/21/11	1240	Soil	1	X						X	X					
MW-11-20	02	12/22/11	1300	"	1	X						X	X					
MW-11-70	03	12/22/11	1400	Soil	1	X						X	X					
MW-11-135	04	12/22/11	1530	"	1	X						X	X					
~~MW-8-122211~~		~~12/22/11~~																MV
MW-8-122311	05	12/23/11	1330	water	1													hold for instructions

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Amy Tice	Aspect Consulting	12/23/2011	1543
Received by:	Yelena Aravkina	F&B, Inc.	12/23/11	15:45
Relinquished by:				
Received by:		Samples received at 5 °C		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 5, 2012

Doug Hillman, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Hillman:

Included are the results from the testing of material submitted on December 21, 2011 from the Crownhill 100094, F&BI 112312 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0104R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 21, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 112312 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
112312 -01	MW-9-15
112312 -02	MW-9-75
112312 -03	MW-9-120
112312 -04	MW-8-20
112312 -05	MW-8-80
112312 -06	MW-8-110
112312 -07	MW-10-5
112312 -08	MW-10-70

The hydrocarbon fuel scan report for samples MW-9-15 and MW-8-110 will follow in a separate report.

All quality control requirements were acceptable.

Date of Report: 01/05/12
Date Received: 12/21/11
Project: Crownhill 100094, F&BI 112312
Date Extracted: 12/23/11
Date Analyzed: 12/24/11 and 01/04/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-9-15 112312-01	70 x	<250	90
MW-9-75 112312-02	<50	<250	100
MW-9-120 112312-03	62 x	<250	99
MW-8-20 112312-04	<50	<250	98
MW-8-80 112312-05	<50	<250	91
MW-8-110 112312-06	5,900	4,900	107
MW-10-5 112312-07	<50	<250	100
MW-10-70 112312-08	<50	<250	90
Method Blank 01-2261 MB	<50	<250	97

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-15	Client:	Aspect Consulting, LLC
Date Received:	12/21/11	Project:	Crownhill 100094, F&BI 112312
Date Extracted:	12/28/11	Lab ID:	112312-01
Date Analyzed:	12/28/11	Data File:	112312-01.011
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.73
Lead	7.52

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-75	Client:	Aspect Consulting, LLC
Date Received:	12/21/11	Project:	Crownhill 100094, F&BI 112312
Date Extracted:	12/28/11	Lab ID:	112312-02
Date Analyzed:	12/28/11	Data File:	112312-02.012
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-120	Client:	Aspect Consulting, LLC
Date Received:	12/21/11	Project:	Crownhill 100094, F&BI 112312
Date Extracted:	12/28/11	Lab ID:	112312-03
Date Analyzed:	12/28/11	Data File:	112312-03.013
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-20	Client:	Aspect Consulting, LLC
Date Received:	12/21/11	Project:	Crownhill 100094, F&BI 112312
Date Extracted:	12/28/11	Lab ID:	112312-04
Date Analyzed:	12/28/11	Data File:	112312-04.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.49
Lead	37.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-80	Client:	Aspect Consulting, LLC
Date Received:	12/21/11	Project:	Crownhill 100094, F&BI 112312
Date Extracted:	12/28/11	Lab ID:	112312-05
Date Analyzed:	12/28/11	Data File:	112312-05.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.06

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-110	Client:	Aspect Consulting, LLC
Date Received:	12/21/11	Project:	Crownhill 100094, F&BI 112312
Date Extracted:	12/28/11	Lab ID:	112312-06
Date Analyzed:	12/28/11	Data File:	112312-06.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	89	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.03
Lead	6.89

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-5	Client:	Aspect Consulting, LLC
Date Received:	12/21/11	Project:	Crownhill 100094, F&BI 112312
Date Extracted:	12/28/11	Lab ID:	112312-07
Date Analyzed:	12/28/11	Data File:	112312-07.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.08
Lead	1.36

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-70	Client:	Aspect Consulting, LLC
Date Received:	12/21/11	Project:	Crownhill 100094, F&BI 112312
Date Extracted:	12/28/11	Lab ID:	112312-08
Date Analyzed:	12/28/11	Data File:	112312-08.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	1.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 112312
Date Extracted:	12/28/11	Lab ID:	I1-863 mb
Date Analyzed:	12/28/11	Data File:	I1-863 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	88	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 01/05/12
Date Received: 12/21/11
Project: Crownhill 100094, F&BI 112312

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 112312-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	94	101	73-135	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	74-139

Date of Report: 01/05/12
Date Received: 12/21/11
Project: Crownhill 100094, F&BI 112312

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 112320-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	10.9	91 b	88 b	44-151	3 b
Lead	mg/kg (ppm)	50	10.7	106 b	106 b	65-126	0 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	99	80-120
Lead	mg/kg (ppm)	50	103	81-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

112312 ME 12-21-11 D02

SAMPLE CHAIN OF CUSTODY

Send Report To Doug Hillman
Company Aspect Consulting
Address dhillman@aspectconsulting.com
City, State, ZIP
Phone # Fax #

SAMPLERS (*signature*)
PROJECT NAME/NO. Crownhill 100094
PO#
REMARKS

Page # 1 of

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel X	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Pb	Total As	HFS				Notes
MW-9-15	01	12-19-2011	0920	SOIL	1	X						X	X	★				★ per MVA 12/28/11 MG
MW-9-75	02	↓	1040	↓	1	X						X	X					
MW-9-120	03	↓	1150	↓	1	X						X	X					
MW-8-20	04	12-20-2011	0950	↓	1	X						X	X					
MW-8-80	05	↓	1120	↓	1	X						X	X					
MW-8-110	06	↓	1200	↓	1	X						X	X	★				
MW-10-5	07	12/21/11	0940	↓	1	X						X	X					
MW-10-70	08		1130	↓	1	X						X	X					

Samples received at 2 °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Matthew von der Ahe	Aspect Consulting	12.21.11	1:35 PM
Received by: Larry J Jackson	Larry J Jackson	AX	12-21-11	2:10
Relinquished by:				
Received by: [signature]	Dovo	F&BI	12-21-11	15:05

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 6, 2012

Doug Hillman, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Hillman:

Included are the results from the testing of material submitted on December 28, 2011 from the 100094 Crown Hill, F&BI 112368 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0106R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 28, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC 100094 Crown Hill, F&BI 112368 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
112368 -01	NG-M4b-1-2.5
112368 -02	NG-M4b-6.5-7
112368 -03	NG-M4b-12-13.5

All quality control requirements were acceptable.

Date of Report: 01/06/12
Date Received: 12/28/11
Project: 100094 Crown Hill, F&BI 112368
Date Extracted: 12/29/11
Date Analyzed: 12/29/11

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
NG-M4b-1-2.5 112368-01	290	1,200	106
NG-M4b-6.5-7 112368-02	<50	<250	98
NG-M4b-12-13.5 112368-03	<50	<250	99
Method Blank 01-2304 MB	<50	<250	105

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M4b-1-2.5	Client:	Aspect Consulting, LLC
Date Received:	12/28/11	Project:	100094 Crown Hill, F&BI 112368
Date Extracted:	12/30/11	Lab ID:	112368-01
Date Analyzed:	12/30/11	Data File:	112368-01.012
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.72
Lead	21.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M4b-6.5-7	Client:	Aspect Consulting, LLC
Date Received:	12/28/11	Project:	100094 Crown Hill, F&BI 112368
Date Extracted:	12/30/11	Lab ID:	112368-02
Date Analyzed:	12/30/11	Data File:	112368-02.013
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	91	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.85
Lead	2.87

Analysis For Total Metals By EPA Method 200.8

Client ID:	NG-M4b-12-13.5	Client:	Aspect Consulting, LLC
Date Received:	12/28/11	Project:	100094 Crown Hill, F&BI 112368
Date Extracted:	12/30/11	Lab ID:	112368-03
Date Analyzed:	12/30/11	Data File:	112368-03.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.88
Lead	2.06

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	100094 Crown Hill, F&BI 112368
Date Extracted:	12/29/11	Lab ID:	I1-867 mb
Date Analyzed:	12/30/11	Data File:	I1-867 mb.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	90	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 01/06/12
Date Received: 12/28/11
Project: 100094 Crown Hill, F&BI 112368

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 112368-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	95	94	73-135	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	74-139

Date of Report: 01/06/12
Date Received: 12/28/11
Project: 100094 Crown Hill, F&BI 112368

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 112390-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	5.41	94 b	95 b	44-151	1 b
Lead	mg/kg (ppm)	50	1,010	631 b	504 b	65-126	22 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	96	80-120
Lead	mg/kg (ppm)	50	104	81-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

112368

SAMPLE CHAIN OF CUSTODY

ME 12/28/11

AI

Page # _____ of _____

Send Report To Doug Hillman

Company Aspect Consulting

Address _____

City, State, ZIP _____

Phone # _____ Fax # _____

SAMPLERS *(signature)* MLM

PROJECT NAME/NO. 100094 Crown Hill

PO# _____

REMARKS

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH _____
Rush charges authorized by _____

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel X	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	As	Pb					Notes
NG-M4b-1-2.5	01	12/27/11	1000	S	1	X						X	X					
NG-M4b-6.5-7	02	"	1010	"	1	X						X	X					
NG-M4b-12-13.5	03	"	1020	"	1	X						X	X					
																		Samples received at 6 °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	MLM	Matthew vanden Ahe	Aspect Consulting	12/27/11	16:16
Received by:	RMelson	R. NELSON	CHAMPION	12-28-11	850
Relinquished by:	RMelson	R. NELSON	CHAMPION	12-28-11	910
Received by:	Nhan Pham	Nhan Pham	FEBT	12/28/11	0915

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 31, 2012

Doug Hillman, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Hillman:

Included are the results from the additional testing of material submitted on December 21, 2011 from the Crownhill 100094, F&BI 112312 project.

The sample MW-8-110 was extracted and analyzed using a gas chromatograph with a flame ionization detector (GC/FID). The data generated yielded information on the boiling range and general chemical composition of the material present. The GC/FID traces are enclosed. A GC/FID trace of a standard consisting of normal alkanes is also provided for reference purposes.

Please contact us if additional consultation is needed by our firm in the interpretation of the analytical results provided. We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

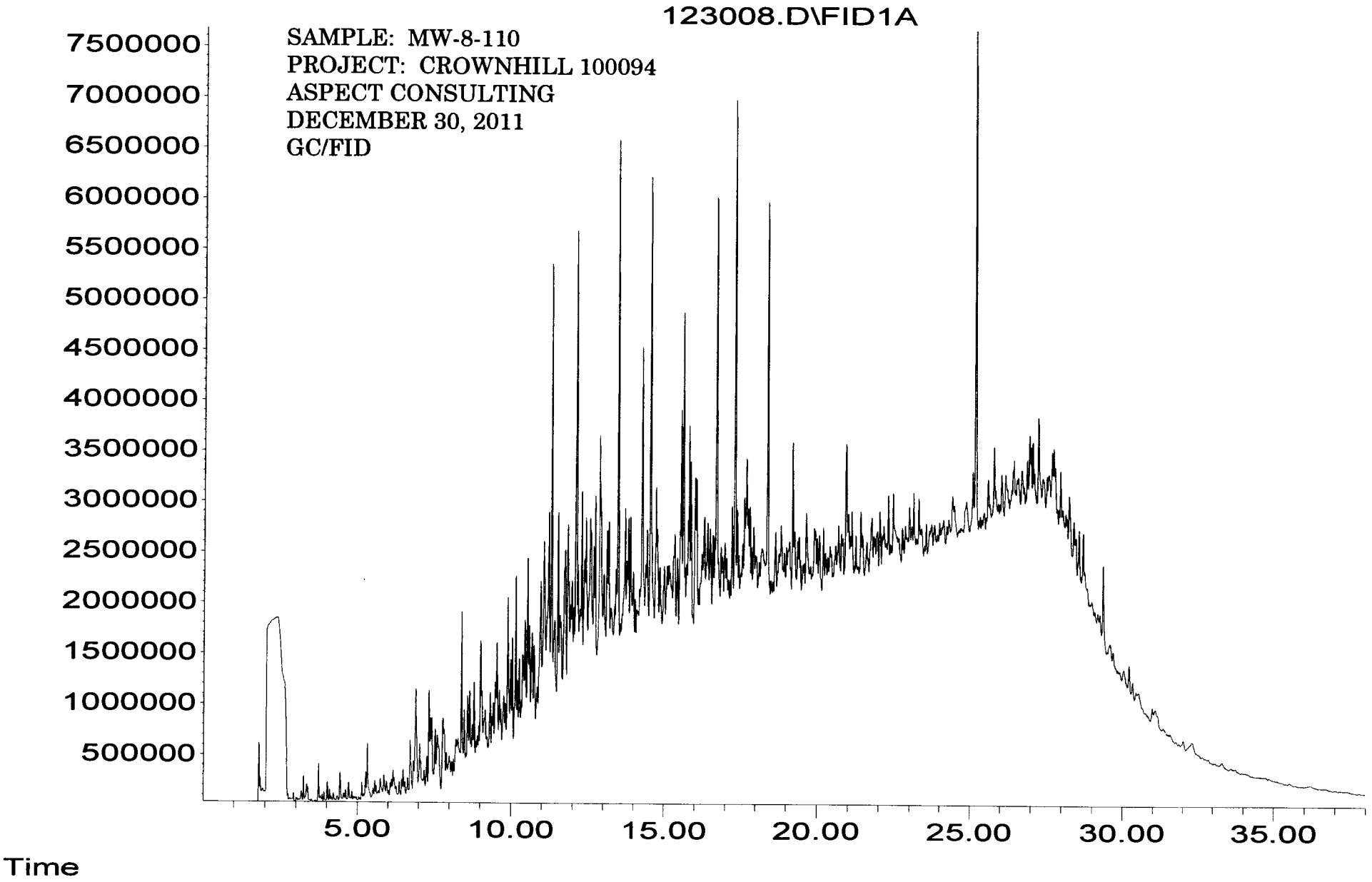
Kurt Johnson
Chemist

Enclosures
mcp/KJ
c: data@aspectconsulting.com, Parker Wittman
ASP0131R.DOC

Date of Report: 01/31/12
Date Received: 12/21/11
Project: Crownhill 100094, F&BI 112312
Date Extracted: 12/30/11
Date Analyzed: 12/30/11

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLE FOR FORENSIC EVALUATION BY CAPILLARY GAS CHROMATOGRAPHY USING A FLAME IONIZATION DETECTOR (FID)

Sample ID	GC Characterization
MW-8-110	The GC trace using the flame ionization detector (FID) showed the presence of medium to high boiling compounds. The patterns displayed by these peaks are indicative of a high boiling product such as diesel fuel No. 4, diesel fuel No. 6, Bunker C, or similar materials. The medium to high boiling compounds appear as an irregular pattern of peaks on top of a broad hump or unresolved complex mixture (UCM). This material elutes from *n*-C_8 to beyond *n*-C_{36} showing a maximum near *n*-C_{29}. This correlates with a temperature range of approximately 130°C to beyond 500°C with a maximum near 440°C. Within this range, the dominant peaks present are indicative of isoprenoids including norpristane, pristane, and phytane. A discernible pattern of peaks characteristic of the normal alkanes was not present. The abundance of isoprenoids in conjunction with the apparent absence of normal alkanes indicates that the fuel present has undergone substantial biological degradation. The large peak seen near 25 minutes on the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis.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SAMPLE: MW-8-110
PROJECT: CROWNHILL 100094
ASPECT CONSULTING
DECEMBER 30, 2011
GC/FID
7500000
7000000
6500000
6000000
5500000
5000000
4500000
4000000
3500000
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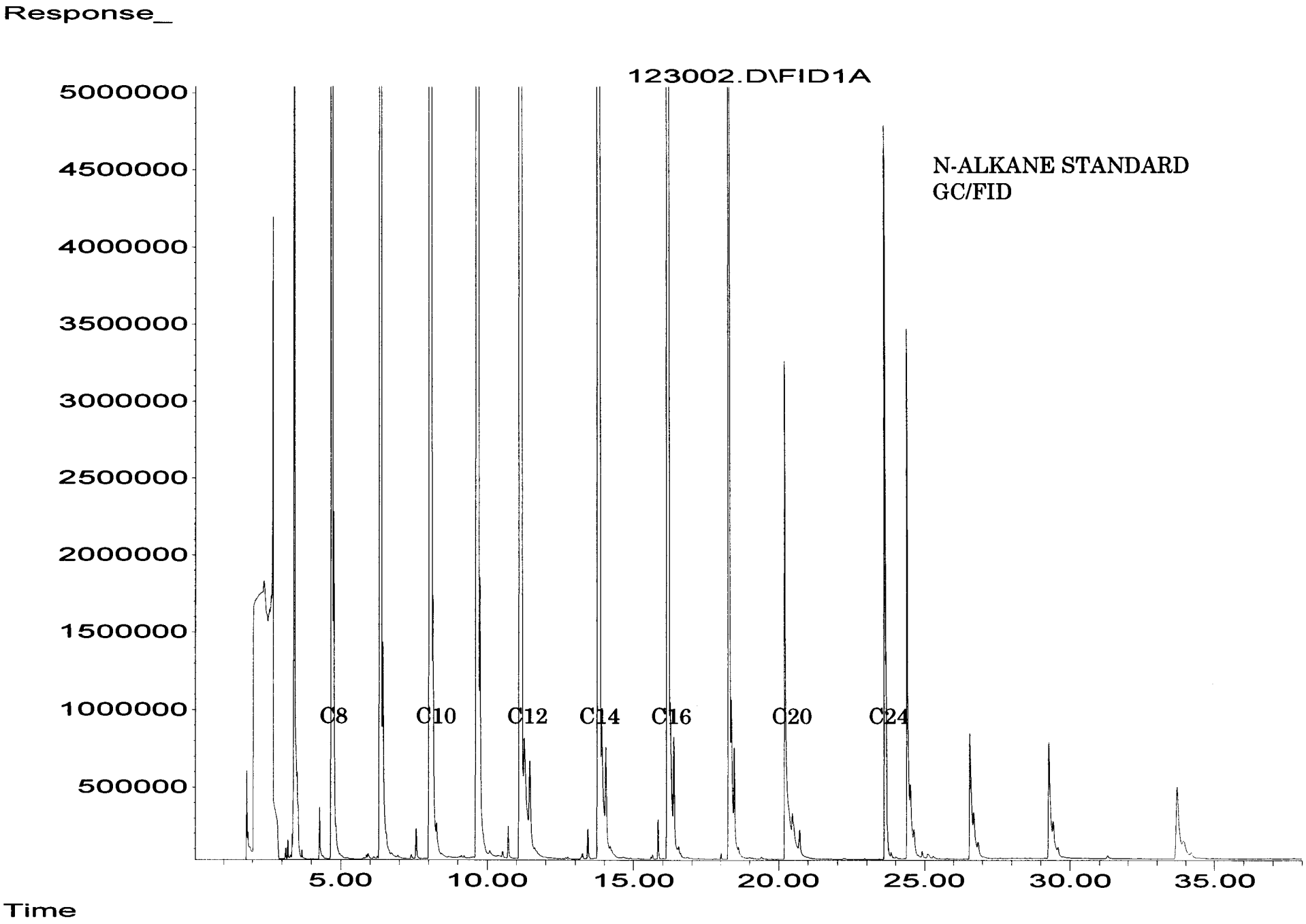
Time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1000000
500000
N-ALKANE STANDARD
GC/FID
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C10
C12
C14
C16
C20
C24
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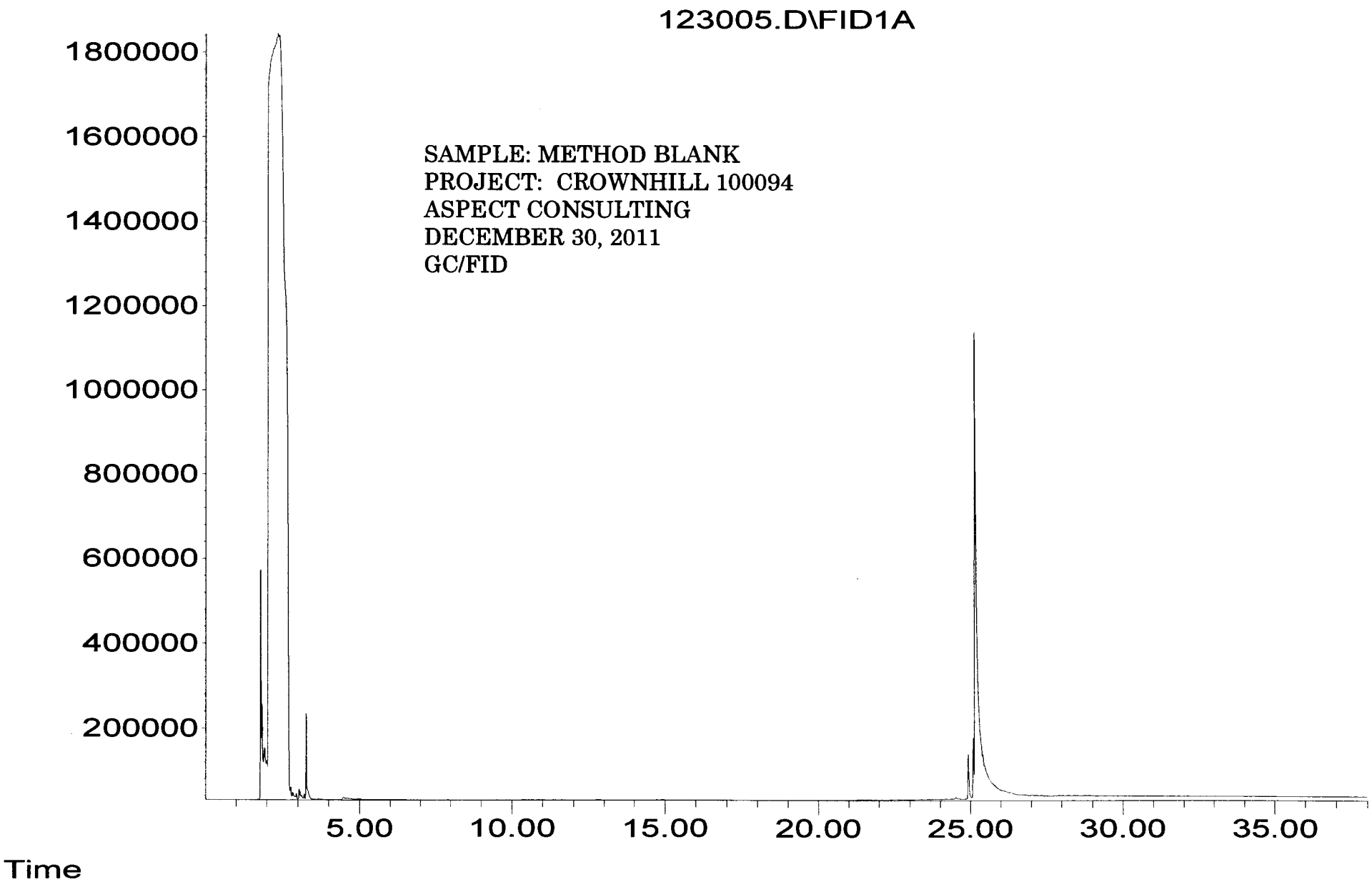
Time


Response_
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1600000
1400000
1200000
1000000
800000
600000
400000
200000
SAMPLE: METHOD BLANK
PROJECT: CROWNHILL 100094
ASPECT CONSULTING
DECEMBER 30, 2011
GC/FID
5.00
10.00
15.00
20.00
25.00
30.00
35.00
Time

12-3-12 | 12-21-11 | 002

SAMPLE CHAIN OF CUSTODY

Page # 1 of

Send Report To Doug Hillman
Company Aspect Consulting
Address dhillman@aspectconsulting.com
City, State, ZIP
Phone # Fax #

SAMPLERS (signature)
PROJECT NAME/NO. Crownhill 100094
PO#
REMARKS

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel X	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Pb	Total As	HFS				Notes
MW-9-15	01	12-19-2011	0920	SOIL	1	X						*	X	*	Via	1/30/12		* per MVA
MW-9-75	02	"	1040	"	1	X						X	X					12/28/11
MW-9-120	03	↓	1150	↓	1	X						X	X					NG
MW-8-20	04	12-20-2011	0950		1	X						X	X					
MW-8-80	05		1120		1	X						X	X					
MW-8-110	06	↓	1200	↓	1	X						X	X	*				
MW-10-5	07	12/21/11	0940		1	X						X	X					
MW-10-70	08		1130	↓	1	X						X	X					
																		Samples received at 21 °C

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Matthew Vander Ark	Aspect Consulting	12-21-11	1:35 PM
Received by:	Lacey J Rebson	Lacey J Rebson	PX	12-21-11	2:10
Relinquished by:					
Received by:		DAVID	F+BE	12-21-11	15:05

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 1, 2012

Dave Heffner, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Heffner:

Included are the results from the testing of material submitted on October 26, 2012 from the Crownhill 100094, F&BI 210483 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP1101R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 26, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 210483 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
210483-01	SG-J10-0-1
210483-02	SG-J11-0-1
210483-03	SG-J11-0-3

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J10-0-1	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210483
Date Extracted:	10/29/12	Lab ID:	210483-01
Date Analyzed:	10/29/12	Data File:	210483-01.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.84

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J11-0-1	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210483
Date Extracted:	10/29/12	Lab ID:	210483-02
Date Analyzed:	10/29/12	Data File:	210483-02.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.56

Analysis For Total Metals By EPA Method 200.8

Client ID:	SG-J11-0-3	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210483
Date Extracted:	10/29/12	Lab ID:	210483-03
Date Analyzed:	10/29/12	Data File:	210483-03.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Crownhill 100094, F&BI 210483
Date Extracted:	10/29/12	Lab ID:	I2-736 mb
Date Analyzed:	10/29/12	Data File:	I2-736 mb.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1

Date of Report: 11/01/12
Date Received: 10/26/12
Project: Crownhill 100094, F&BI 210483

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 210483-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.31	84	81	56-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	90	79-112

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

210483
[redacted]

SAMPLE CHAIN OF CUSTODY

ME [redacted] 10/26/12 (NP)

Page # 1 of 1 AI

Send Report To: Dave Heffner

Company: Aspect

Address: 401 2nd Ave S.

City, State, ZIP: Seattle, WA

Phone #: ______ Fax #: ______

SAMPLERS (signature): M. Revits

PROJECT NAME/NO.: Crownhill 100094

PO#:

REMARKS:

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH ______
- Rush charges authorized by ______

SAMPLE DISPOSAL
- ☒ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

						ANALYSES REQUESTED												
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	As (Method 6010)						Notes
SG-J10-0-1	01	10/26/12	1305	Soil	1							X						
SG-J11-0-1	02	↓	1330	↓	1							X						
SG-J11-0-3	03	↓	1335	↓	1							X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	M. Revits	Molly Revits	Aspect	10/26	1630
Received by:	[signature]	Matt Eystone	FBI	10/26	16/30
Relinquished by:					
Received by:			Samples received at 4 °C		

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 12, 2012

Dave Heffner, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Heffner:

Included are the results from the testing of material submitted on October 29, 2012 from the Crownhill 100094, F&BI 210497 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP1112R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 29, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 210497 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
210497-01	MW-12-41
210497-02	MW-12-61.5
210497-03	MW-12-81
210497-04	MW-12-105.5
210497-05	MW-12-115.5
210497-06	MW-13-45
210497-07	MW-13-65
210497-08	MW-13-85
210497-09	MW-13-105
210497-10	MW-14-40
210497-11	MW-14-60
210497-12	MW-14-80
210497-13	MW-14-100
210497-14	MW-15-45
210497-15	MW-15-110
210497-16	MW-16-20
210497-17	MW-16-110

All quality control requirements were acceptable.

Date of Report: 11/12/12
Date Received: 10/29/12
Project: Crownhill 100094, F&BI 210497
Date Extracted: 11/01/12
Date Analyzed: 11/01/12, 11/05/12, and 11/08/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-12-41 210497-01	3,700	4,400	101
MW-12-61.5 210497-02	<50	<250	133
MW-12-81 210497-03	<50	<250	108
MW-12-105.5 210497-04	<50	<250	133
MW-12-115.5 210497-05	<50	<250	105
MW-13-45 210497-06 1/10	14,000	15,000	120
MW-13-65 210497-07	9,300	7,500	92
MW-13-85 210497-08	3,000	3,500	89
MW-13-105 210497-09	6,400	6,200	107
MW-14-40 210497-10 1/10	21,000	40,000	99
MW-14-60 210497-11	7,300	6,900	94

Date of Report: 11/12/12
Date Received: 10/29/12
Project: Crownhill 100094, F&BI 210497
Date Extracted: 11/01/12
Date Analyzed: 11/01/12, 11/05/12, and 11/08/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-14-80 210497-12	10,000	12,000	93
MW-14-100 210497-13	330	350	137
MW-15-45 210497-14	<50	<250	134
MW-15-110 210497-15	<50	<250	133
MW-16-20 210497-16	<50	<250	108
MW-16-110 210497-17	15,000	14,000	87
Method Blank 02-2004 MB	<50	<250	132

Date of Report: 11/12/12
Date Received: 10/29/12
Project: Crownhill 100094, F&BI 210497

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 210497-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	121	123	73-135	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	121	74-139

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

210497 Dave Heffner

SAMPLE CHAIN OF CUSTODY

ME 10/29/12

Page # 1 of 2

A03

Send Report To dheffner@aspectconsulting.com

Company Aspect Consulting

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 100094 Crown Hill

PO#

REMARKS

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NW TPH-Diesel X	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
MW-12-41	01	1000	10/25/12	soil	1	X												
MW-12-61.5	02	1030																
MW-12-81	03	1100																
MW-12-105.5	04	1140																
MW-12-115.5	05	1200																
MW-13-45	06	1220	10/25/12															
MW-13-65	07	1240																
MW-13-85	08	1300																
MW-13-105	09	1320																
MW-14-40	10	0810	10/26/12															

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:					
Received by:		Nhan Phan	FEBI	10/29/12	1202
Relinquished by:			Samples received at 2 °C		
Received by:					

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210497 dheffner@aspectconsulting.com

SAMPLE CHAIN OF CUSTODY

ME 10/29/12

AC03

Page # 1 of 2

Send Report To Dave Heffner

Company Aspect Consulting

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature) MR

PROJECT NAME/NO. 100094 Cromhill

PO #

REMARKS

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: NWTPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Notes
MW-14-60	11	10/26/12	0915	S	1	X						
MW-14-80	12		0940									
MW-14-100	13		1000									NWTPH 10/29/12
MW-15-45	14		0855									* Sample label, MW-15-45-46.5
MW-15-110	15		0930									MW-15-110-110.5
MW-16-20	16		1305									MW-16-20-20.5
MW-16-110	17	↓	1425	↓	↓	↓						MW-16-110-110.5

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:				
Received by: [signature]	Nhan Phan	FEBI	10/29/12	1202
Relinquished by:				
Received by:		Samples received at 2 °C		

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

April 22, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on April 11, 2011 from the Crown Hill 100094, F&BI 104099 project. There are 50 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0422R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 11, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crown Hill 100094 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
104099-01	MW-1-040911
104099-02	MW-2-040911
104099-03	MW-4-040911
104099-04	MW-5-040911
104099-05	MW-6-040911
104099-06	MW-7-040911
104099-07	MW-8-040911

DRO/RRO by Method NWTPH-Dx, Extraction Method 3510C

The surrogate used for this analysis was o-terphenyl. All quality control requirements were acceptable.

PAHs by Method 8270D SIM, Extraction Method 3510C

All quality control requirements were acceptable.

VOCs by Method 8260B, Extraction Method 5030B

All quality control requirements were acceptable.

SVOCs by Method 8270D, Extraction Method 3510C

The 8270D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable. The 8270D SIM laboratory control sample duplicate exceeded the acceptance criteria for fluorene. The analyte was not detected therefore the data were acceptable. All other quality control requirements were acceptable.

Metals by Method 200.8, Extraction Method 200.8

The 200.8 dissolved metals matrix spike and matrix spike duplicate exceeded the acceptance criteria for arsenic. The laboratory control sample passed within the acceptance criteria, therefore the results are likely due to matrix effect. All other quality control requirements were acceptable.

Date of Report: 04/22/11
Date Received: 04/11/11
Project: Crown Hill 100094, F&BI 104099
Date Extracted: 04/12/11
Date Analyzed: 04/12/11 and 04/13/11

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 47-140)
MW-1-040911 104099-01	<50	<250	87
MW-2-040911 104099-02	<50	<250	88
MW-4-040911 104099-03	<50	<250	91
MW-5-040911 104099-04	2,100 x	310 x	94
MW-6-040911 104099-05	<50	<250	88
MW-7-040911 104099-06	<50	<250	91
MW-8-040911 104099-07	<50	<250	90
Method Blank 01-622 MB2	<50	<250	89

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-01
Date Analyzed:	04/13/11	Data File:	104099-01.042
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	93	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	4.24
Arsenic	<1
Lead	1.17

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-02
Date Analyzed:	04/13/11	Data File:	104099-02.043
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	96	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.18
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-03
Date Analyzed:	04/13/11	Data File:	104099-03.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	102	60	125
Indium	93	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	17.7
Arsenic	4.74
Lead	2.24

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-04
Date Analyzed:	04/13/11	Data File:	104099-04.045
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	94	60	125
Indium	94	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	8.41
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-05
Date Analyzed:	04/13/11	Data File:	104099-05.046
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	103	60	125
Indium	97	60	125
Holmium	100	60	125

Analyte:	Concentration ug/L (ppb)
Copper	3.91
Arsenic	4.93
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-06
Date Analyzed:	04/13/11	Data File:	104099-06.047
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	100	60	125
Indium	98	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-07
Date Analyzed:	04/13/11	Data File:	104099-07.048
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	105	60	125
Indium	101	60	125
Holmium	103	60	125

Analyte:	Concentration ug/L (ppb)
Copper	6.08
Arsenic	<1
Lead	3.47

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	I1-270 mb
Date Analyzed:	04/13/11	Data File:	I1-270 mb.025
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	101	60	125
Indium	97	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-1-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/15/11	Lab ID:	104099-01
Date Analyzed:	04/15/11	Data File:	104099-01.010
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	104	60	125
Indium	93	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-2-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/15/11	Lab ID:	104099-02
Date Analyzed:	04/15/11	Data File:	104099-02.013
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	103	60	125
Indium	98	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.41
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-4-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/15/11	Lab ID:	104099-03
Date Analyzed:	04/15/11	Data File:	104099-03.014
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	94	60	125
Holmium	91	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.58
Arsenic	3.80
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-5-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/15/11	Lab ID:	104099-04
Date Analyzed:	04/15/11	Data File:	104099-04.015
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	99	60	125
Indium	82	60	125
Holmium	92	60	125

Analyte:	Concentration ug/L (ppb)
Copper	9.50
Arsenic	1.38
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-6-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/15/11	Lab ID:	104099-05
Date Analyzed:	04/15/11	Data File:	104099-05.016
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	101	60	125
Indium	103	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.24
Arsenic	6.33
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-7-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/15/11	Lab ID:	104099-06
Date Analyzed:	04/15/11	Data File:	104099-06.018
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	101	60	125
Indium	103	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.15
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-8-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/15/11	Lab ID:	104099-07
Date Analyzed:	04/15/11	Data File:	104099-07.019
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	101	60	125
Indium	86	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/15/11	Lab ID:	I1-275 mb
Date Analyzed:	04/15/11	Data File:	I1-275 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	97	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-01
Date Analyzed:	04/13/11	Data File:	041310.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-02
Date Analyzed:	04/13/11	Data File:	041311.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	57	121
Toluene-d8	96	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-03
Date Analyzed:	04/13/11	Data File:	041312.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	70	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-04
Date Analyzed:	04/13/11	Data File:	041313.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	1.0
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	1.3	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-05
Date Analyzed:	04/13/11	Data File:	041317.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	106	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-06
Date Analyzed:	04/13/11	Data File:	041318.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	3.1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	104099-07
Date Analyzed:	04/13/11	Data File:	041319.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	106	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/13/11	Lab ID:	01-638 mb
Date Analyzed:	04/13/11	Data File:	041307.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-1-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-01
Date Analyzed:	04/18/11	Data File:	041811.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	49	10	137
Phenol-d6	33	10	100
Nitrobenzene-d5	89	11	153
2-Fluorobiphenyl	94	21	159
2,4,6-Tribromophenol	86	10	210
Terphenyl-d14	97	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-2-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-02
Date Analyzed:	04/20/11	Data File:	042006.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	46	10	137
Phenol-d6	31	10	100
Nitrobenzene-d5	82	11	153
2-Fluorobiphenyl	85	21	159
2,4,6-Tribromophenol	77	10	210
Terphenyl-d14	83	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-4-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-03
Date Analyzed:	04/18/11	Data File:	041815.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	54	10	137
Phenol-d6	37	10	100
Nitrobenzene-d5	92	11	153
2-Fluorobiphenyl	96	21	159
2,4,6-Tribromophenol	89	10	210
Terphenyl-d14	95	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-5-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-04
Date Analyzed:	04/20/11	Data File:	042007.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	48	10	137
Phenol-d6	32	10	100
Nitrobenzene-d5	87	11	153
2-Fluorobiphenyl	91	21	159
2,4,6-Tribromophenol	91	10	210
Terphenyl-d14	86	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-6-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-05
Date Analyzed:	04/20/11	Data File:	042008.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	47	10	137
Phenol-d6	31	10	100
Nitrobenzene-d5	84	11	153
2-Fluorobiphenyl	87	21	159
2,4,6-Tribromophenol	81	10	210
Terphenyl-d14	88	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-7-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-06
Date Analyzed:	04/18/11	Data File:	041812.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	50	10	137
Phenol-d6	33	10	100
Nitrobenzene-d5	90	11	153
2-Fluorobiphenyl	95	21	159
2,4,6-Tribromophenol	91	10	210
Terphenyl-d14	98	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-8-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-07
Date Analyzed:	04/18/11	Data File:	041813.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	10	137
Phenol-d6	36	10	100
Nitrobenzene-d5	90	11	153
2-Fluorobiphenyl	93	21	159
2,4,6-Tribromophenol	88	10	210
Terphenyl-d14	98	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	01-679 mb
Date Analyzed:	04/18/11	Data File:	041807.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	50	10	137
Phenol-d6	34	10	100
Nitrobenzene-d5	86	11	153
2-Fluorobiphenyl	91	21	159
2,4,6-Tribromophenol	85	10	210
Terphenyl-d14	95	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<1	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<1	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<1	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<1	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-01
Date Analyzed:	04/16/11	Data File:	041521.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	80	50	150
Benzo(a)anthracene-d12	88	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.12
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-02
Date Analyzed:	04/16/11	Data File:	041524.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	83	50	150
Benzo(a)anthracene-d12	90	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.12
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-03
Date Analyzed:	04/16/11	Data File:	041525.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	83	50	150
Benzo(a)anthracene-d12	82	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.16
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-5-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-04
Date Analyzed:	04/16/11	Data File:	041528.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	101	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-6-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-05
Date Analyzed:	04/16/11	Data File:	041526.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	83	50	150
Benzo(a)anthracene-d12	92	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.10
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-7-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-06
Date Analyzed:	04/16/11	Data File:	041522.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	84	50	150
Benzo(a)anthracene-d12	94	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.11
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-8-040911	Client:	Aspect Consulting
Date Received:	04/11/11	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	104099-07
Date Analyzed:	04/16/11	Data File:	041523.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	82	50	150
Benzo(a)anthracene-d12	89	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.11
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill 100094, F&BI 104099
Date Extracted:	04/12/11	Lab ID:	01-678 mb
Date Analyzed:	04/14/11	Data File:	041413.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	94	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Date of Report: 04/22/11
Date Received: 04/11/11
Project: Crown Hill 100094, F&BI 104099

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	104	102	61-133	2

Date of Report: 04/22/11
Date Received: 04/11/11
Project: Crown Hill 100094, F&BI 104099

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 104119-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	8.88	101 b	99 b	50-144	2 b
Arsenic	ug/L (ppb)	10	2.20	112 b	111 b	56-167	1 b
Lead	ug/L (ppb)	10	4.07	108 b	111 b	76-125	3 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	101	66-134
Arsenic	ug/L (ppb)	10	105	55-128
Lead	ug/L (ppb)	10	100	67-135

Date of Report: 04/22/11
Date Received: 04/11/11
Project: Crown Hill 100094, F&BI 104099

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 104099-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<1	101	101	50-144	0
Arsenic	ug/L (ppb)	10	<1	194 vo	168 vo	56-167	14
Lead	ug/L (ppb)	10	<1	106	107	76-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	102	66-134
Arsenic	ug/L (ppb)	10	101	55-128
Lead	ug/L (ppb)	10	105	67-135

Date of Report: 04/22/11
Date Received: 04/11/11
Project: Crown Hill 100094, F&BI 104099

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 104106-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	107	10-172
Chloromethane	ug/L (ppb)	50	<10	110	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	113	36-166
Bromomethane	ug/L (ppb)	50	<1	96	47-169
Chloroethane	ug/L (ppb)	50	<1	109	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	102	44-165
Acetone	ug/L (ppb)	250	<10	114	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	92	60-136
Methylene chloride	ug/L (ppb)	50	<5	107	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	97	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	101	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	94	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	103	71-127
Chloroform	ug/L (ppb)	50	<1	100	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	109	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	100	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	104	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	102	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	104	56-152
Benzene	ug/L (ppb)	50	<0.35	104	76-125
Trichloroethene	ug/L (ppb)	50	<1	100	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	103	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	105	61-150
Dibromomethane	ug/L (ppb)	50	<1	106	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	116	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	106	72-132
Toluene	ug/L (ppb)	50	<1	97	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	104	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	100	68-131
2-Hexanone	ug/L (ppb)	250	<10	117	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	101	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	95	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	105	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	103	69-134
Chlorobenzene	ug/L (ppb)	50	<1	99	77-122
Ethylbenzene	ug/L (ppb)	50	<1	101	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	103	73-137
m,p-Xylene	ug/L (ppb)	100	<2	102	69-135
o-Xylene	ug/L (ppb)	50	<1	106	68-137
Styrene	ug/L (ppb)	50	<1	107	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	107	65-142
Bromoform	ug/L (ppb)	50	<1	111	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	106	58-144
Bromobenzene	ug/L (ppb)	50	<1	106	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	104	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	106	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	105	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	105	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	105	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	106	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	104	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	102	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	102	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	100	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	97	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	99	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	100	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	103	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	95	60-143
Naphthalene	ug/L (ppb)	50	<1	108	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	103	69-148

Date of Report: 04/22/11
Date Received: 04/11/11
Project: Crown Hill 100094, F&BI 104099

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	113	94	25-158	18
Chloromethane	ug/L (ppb)	50	107	96	45-156	11
Vinyl chloride	ug/L (ppb)	50	102	110	50-154	8
Bromomethane	ug/L (ppb)	50	80	87	55-143	8
Chloroethane	ug/L (ppb)	50	88	96	58-146	9
Trichlorofluoromethane	ug/L (ppb)	50	84	87	50-150	4
Acetone	ug/L (ppb)	250	109	102	60-155	7
1,1-Dichloroethene	ug/L (ppb)	50	86	90	67-136	5
Methylene chloride	ug/L (ppb)	50	98	101	39-148	3
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	104	97	64-147	7
trans-1,2-Dichloroethene	ug/L (ppb)	50	98	98	68-128	0
1,1-Dichloroethane	ug/L (ppb)	50	98	98	79-121	0
2,2-Dichloropropane	ug/L (ppb)	50	101	104	55-143	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	103	102	80-123	1
Chloroform	ug/L (ppb)	50	96	95	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	110	106	57-149	4
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	91	90	73-132	1
1,1,1-Trichloroethane	ug/L (ppb)	50	93	96	83-130	3
1,1-Dichloropropene	ug/L (ppb)	50	101	101	77-129	0
Carbon tetrachloride	ug/L (ppb)	50	95	95	75-158	0
Benzene	ug/L (ppb)	50	103	102	69-134	1
Trichloroethene	ug/L (ppb)	50	95	95	80-120	0
1,2-Dichloropropane	ug/L (ppb)	50	103	102	77-123	1
Bromodichloromethane	ug/L (ppb)	50	100	99	81-133	1
Dibromomethane	ug/L (ppb)	50	103	101	82-125	2
4-Methyl-2-pentanone	ug/L (ppb)	250	116	110	70-140	5
cis-1,3-Dichloropropene	ug/L (ppb)	50	108	107	82-132	1
Toluene	ug/L (ppb)	50	96	97	72-122	1
trans-1,3-Dichloropropene	ug/L (ppb)	50	104	104	80-136	0
1,1,2-Trichloroethane	ug/L (ppb)	50	99	99	75-124	0
2-Hexanone	ug/L (ppb)	250	117	113	64-152	3
1,3-Dichloropropane	ug/L (ppb)	50	99	100	76-126	1
Tetrachloroethene	ug/L (ppb)	50	96	96	76-121	0
Dibromochloromethane	ug/L (ppb)	50	103	103	84-133	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	103	102	82-125	1
Chlorobenzene	ug/L (ppb)	50	97	97	83-114	0
Ethylbenzene	ug/L (ppb)	50	100	99	77-124	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	101	99	84-127	2
m,p-Xylene	ug/L (ppb)	100	102	100	83-125	2
o-Xylene	ug/L (ppb)	50	107	104	86-121	3
Styrene	ug/L (ppb)	50	109	106	85-127	3
Isopropylbenzene	ug/L (ppb)	50	109	104	87-122	5
Bromoform	ug/L (ppb)	50	113	107	74-136	5
n-Propylbenzene	ug/L (ppb)	50	106	106	74-126	0
Bromobenzene	ug/L (ppb)	50	102	104	80-121	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	106	105	80-126	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	105	105	66-126	0
1,2,3-Trichloropropane	ug/L (ppb)	50	103	103	67-124	0
2-Chlorotoluene	ug/L (ppb)	50	103	104	77-127	1
4-Chlorotoluene	ug/L (ppb)	50	105	105	78-128	0
tert-Butylbenzene	ug/L (ppb)	50	107	106	85-127	1
1,2,4-Trimethylbenzene	ug/L (ppb)	50	106	103	82-125	3
sec-Butylbenzene	ug/L (ppb)	50	104	103	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	104	103	82-127	1
1,3-Dichlorobenzene	ug/L (ppb)	50	101	101	85-116	0
1,4-Dichlorobenzene	ug/L (ppb)	50	98	97	84-121	1
1,2-Dichlorobenzene	ug/L (ppb)	50	98	99	85-116	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	91	98	57-141	7
1,2,4-Trichlorobenzene	ug/L (ppb)	50	97	107	72-130	10
Hexachlorobutadiene	ug/L (ppb)	50	87	97	53-141	11
Naphthalene	ug/L (ppb)	50	102	110	64-133	8
1,2,3-Trichlorobenzene	ug/L (ppb)	50	96	106	65-136	10

Date of Report: 04/22/11
Date Received: 04/11/11
Project: Crown Hill 100094, F&BI 104099

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	42	42	22-64	0
Bis(2-chloroethyl) ether	ug/L (ppb)	50	96	95	52-122	1
2-Chlorophenol	ug/L (ppb)	50	94	92	61-108	2
1,3-Dichlorobenzene	ug/L (ppb)	50	92	88	59-105	4
1,4-Dichlorobenzene	ug/L (ppb)	50	87	88	59-107	1
1,2-Dichlorobenzene	ug/L (ppb)	50	92	91	56-110	1
Benzyl alcohol	ug/L (ppb)	50	90	88	52-106	2
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	91	97	44-117	6
2-Methylphenol	ug/L (ppb)	50	59	57	41-95	3
Hexachloroethane	ug/L (ppb)	50	89	88	56-115	1
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	102	99	62-111	3
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	83	81	24-138	2
Nitrobenzene	ug/L (ppb)	50	94	93	55-116	1
Isophorone	ug/L (ppb)	50	96	95	66-121	1
2-Nitrophenol	ug/L (ppb)	50	93	93	53-116	0
2,4-Dimethylphenol	ug/L (ppb)	50	88	86	44-103	2
Benzoic acid	ug/L (ppb)	75	28	36	10-59	25 vo
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	97	95	53-113	2
2,4-Dichlorophenol	ug/L (ppb)	50	97	95	55-114	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	89	87	67-102	2
Hexachlorobutadiene	ug/L (ppb)	50	87	85	57-112	2
4-Chloroaniline	ug/L (ppb)	50	54	63	24-106	15
4-Chloro-3-methylphenol	ug/L (ppb)	50	96	94	49-123	2
2-Methylnaphthalene	ug/L (ppb)	50	94	93	55-119	1
Hexachlorocyclopentadiene	ug/L (ppb)	50	75	75	24-132	0
2,4,6-Trichlorophenol	ug/L (ppb)	50	98	95	65-116	3
2,4,5-Trichlorophenol	ug/L (ppb)	50	99	95	53-117	4
2-Chloronaphthalene	ug/L (ppb)	50	96	94	49-118	2
2-Nitroaniline	ug/L (ppb)	50	101	99	59-126	2
Dimethyl phthalate	ug/L (ppb)	50	96	95	54-115	1
2,6-Dinitrotoluene	ug/L (ppb)	50	98	96	54-123	2
3-Nitroaniline	ug/L (ppb)	50	52	65	34-112	22 vo
2,4-Dinitrophenol	ug/L (ppb)	50	107	102	53-123	5
Dibenzofuran	ug/L (ppb)	50	94	92	39-128	2
2,4-Dinitrotoluene	ug/L (ppb)	50	98	95	44-128	3
4-Nitrophenol	ug/L (ppb)	50	47	46	10-102	2
Diethyl phthalate	ug/L (ppb)	50	94	94	48-121	0
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	92	91	59-113	1
N-Nitrosodiphenylamine	ug/L (ppb)	50	95	94	43-115	1
4-Nitroaniline	ug/L (ppb)	50	85	89	23-173	5
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	103	101	58-124	2
4-Bromophenyl phenyl ether	ug/L (ppb)	50	96	94	57-115	2
Hexachlorobenzene	ug/L (ppb)	50	95	93	66-109	2
Pentachlorophenol	ug/L (ppb)	50	100	94	52-129	6
Carbazole	ug/L (ppb)	50	96	95	33-140	1
Di-n-butyl phthalate	ug/L (ppb)	50	95	94	51-121	1
Benzyl butyl phthalate	ug/L (ppb)	50	96	95	50-128	1
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	95	94	50-127	1
Di-n-octyl phthalate	ug/L (ppb)	50	97	95	54-129	2

Date of Report: 04/22/11
Date Received: 04/11/11
Project: Crown Hill 100094, F&BI 104099

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	93	99	64-100	6
Acenaphthylene	ug/L (ppb)	1	98	102	67-104	4
Acenaphthene	ug/L (ppb)	1	94	99	65-103	5
Fluorene	ug/L (ppb)	1	102	106	64-106	4
Phenanthrene	ug/L (ppb)	1	90	96	66-106	6
Anthracene	ug/L (ppb)	1	96	103	67-112	7
Fluoranthene	ug/L (ppb)	1	112	119 vo	69-116	6
Pyrene	ug/L (ppb)	1	93	101	68-115	8
Benz(a)anthracene	ug/L (ppb)	1	91	96	59-100	5
Chrysene	ug/L (ppb)	1	97	102	66-103	5
Benzo(b)fluoranthene	ug/L (ppb)	1	103	107	59-114	4
Benzo(k)fluoranthene	ug/L (ppb)	1	98	104	55-111	6
Benzo(a)pyrene	ug/L (ppb)	1	91	97	54-111	6
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	86	92	35-124	7
Dibenz(a,h)anthracene	ug/L (ppb)	1	85	91	35-116	7
Benzo(g,h,i)perylene	ug/L (ppb)	1	100	107	39-114	7

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

104099

SAMPLE CHAIN OF CUSTODY

ME 04/11/11 V3/C05/B141

Page # 1 of 1

Send Report To Dana Cannon
Company Aspect Consulting
Address 401 2nd Ave S, #201
City, State, ZIP Seattle, WA 98115
Phone # _____ Fax # _____

SAMPLERS (signature)

PROJECT NAME/NO. Crown hill

PO# 100094

REMARKS dissolved metals were field filtered

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	total metals As, Pb, Cu	dissolved metals As, Pb, Cu	PAHs by 8270 mod				Notes
MW-1-040911	01A-G	4/9/11	1202	water	7	X	-		X	X		X	X	X				
MW-2-040911	02		1520			X			X	X		X	X	X				
MW-4-040911	03		1330			X			X	X		X	X	X				
MW-5-040911	04		1320			X			X	X		X	X	X				
MW-6-040911	05		1435			X			X	X		X	X	X				
MW-7-040911	06		1200			X			X	X		X	X	X				
MW-8-040911	07		1215			X			X	X		X	X	X				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Amy Tice	Aspect	4/11/11	1220
Received by:	Michael Erdahl	FFBine	↓	↓
Relinquished by:				
Received by:		Samples received at 5 °C		

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

July 25, 2011

Dana Cannon, Project Manager
Aspect Consulting
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on July 8, 2011 from the Crown Hill PO 100094, F&BI 107071 project. There are 51 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP0725R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 8, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting Crown Hill PO 100094, F&BI 107071 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting
107071-01	MW-1-070711
107071-02	MW-2-070711
107071-03	MW-4-070711
107071-04	MW-5-070711
107071-05	MW-6-070711
107071-06	MW-7-070711
107071-07	MW-8-070711

The 8270D SIM laboratory control sample and laboratory control sample duplicate failed the relative percent difference for fluoranthene. The analyte was not detected therefore the data were acceptable.

The 8270D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for benzoic acid. The analyte was not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 07/25/11
Date Received: 07/08/11
Project: Crown Hill PO 100094, F&BI 107071
Date Extracted: 07/08/11
Date Analyzed: 07/11/11 and 07/12/11

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-1-070711 107071-01	<50	<250	97
MW-2-070711 107071-02	<50	<250	85
MW-4-070711 107071-03	<50	<250	85
MW-5-070711 107071-04	1,900	530 x	93
MW-6-070711 107071-05	<50	<250	80
MW-7-070711 107071-06	<50	<250	110
MW-8-070711 107071-07	<50	<250	91
Method Blank 01-1216 MB	<50	<250	117

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-1-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-01
Date Analyzed:	07/08/11	Data File:	107071-01.033
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	85	60	125
Indium	92	60	125
Holmium	103	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-2-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-02
Date Analyzed:	07/08/11	Data File:	107071-02.036
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	79	60	125
Indium	85	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-4-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-03
Date Analyzed:	07/08/11	Data File:	107071-03.037
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	78	60	125
Indium	82	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.16
Arsenic	3.28
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-5-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-04
Date Analyzed:	07/08/11	Data File:	107071-04.039
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	76	60	125
Indium	83	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	6.53
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-6-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-05
Date Analyzed:	07/08/11	Data File:	107071-05.040
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	81	60	125
Indium	82	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	3.32
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-7-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-06
Date Analyzed:	07/08/11	Data File:	107071-06.042
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	84	60	125
Indium	85	60	125
Holmium	88	60	125

Analyte:	Concentration ug/L (ppb)
Copper	4.47
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-8-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-07
Date Analyzed:	07/08/11	Data File:	107071-07.043
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	88	60	125
Indium	91	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	I1-471 mb
Date Analyzed:	07/08/11	Data File:	I1-471 mb.031
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	83	60	125
Indium	88	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-01
Date Analyzed:	07/08/11	Data File:	107071-01.069
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	108	60	125
Indium	82	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Copper	59.6
Arsenic	3.63
Lead	20.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-02
Date Analyzed:	07/08/11	Data File:	107071-02.070
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	79	60	125
Indium	82	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-03
Date Analyzed:	07/08/11	Data File:	107071-03.071
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	236 vo	60	125
Indium	81	60	125
Holmium	111	60	125

Analyte:	Concentration ug/L (ppb)
Copper	159 J
Arsenic	24.9
Lead	53.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-03 x10
Date Analyzed:	07/08/11	Data File:	107071-03 x10.077
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	75	60	125
Holmium	85	60	125

Analyte:	Concentration ug/L (ppb)
Copper	464
Arsenic	26.9
Lead	83.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-04
Date Analyzed:	07/08/11	Data File:	107071-04.072
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	82	60	125
Indium	74	60	125
Holmium	77	60	125

Analyte:	Concentration ug/L (ppb)
Copper	19.9
Arsenic	1.60
Lead	4.89

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-05
Date Analyzed:	07/08/11	Data File:	107071-05.073
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	82	60	125
Indium	77	60	125
Holmium	80	60	125

Analyte:	Concentration ug/L (ppb)
Copper	3.07
Arsenic	2.45
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-06
Date Analyzed:	07/08/11	Data File:	107071-06.074
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	74	60	125
Indium	75	60	125
Holmium	82	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-07
Date Analyzed:	07/08/11	Data File:	107071-07.075
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	74	60	125
Holmium	84	60	125

Analyte:	Concentration ug/L (ppb)
Copper	41.9
Arsenic	2.60
Lead	13.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	I1-465 mb
Date Analyzed:	07/08/11	Data File:	I1-465 mb.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	94	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-01
Date Analyzed:	07/08/11	Data File:	070820.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	57	121
Toluene-d8	104	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-02
Date Analyzed:	07/08/11	Data File:	070821.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-03
Date Analyzed:	07/08/11	Data File:	070822.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-04
Date Analyzed:	07/08/11	Data File:	070823.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	1.3
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	1.7	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-05
Date Analyzed:	07/08/11	Data File:	070824.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-06
Date Analyzed:	07/08/11	Data File:	070825.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	57	121
Toluene-d8	104	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	3.7	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-07
Date Analyzed:	07/08/11	Data File:	070826.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	01-1191 mb
Date Analyzed:	07/08/11	Data File:	070818.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-01
Date Analyzed:	07/11/11	Data File:	071105.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	78	50	150
Benzo(a)anthracene-d12	83	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.14
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-02
Date Analyzed:	07/11/11	Data File:	071106.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	99	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-03
Date Analyzed:	07/11/11	Data File:	071107.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	77	50	150
Benzo(a)anthracene-d12	78	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.17
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-5-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-04
Date Analyzed:	07/11/11	Data File:	071108.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	86	50	150
Benzo(a)anthracene-d12	100	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-6-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-05
Date Analyzed:	07/11/11	Data File:	071109.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	94	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-7-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-06
Date Analyzed:	07/12/11	Data File:	071210.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	63	50	150
Benzo(a)anthracene-d12	71	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-8-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-07
Date Analyzed:	07/11/11	Data File:	071111.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	77	50	150
Benzo(a)anthracene-d12	83	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.15
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	01-1215 mb
Date Analyzed:	07/08/11	Data File:	070805.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	75	50	150
Benzo(a)anthracene-d12	77	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-1-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-01
Date Analyzed:	07/18/11	Data File:	071814.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	68	10	137
Phenol-d6	45	10	100
Nitrobenzene-d5	98	11	153
2-Fluorobiphenyl	93	21	159
2,4,6-Tribromophenol	77	10	210
Terphenyl-d14	98	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-2-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-02
Date Analyzed:	07/18/11	Data File:	071815.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	68	10	137
Phenol-d6	43	10	100
Nitrobenzene-d5	94	11	153
2-Fluorobiphenyl	92	21	159
2,4,6-Tribromophenol	82	10	210
Terphenyl-d14	97	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-4-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-03
Date Analyzed:	07/18/11	Data File:	071816.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	73	10	137
Phenol-d6	46	10	100
Nitrobenzene-d5	96	11	153
2-Fluorobiphenyl	90	21	159
2,4,6-Tribromophenol	86	10	210
Terphenyl-d14	97	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-5-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-04
Date Analyzed:	07/18/11	Data File:	071817.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	69	10	137
Phenol-d6	43	10	100
Nitrobenzene-d5	93	11	153
2-Fluorobiphenyl	90	21	159
2,4,6-Tribromophenol	91	10	210
Terphenyl-d14	89	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-6-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-05
Date Analyzed:	07/18/11	Data File:	071818.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	10	137
Phenol-d6	44	10	100
Nitrobenzene-d5	89	11	153
2-Fluorobiphenyl	85	21	159
2,4,6-Tribromophenol	87	10	210
Terphenyl-d14	88	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-7-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-06
Date Analyzed:	07/18/11	Data File:	071819.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	65	10	137
Phenol-d6	41	10	100
Nitrobenzene-d5	95	11	153
2-Fluorobiphenyl	90	21	159
2,4,6-Tribromophenol	84	10	210
Terphenyl-d14	97	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-8-070711	Client:	Aspect Consulting
Date Received:	07/08/11	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	107071-07
Date Analyzed:	07/18/11	Data File:	071820.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	72	10	137
Phenol-d6	49	10	100
Nitrobenzene-d5	94	11	153
2-Fluorobiphenyl	87	21	159
2,4,6-Tribromophenol	77	10	210
Terphenyl-d14	87	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 107071
Date Extracted:	07/08/11	Lab ID:	01-1221 mb
Date Analyzed:	07/18/11	Data File:	071812A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	53	10	137
Phenol-d6	35	10	100
Nitrobenzene-d5	93	11	153
2-Fluorobiphenyl	89	21	159
2,4,6-Tribromophenol	75	10	210
Terphenyl-d14	96	51	143

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Date of Report: 07/25/11
Date Received: 07/08/11
Project: Crown Hill PO 100094, F&BI 107071

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	103	103	63-142	0

Date of Report: 07/25/11
Date Received: 07/08/11
Project: Crown Hill PO 100094, F&BI 107071

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 107071-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<1	97	96	50-144	1
Arsenic	ug/L (ppb)	10	<1	146	148	56-167	1
Lead	ug/L (ppb)	10	<1	109	108	76-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	101	66-134
Arsenic	ug/L (ppb)	10	93	55-128
Lead	ug/L (ppb)	10	109	67-135

Date of Report: 07/25/11
Date Received: 07/08/11
Project: Crown Hill PO 100094, F&BI 107071

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 107047-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	79.4	106 b	94 b	50-144	12 b
Arsenic	ug/L (ppb)	10	5.05	110 b	107 b	56-167	3 b
Lead	ug/L (ppb)	10	3.04	109 b	111 b	76-125	2 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	112	66-134
Arsenic	ug/L (ppb)	10	106	55-128
Lead	ug/L (ppb)	10	113	67-135

Date of Report: 07/25/11
Date Received: 07/08/11
Project: Crown Hill PO 100094, F&BI 107071

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 107071-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	102	10-172
Chloromethane	ug/L (ppb)	50	<10	110	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	108	36-166
Bromomethane	ug/L (ppb)	50	<1	105	47-169
Chloroethane	ug/L (ppb)	50	<1	115	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	110	44-165
Acetone	ug/L (ppb)	250	<10	114	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Methylene chloride	ug/L (ppb)	50	<5	103	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	110	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	107	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	98	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	108	71-127
Chloroform	ug/L (ppb)	50	<1	107	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	113	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	108	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	110	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	102	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	107	56-152
Benzene	ug/L (ppb)	50	<0.35	103	76-125
Trichloroethene	ug/L (ppb)	50	<1	107	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	110	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	110	61-150
Dibromomethane	ug/L (ppb)	50	<1	115	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	112	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	107	72-132
Toluene	ug/L (ppb)	50	<1	99	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	102	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	107	68-131
2-Hexanone	ug/L (ppb)	250	<10	105	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	103	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	103	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	108	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	107	69-134
Chlorobenzene	ug/L (ppb)	50	<1	101	77-122
Ethylbenzene	ug/L (ppb)	50	<1	100	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	107	73-137
m,p-Xylene	ug/L (ppb)	100	<2	101	69-135
o-Xylene	ug/L (ppb)	50	<1	99	68-137
Styrene	ug/L (ppb)	50	<1	101	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	97	65-142
Bromoform	ug/L (ppb)	50	<1	115	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	95	58-144
Bromobenzene	ug/L (ppb)	50	<1	103	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	96	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	104	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	105	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	97	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	95	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	96	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	95	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	90	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	91	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	98	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	97	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	98	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	105	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	88	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	71	60-143
Naphthalene	ug/L (ppb)	50	<1	94	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	90	69-148

Date of Report: 07/25/11
Date Received: 07/08/11
Project: Crown Hill PO 100094, F&BI 107071

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	120	122	25-158	2
Chloromethane	ug/L (ppb)	50	111	112	45-156	1
Vinyl chloride	ug/L (ppb)	50	111	115	50-154	4
Bromomethane	ug/L (ppb)	50	107	111	55-143	4
Chloroethane	ug/L (ppb)	50	121	121	58-146	0
Trichlorofluoromethane	ug/L (ppb)	50	114	119	50-150	4
Acetone	ug/L (ppb)	250	113	112	60-155	1
1,1-Dichloroethene	ug/L (ppb)	50	103	105	67-136	2
Methylene chloride	ug/L (ppb)	50	102	104	39-148	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	111	112	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	105	108	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	107	108	79-121	1
2,2-Dichloropropane	ug/L (ppb)	50	114	116	55-143	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	108	109	80-123	1
Chloroform	ug/L (ppb)	50	108	109	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	113	110	57-149	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	105	107	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	111	113	83-130	2
1,1-Dichloropropene	ug/L (ppb)	50	106	106	77-129	0
Carbon tetrachloride	ug/L (ppb)	50	110	109	75-158	1
Benzene	ug/L (ppb)	50	105	104	69-134	1
Trichloroethene	ug/L (ppb)	50	110	111	80-120	1
1,2-Dichloropropane	ug/L (ppb)	50	110	110	77-123	0
Bromodichloromethane	ug/L (ppb)	50	109	109	81-133	0
Dibromomethane	ug/L (ppb)	50	112	115	82-125	3
4-Methyl-2-pentanone	ug/L (ppb)	250	113	113	70-140	0
cis-1,3-Dichloropropene	ug/L (ppb)	50	110	109	82-132	1
Toluene	ug/L (ppb)	50	106	106	72-122	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	107	107	80-136	0
1,1,2-Trichloroethane	ug/L (ppb)	50	110	109	75-124	1
2-Hexanone	ug/L (ppb)	250	105	105	64-152	0
1,3-Dichloropropane	ug/L (ppb)	50	108	107	76-126	1
Tetrachloroethene	ug/L (ppb)	50	114	116	76-121	2
Dibromochloromethane	ug/L (ppb)	50	114	112	84-133	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	110	110	82-125	0
Chlorobenzene	ug/L (ppb)	50	109	109	83-114	0
Ethylbenzene	ug/L (ppb)	50	104	105	77-124	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	111	112	84-127	1
m,p-Xylene	ug/L (ppb)	100	108	108	83-125	0
o-Xylene	ug/L (ppb)	50	105	105	86-121	0
Styrene	ug/L (ppb)	50	106	107	85-127	1
Isopropylbenzene	ug/L (ppb)	50	103	104	87-122	1
Bromoform	ug/L (ppb)	50	117	119	74-136	2
n-Propylbenzene	ug/L (ppb)	50	101	102	74-126	1
Bromobenzene	ug/L (ppb)	50	108	107	80-121	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	104	103	80-126	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	106	106	66-126	0
1,2,3-Trichloropropane	ug/L (ppb)	50	105	106	67-124	1
2-Chlorotoluene	ug/L (ppb)	50	102	102	77-127	0
4-Chlorotoluene	ug/L (ppb)	50	99	100	78-128	1
tert-Butylbenzene	ug/L (ppb)	50	101	102	85-127	1
1,2,4-Trimethylbenzene	ug/L (ppb)	50	101	101	82-125	0
sec-Butylbenzene	ug/L (ppb)	50	98	99	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	99	101	82-127	2
1,3-Dichlorobenzene	ug/L (ppb)	50	103	105	85-116	2
1,4-Dichlorobenzene	ug/L (ppb)	50	102	103	84-121	1
1,2-Dichlorobenzene	ug/L (ppb)	50	103	103	85-116	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	102	106	57-141	4
1,2,4-Trichlorobenzene	ug/L (ppb)	50	96	97	72-130	1
Hexachlorobutadiene	ug/L (ppb)	50	83	85	53-141	2
Naphthalene	ug/L (ppb)	50	95	99	64-133	4
1,2,3-Trichlorobenzene	ug/L (ppb)	50	96	99	65-136	3

Date of Report: 07/25/11
Date Received: 07/08/11
Project: Crown Hill PO 100094, F&BI 107071

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	93	81	64-100	14
Acenaphthylene	ug/L (ppb)	1	94	83	67-104	12
Acenaphthene	ug/L (ppb)	1	93	83	65-103	11
Fluorene	ug/L (ppb)	1	96	89	64-106	8
Phenanthrene	ug/L (ppb)	1	95	83	66-106	13
Anthracene	ug/L (ppb)	1	96	79	67-112	19
Fluoranthene	ug/L (ppb)	1	105	84	69-116	22 vo
Pyrene	ug/L (ppb)	1	86	78	68-115	10
Benz(a)anthracene	ug/L (ppb)	1	89	81	59-100	9
Chrysene	ug/L (ppb)	1	99	87	66-103	13
Benzo(b)fluoranthene	ug/L (ppb)	1	99	95	59-114	4
Benzo(k)fluoranthene	ug/L (ppb)	1	103	86	55-111	18
Benzo(a)pyrene	ug/L (ppb)	1	101	92	54-111	9
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	111	96	35-124	14
Dibenz(a,h)anthracene	ug/L (ppb)	1	109	93	35-116	16
Benzo(g,h,i)perylene	ug/L (ppb)	1	108	93	39-114	15

Date of Report: 07/25/11
Date Received: 07/08/11
Project: Crown Hill PO 100094, F&BI 107071

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	46	48	22-64	4
Bis(2-chloroethyl) ether	ug/L (ppb)	50	90	96	52-122	6
2-Chlorophenol	ug/L (ppb)	50	89	93	61-108	4
1,3-Dichlorobenzene	ug/L (ppb)	50	81	90	59-105	11
1,4-Dichlorobenzene	ug/L (ppb)	50	90	90	59-107	0
1,2-Dichlorobenzene	ug/L (ppb)	50	87	92	56-110	6
Benzyl alcohol	ug/L (ppb)	50	82	92	52-106	11
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	88	83	44-117	6
2-Methylphenol	ug/L (ppb)	50	75	78	41-95	4
Hexachloroethane	ug/L (ppb)	50	86	90	56-115	5
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	83	94	62-111	12
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	72	73	24-138	1
Nitrobenzene	ug/L (ppb)	50	86	90	55-116	5
Isophorone	ug/L (ppb)	50	89	96	66-121	8
2-Nitrophenol	ug/L (ppb)	50	94	101	53-116	7
2,4-Dimethylphenol	ug/L (ppb)	50	69	69	44-103	0
Benzoic acid	ug/L (ppb)	75	31	43	10-59	32 vo
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	88	90	53-113	2
2,4-Dichlorophenol	ug/L (ppb)	50	90	94	55-114	4
1,2,4-Trichlorobenzene	ug/L (ppb)	50	85	89	67-102	5
Naphthalene	ug/L (ppb)	50	84	87	68-109	4
Hexachlorobutadiene	ug/L (ppb)	50	87	87	57-112	0
4-Chloroaniline	ug/L (ppb)	50	65	70	24-106	7
4-Chloro-3-methylphenol	ug/L (ppb)	50	89	96	49-123	8
2-Methylnaphthalene	ug/L (ppb)	50	82	91	55-119	10
Hexachlorocyclopentadiene	ug/L (ppb)	50	72	75	24-132	4
2,4,6-Trichlorophenol	ug/L (ppb)	50	91	94	65-116	3
2,4,5-Trichlorophenol	ug/L (ppb)	50	94	98	53-117	4
2-Chloronaphthalene	ug/L (ppb)	50	88	91	49-118	3
2-Nitroaniline	ug/L (ppb)	50	92	98	59-126	6
Dimethyl phthalate	ug/L (ppb)	50	90	97	54-115	7
Acenaphthylene	ug/L (ppb)	50	82	85	51-125	4
2,6-Dinitrotoluene	ug/L (ppb)	50	94	99	54-123	5
3-Nitroaniline	ug/L (ppb)	50	77	90	34-112	16
Acenaphthene	ug/L (ppb)	50	84	88	52-116	5
2,4-Dinitrophenol	ug/L (ppb)	50	90	107	53-123	17
Dibenzofuran	ug/L (ppb)	50	84	90	39-128	7
2,4-Dinitrotoluene	ug/L (ppb)	50	89	100	44-128	12
4-Nitrophenol	ug/L (ppb)	50	47	56	10-102	17
Diethyl phthalate	ug/L (ppb)	50	88	92	48-121	4
Fluorene	ug/L (ppb)	50	82	89	60-122	8
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	86	88	59-113	2
N-Nitrosodiphenylamine	ug/L (ppb)	50	90	88	43-115	2
4-Nitroaniline	ug/L (ppb)	50	87	106	23-173	20
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	97	108	58-124	11
4-Bromophenyl phenyl ether	ug/L (ppb)	50	93	92	57-115	1
Hexachlorobenzene	ug/L (ppb)	50	89	92	66-109	3
Pentachlorophenol	ug/L (ppb)	50	96	106	52-129	10
Phenanthrene	ug/L (ppb)	50	86	89	62-118	3
Anthracene	ug/L (ppb)	50	86	89	64-116	3
Carbazole	ug/L (ppb)	50	89	96	33-140	8
Di-n-butyl phthalate	ug/L (ppb)	50	95	93	51-121	2
Fluoranthene	ug/L (ppb)	50	87	92	53-125	6
Pyrene	ug/L (ppb)	50	89	93	59-115	4
Benzyl butyl phthalate	ug/L (ppb)	50	96	97	50-128	1
Benz(a)anthracene	ug/L (ppb)	50	90	97	58-113	7
Chrysene	ug/L (ppb)	50	92	96	46-124	4
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	100	95	50-127	5
Di-n-octyl phthalate	ug/L (ppb)	50	100	97	54-129	3
Benzo(a)pyrene	ug/L (ppb)	50	93	99	57-110	6
Benzo(b)fluoranthene	ug/L (ppb)	50	89	99	60-118	11
Benzo(k)fluoranthene	ug/L (ppb)	50	95	93	46-143	2
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	50	101	107	60-125	6
Dibenz(a,h)anthracene	ug/L (ppb)	50	105	111	42-134	6
Benzo(g,h,i)perylene	ug/L (ppb)	50	98	98	61-119	0

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

107071

SAMPLE CHAIN OF CUSTODY ME 7/8/11 V2/A03/A15

Page # ____ of ____

Send Report To Dana Cannon
Company Aspect Consulting LLC
Address 401 2nd Ave S #201
City, State, ZIP Seattle, WA 98104
Phone # _____ Fax # _____

SAMPLERS (signature)

PROJECT NAME/NO. Crown Hill

PO # 100094

REMARKS dissolved metals were field filtered

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH _____
Rush charges authorized by: _____

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total metals As, Pb, Cu	dissolved metals As, Pb, Cu	PAHs by 8270 mod			Notes
MW-1-070711	01 A-G	7/7/11	1500	water	7	X			X	X		X	X	X			
MW-2-070711	02		1055			X			X	X		X	X	X			
~~MW-3-070711~~									X	X							
MW-4-070711	03		1248			X			X	X		X	X	X			
MW-5-070711	04		1205			X			X	X		X	X	X			
MW-6-070711	05		1125			X			X	X		X	X	X			
MW-7-070711	06		1315			X			X	X		X	X	X			
MW-8-070711	07		—			X			X	X		X	X	X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:				
Received by: [signature]	HONG NGUYEN	FBI	7/8/11	10:30
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

Samples received at 5 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 10, 2011

Dana Cannon, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on October 27, 2011 from the Crown Hill 100094, F&BI 110366 project. There are 50 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com
ASP1110R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 27, 2011 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crown Hill 100094, F&BI 110366 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
110366-01	MW-1-102611
110366-02	MW-2-102611
110366-03	MW-4-102611
110366-04	MW-5-102611
110366-05	MW-6-102611
110366-06	MW-7-102611
110366-07	MW-8-102611

The 8270D full list and SIM laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

The 8270D full list laboratory control sample duplicate failed below the acceptance criteria for 2,4,5 trichlorophenol. The data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 11/10/11
Date Received: 10/27/11
Project: Crown Hill 100094, F&BI 110366
Date Extracted: 10/31/11
Date Analyzed: 10/31/11

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-1-102611 110366-01	<50	<250	87
MW-2-102611 110366-02	<50	<250	92
MW-4-102611 110366-03	<50	<250	92
MW-5-102611 110366-04	2,600 x	730 x	107
MW-6-102611 110366-05	<50	<250	93
MW-7-102611 110366-06	<50	<250	94
MW-8-102611 110366-07	<50	<250	96
Method Blank 01-1964 MB	<50	<250	88

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-1-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-01
Date Analyzed:	10/31/11	Data File:	110366-01.057
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Indium	90	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-2-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-02
Date Analyzed:	10/31/11	Data File:	110366-02.058
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	85	60	125
Indium	89	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-4-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-03
Date Analyzed:	10/31/11	Data File:	110366-03.059
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	99	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	3.37
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-5-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-04
Date Analyzed:	10/31/11	Data File:	110366-04.060
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	72	60	125
Indium	74	60	125
Holmium	79	60	125

Analyte:	Concentration ug/L (ppb)
Copper	6.49
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-6-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-05
Date Analyzed:	10/31/11	Data File:	110366-05.061
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	78	60	125
Indium	80	60	125
Holmium	83	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	4.70
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-7-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-06
Date Analyzed:	10/31/11	Data File:	110366-06.063
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	89	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-8-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-07
Date Analyzed:	10/31/11	Data File:	110366-07.054
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	85	60	125
Indium	87	60	125
Holmium	88	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	I1-746 mb
Date Analyzed:	10/31/11	Data File:	I1-746 mb.052
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	91	60	125
Holmium	91	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-01
Date Analyzed:	10/31/11	Data File:	110366-01.031
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	94	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Copper	5.66
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-02
Date Analyzed:	10/31/11	Data File:	110366-02.034
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	91	60	125
Holmium	91	60	125

Analyte:	Concentration ug/L (ppb)
Copper	2.96
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-03
Date Analyzed:	10/31/11	Data File:	110366-03.035
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	115	60	125
Indium	94	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	35.6
Arsenic	7.82
Lead	5.58

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-04
Date Analyzed:	10/31/11	Data File:	110366-04.036
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	81	60	125
Indium	73	60	125
Holmium	78	60	125

Analyte:	Concentration ug/L (ppb)
Copper	19.2
Arsenic	1.30
Lead	3.87

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-05
Date Analyzed:	10/31/11	Data File:	110366-05.037
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	87	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.47
Arsenic	5.80
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-06
Date Analyzed:	10/31/11	Data File:	110366-06.038
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	88	60	125
Holmium	88	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.05
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-07
Date Analyzed:	10/31/11	Data File:	110366-07.040
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	94	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	5.43
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	I1-751 mb
Date Analyzed:	10/31/11	Data File:	I1-751 mb.029
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	94	60	125
Indium	95	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/28/11	Lab ID:	110366-01
Date Analyzed:	10/29/11	Data File:	102839.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/28/11	Lab ID:	110366-02
Date Analyzed:	10/29/11	Data File:	102840.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/28/11	Lab ID:	110366-03
Date Analyzed:	10/29/11	Data File:	102841.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/28/11	Lab ID:	110366-04
Date Analyzed:	10/29/11	Data File:	102842.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	1.7
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	2.0	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/28/11	Lab ID:	110366-05
Date Analyzed:	10/29/11	Data File:	102843.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/28/11	Lab ID:	110366-06
Date Analyzed:	10/29/11	Data File:	102844.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	1.3	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/28/11	Lab ID:	110366-07
Date Analyzed:	10/29/11	Data File:	102845.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/28/11	Lab ID:	01-1933 mb
Date Analyzed:	10/29/11	Data File:	102838.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-1-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-01
Date Analyzed:	11/01/11	Data File:	110107.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	32	162
Phenol-d6	37	10	170
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	94	43	158
2,4,6-Tribromophenol	101	43	146
Terphenyl-d14	79	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10 jl	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-2-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-02
Date Analyzed:	11/01/11	Data File:	110108.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	32	162
Phenol-d6	36	10	170
Nitrobenzene-d5	90	50	150
2-Fluorobiphenyl	94	43	158
2,4,6-Tribromophenol	103	43	146
Terphenyl-d14	80	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10 jl	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-4-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-03
Date Analyzed:	11/01/11	Data File:	110109.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	65	32	162
Phenol-d6	39	10	170
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	99	43	158
2,4,6-Tribromophenol	110	43	146
Terphenyl-d14	94	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10 jl	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-5-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-04
Date Analyzed:	11/01/11	Data File:	110110.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	41	32	162
Phenol-d6	31	10	170
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	97	43	158
2,4,6-Tribromophenol	111	43	146
Terphenyl-d14	84	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10 jl	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-6-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-05
Date Analyzed:	11/01/11	Data File:	110111.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	32	162
Phenol-d6	37	10	170
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	98	43	158
2,4,6-Tribromophenol	107	43	146
Terphenyl-d14	93	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10 jl	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-7-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-06
Date Analyzed:	11/01/11	Data File:	110112.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59	32	162
Phenol-d6	35	10	170
Nitrobenzene-d5	94	50	150
2-Fluorobiphenyl	103	43	158
2,4,6-Tribromophenol	114	43	146
Terphenyl-d14	99	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10 jl	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-8-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-07
Date Analyzed:	11/01/11	Data File:	110113.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	32	162
Phenol-d6	36	10	170
Nitrobenzene-d5	91	50	150
2-Fluorobiphenyl	99	43	158
2,4,6-Tribromophenol	106	43	146
Terphenyl-d14	95	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10 jl	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	01-1962 mb
Date Analyzed:	11/01/11	Data File:	110105.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	51	32	162
Phenol-d6	33	10	170
Nitrobenzene-d5	82	50	150
2-Fluorobiphenyl	84	43	158
2,4,6-Tribromophenol	84	43	146
Terphenyl-d14	84	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<10	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<10	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<10	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<10	4-Nitroaniline	<10
3-Methylphenol + 4-Methylphenol	<20	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<50	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10 jl	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-01
Date Analyzed:	11/01/11	Data File:	110112.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	95	50	150
Benzo(a)anthracene-d12	100	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-02
Date Analyzed:	11/01/11	Data File:	110113.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	50	150
Benzo(a)anthracene-d12	100	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-03
Date Analyzed:	11/01/11	Data File:	110114.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	99	50	150
Benzo(a)anthracene-d12	102	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-5-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-04
Date Analyzed:	11/01/11	Data File:	110115.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	100	50	150
Benzo(a)anthracene-d12	106	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.17
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-6-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-05
Date Analyzed:	11/01/11	Data File:	110116.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	101	50	150
Benzo(a)anthracene-d12	103	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-7-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-06
Date Analyzed:	11/01/11	Data File:	110117.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	100	50	150
Benzo(a)anthracene-d12	101	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-8-102611	Client:	Aspect Consulting, LLC
Date Received:	10/27/11	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	110366-07
Date Analyzed:	11/01/11	Data File:	110118.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	100	50	150
Benzo(a)anthracene-d12	97	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill 100094, F&BI 110366
Date Extracted:	10/31/11	Lab ID:	01-1963 mb
Date Analyzed:	11/01/11	Data File:	110106.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	96	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Date of Report: 11/10/11
Date Received: 10/27/11
Project: Crown Hill 100094, F&BI 110366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	94	94	63-142	0

Date of Report: 11/10/11
Date Received: 10/27/11
Project: Crown Hill 100094, F&BI 110366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 110366-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<1	96	103	50-144	7
Arsenic	ug/L (ppb)	10	<1	99	109	56-167	10
Lead	ug/L (ppb)	10	<1	99	104	76-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	99	66-134
Arsenic	ug/L (ppb)	10	97	55-128
Lead	ug/L (ppb)	10	101	67-135

Date of Report: 11/10/11
Date Received: 10/27/11
Project: Crown Hill 100094, F&BI 110366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 110366-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	5.66	91 b	98 b	50-144	7 b
Arsenic	ug/L (ppb)	10	<1	96	103	56-167	7
Lead	ug/L (ppb)	10	<1	96	101	76-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	98	66-134
Arsenic	ug/L (ppb)	10	99	55-128
Lead	ug/L (ppb)	10	102	67-135

Date of Report: 11/10/11
Date Received: 10/27/11
Project: Crown Hill 100094, F&BI 110366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 110366-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	119	10-172
Chloromethane	ug/L (ppb)	50	<10	100	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	112	36-166
Bromomethane	ug/L (ppb)	50	<1	98	47-169
Chloroethane	ug/L (ppb)	50	<1	110	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	105	44-165
Acetone	ug/L (ppb)	250	<10	105	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	100	60-136
Methylene chloride	ug/L (ppb)	50	<5	92	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	94	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	97	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	73	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	98	71-127
Chloroform	ug/L (ppb)	50	<1	95	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	99	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	95	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	100	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	100	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	102	56-152
Benzene	ug/L (ppb)	50	<0.35	98	76-125
Trichloroethene	ug/L (ppb)	50	<1	96	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	97	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	101	61-150
Dibromomethane	ug/L (ppb)	50	<1	96	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	101	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	72-132
Toluene	ug/L (ppb)	50	<1	97	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	99	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	97	68-131
2-Hexanone	ug/L (ppb)	250	<10	101	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	97	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	100	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	101	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	98	69-134
Chlorobenzene	ug/L (ppb)	50	<1	96	77-122
Ethylbenzene	ug/L (ppb)	50	<1	99	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	103	73-137
m,p-Xylene	ug/L (ppb)	100	<2	100	69-135
o-Xylene	ug/L (ppb)	50	<1	102	68-137
Styrene	ug/L (ppb)	50	<1	103	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	101	65-142
Bromoform	ug/L (ppb)	50	<1	105	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	100	58-144
Bromobenzene	ug/L (ppb)	50	<1	96	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	100	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	96	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	99	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	99	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	101	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	101	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	101	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	101	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	98	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	96	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	98	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	100	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	101	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	95	60-143
Naphthalene	ug/L (ppb)	50	<1	100	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	100	69-148

Date of Report: 11/10/11
Date Received: 10/27/11
Project: Crown Hill 100094, F&BI 110366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	120	122	25-158	2
Chloromethane	ug/L (ppb)	50	104	101	45-156	3
Vinyl chloride	ug/L (ppb)	50	113	111	50-154	2
Bromomethane	ug/L (ppb)	50	102	99	55-143	3
Chloroethane	ug/L (ppb)	50	109	110	58-146	1
Trichlorofluoromethane	ug/L (ppb)	50	104	103	50-150	1
Acetone	ug/L (ppb)	250	100	100	60-155	0
1,1-Dichloroethene	ug/L (ppb)	50	102	103	67-136	1
Methylene chloride	ug/L (ppb)	50	95	96	39-148	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	97	98	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	99	98	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	99	98	79-121	1
2,2-Dichloropropane	ug/L (ppb)	50	85	83	55-143	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	99	80-123	1
Chloroform	ug/L (ppb)	50	98	98	80-121	0
2-Butanone (MEK)	ug/L (ppb)	250	100	102	57-149	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	97	95	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	102	101	83-130	1
1,1-Dichloropropene	ug/L (ppb)	50	102	102	77-129	0
Carbon tetrachloride	ug/L (ppb)	50	107	106	75-158	1
Benzene	ug/L (ppb)	50	100	100	69-134	0
Trichloroethene	ug/L (ppb)	50	98	97	80-120	1
1,2-Dichloropropane	ug/L (ppb)	50	100	100	77-123	0
Bromodichloromethane	ug/L (ppb)	50	104	104	81-133	0
Dibromomethane	ug/L (ppb)	50	99	99	82-125	0
4-Methyl-2-pentanone	ug/L (ppb)	250	103	103	70-140	0
cis-1,3-Dichloropropene	ug/L (ppb)	50	102	101	82-132	1
Toluene	ug/L (ppb)	50	100	100	72-122	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	104	103	80-136	1
1,1,2-Trichloroethane	ug/L (ppb)	50	99	101	75-124	2
2-Hexanone	ug/L (ppb)	250	104	104	64-152	0
1,3-Dichloropropane	ug/L (ppb)	50	101	100	76-126	1
Tetrachloroethene	ug/L (ppb)	50	104	103	76-121	1
Dibromochloromethane	ug/L (ppb)	50	105	105	84-133	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	102	102	82-125	0
Chlorobenzene	ug/L (ppb)	50	99	98	83-114	1
Ethylbenzene	ug/L (ppb)	50	101	101	77-124	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	106	106	84-127	0
m,p-Xylene	ug/L (ppb)	100	103	102	83-125	1
o-Xylene	ug/L (ppb)	50	105	105	86-121	0
Styrene	ug/L (ppb)	50	105	105	85-127	0
Isopropylbenzene	ug/L (ppb)	50	104	103	87-122	1
Bromoform	ug/L (ppb)	50	107	107	74-136	0
n-Propylbenzene	ug/L (ppb)	50	102	101	74-126	1
Bromobenzene	ug/L (ppb)	50	100	99	80-121	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	103	103	80-126	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	101	102	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	99	99	67-124	0
2-Chlorotoluene	ug/L (ppb)	50	101	101	77-127	0
4-Chlorotoluene	ug/L (ppb)	50	101	101	78-128	0
tert-Butylbenzene	ug/L (ppb)	50	104	103	85-127	1
1,2,4-Trimethylbenzene	ug/L (ppb)	50	103	103	82-125	0
sec-Butylbenzene	ug/L (ppb)	50	103	103	80-125	0
p-Isopropyltoluene	ug/L (ppb)	50	104	103	82-127	1
1,3-Dichlorobenzene	ug/L (ppb)	50	100	99	85-116	1
1,4-Dichlorobenzene	ug/L (ppb)	50	97	97	84-121	0
1,2-Dichlorobenzene	ug/L (ppb)	50	100	100	85-116	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	101	103	57-141	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	105	105	72-130	0
Hexachlorobutadiene	ug/L (ppb)	50	98	97	53-141	1
Naphthalene	ug/L (ppb)	50	103	103	64-133	0
1,2,3-Trichlorobenzene	ug/L (ppb)	50	105	105	65-136	0

Date of Report: 11/10/11
Date Received: 10/27/11
Project: Crown Hill 100094, F&BI 110366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	35	34	18-52	3
Bis(2-chloroethyl) ether	ug/L (ppb)	50	67	63	52-113	6
2-Chlorophenol	ug/L (ppb)	50	71	64	50-110	10
1,3-Dichlorobenzene	ug/L (ppb)	50	76	72	45-109	5
1,4-Dichlorobenzene	ug/L (ppb)	50	78	74	44-118	5
1,2-Dichlorobenzene	ug/L (ppb)	50	76	73	46-116	4
Benzyl alcohol	ug/L (ppb)	50	66	60	42-100	10
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	60	56	51-124	7
2-Methylphenol	ug/L (ppb)	50	65	56	38-100	15
Hexachloroethane	ug/L (ppb)	50	73	69	42-117	6
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	72	68	48-124	6
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	62	53	48-87	16
Nitrobenzene	ug/L (ppb)	50	74	70	50-118	6
Isophorone	ug/L (ppb)	50	73	70	55-116	4
2-Nitrophenol	ug/L (ppb)	50	76	71	42-127	7
2,4-Dimethylphenol	ug/L (ppb)	50	61	56	45-100	9
Benzoic acid	ug/L (ppb)	75	36	29	10-46	22 vo
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	73	69	55-115	6
2,4-Dichlorophenol	ug/L (ppb)	50	77	70	55-113	10
1,2,4-Trichlorobenzene	ug/L (ppb)	50	74	70	50-109	6
Naphthalene	ug/L (ppb)	50	79	75	53-112	5
Hexachlorobutadiene	ug/L (ppb)	50	79	74	50-109	7
4-Chloroaniline	ug/L (ppb)	100	55	55	34-85	0
4-Chloro-3-methylphenol	ug/L (ppb)	50	77	69	54-114	11
2-Methylnaphthalene	ug/L (ppb)	50	78	74	53-113	5
Hexachlorocyclopentadiene	ug/L (ppb)	50	49	56	26-94	13
2,4,6-Trichlorophenol	ug/L (ppb)	50	86	86	46-114	0
2,4,5-Trichlorophenol	ug/L (ppb)	50	65	51 vo	57-122	24 vo
2-Chloronaphthalene	ug/L (ppb)	50	77	72	52-112	7
2-Nitroaniline	ug/L (ppb)	50	72	67	47-128	7
Dimethyl phthalate	ug/L (ppb)	50	77	72	55-116	7
Acenaphthylene	ug/L (ppb)	50	76	71	52-112	7
2,6-Dinitrotoluene	ug/L (ppb)	50	80	74	49-126	8
3-Nitroaniline	ug/L (ppb)	100	55	52	32-89	6
Acenaphthene	ug/L (ppb)	50	77	72	52-114	7
2,4-Dinitrophenol	ug/L (ppb)	50	77	70	29-130	10
Dibenzofuran	ug/L (ppb)	50	77	72	53-113	7
2,4-Dinitrotoluene	ug/L (ppb)	50	81	75	48-129	8
4-Nitrophenol	ug/L (ppb)	50	50	43	12-59	15
Diethyl phthalate	ug/L (ppb)	50	77	71	55-116	8
Fluorene	ug/L (ppb)	50	77	72	54-115	7
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	77	72	52-115	7
N-Nitrosodiphenylamine	ug/L (ppb)	50	74	69	51-112	7
4-Nitroaniline	ug/L (ppb)	100	65	61	42-115	6
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	81	74	40-128	9
4-Bromophenyl phenyl ether	ug/L (ppb)	50	76	71	53-114	7
Hexachlorobenzene	ug/L (ppb)	50	79	73	54-115	8
Pentachlorophenol	ug/L (ppb)	50	79	71	49-114	11
Phenanthrene	ug/L (ppb)	50	78	72	53-113	8
Anthracene	ug/L (ppb)	50	76	71	56-119	7
Carbazole	ug/L (ppb)	50	75	69	54-115	8
Di-n-butyl phthalate	ug/L (ppb)	50	77	70	54-115	10
Fluoranthene	ug/L (ppb)	50	76	70	55-116	8
Pyrene	ug/L (ppb)	50	75	68	54-121	10
Benzyl butyl phthalate	ug/L (ppb)	50	76	68	53-122	11
Benz(a)anthracene	ug/L (ppb)	50	73	67	52-114	9
Chrysene	ug/L (ppb)	50	79	72	54-119	9
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	74	67	54-122	10
Di-n-octyl phthalate	ug/L (ppb)	50	76	69	50-131	10
Benzo(a)pyrene	ug/L (ppb)	50	76	69	54-120	10
Benzo(b)fluoranthene	ug/L (ppb)	50	73	69	46-118	6
Benzo(k)fluoranthene	ug/L (ppb)	50	70	64	56-125	9
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	50	74	67	52-120	10
Dibenz(a,h)anthracene	ug/L (ppb)	50	76	68	54-122	11
Benzo(g,h,i)perylene	ug/L (ppb)	50	74	68	54-118	8

Date of Report: 11/10/11
Date Received: 10/27/11
Project: Crown Hill 100094, F&BI 110366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	91	91	64-100	0
Acenaphthylene	ug/L (ppb)	1	94	93	67-104	1
Acenaphthene	ug/L (ppb)	1	88	88	65-103	0
Fluorene	ug/L (ppb)	1	89	94	64-106	5
Phenanthrene	ug/L (ppb)	1	91	91	66-106	0
Anthracene	ug/L (ppb)	1	94	92	67-112	2
Fluoranthene	ug/L (ppb)	1	99	97	69-116	2
Pyrene	ug/L (ppb)	1	95	98	68-115	3
Benz(a)anthracene	ug/L (ppb)	1	90	90	59-100	0
Chrysene	ug/L (ppb)	1	94	96	66-103	2
Benzo(b)fluoranthene	ug/L (ppb)	1	97	98	59-114	1
Benzo(k)fluoranthene	ug/L (ppb)	1	94	92	55-111	2
Benzo(a)pyrene	ug/L (ppb)	1	100	98	54-111	2
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	103	98	35-124	5
Dibenz(a,h)anthracene	ug/L (ppb)	1	97	78	35-116	22 vo
Benzo(g,h,i)perylene	ug/L (ppb)	1	97	82	39-114	17

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

110366

SAMPLE CHAIN OF CUSTODY

ME 10/27/11 V4/BI4/D04

Page # _____ of _____

Send Report To Dana Cannon
Company Aspect Consulting
Address 401 2nd Ave. S, Suite 201
City, State, ZIP Seattle, WA 98104
Phone #(206) 328-7443 Fax # _____

SAMPLERS (signature) Molly Ravits
PROJECT NAME/NO. Crownhill 100094
PO#
REMARKS Diss. Metals NOT Field filtered

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH _____
Rush charges authorized by _____

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals As, Pb, Cu	Dissolved Metals As, Pb, Cu	PAHs by 8270 MOE				Notes
MW-1-102611	01 A-I	10/26/11	1140	H_2O	9	X			X	X		X	X	X				
MW-2-102611	02		1300			X			X	X		X	X	X				
MW-4-102611	03		1500			X			X	X		X	X	X				
MW-5-102611	04		1100			X			X	X		X	X	X				
MW-6-102611	05		1305			X			X	X		X	X	X				
MW-7-102611	06		1425			X			X	X		X	X	X				
MW-8-102611	07		—			X			X	X		X	X	X				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Molly Ravits	Molly Ravits	Aspect	10/27/11	1310
Received by: [signature]	Nhan Phan	FEBI	10/27/11	1310
Relinquished by:				
Received by:		Samples received at	4 °C	

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 1, 2012

Dana Cannon, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on January 16, 2012 from the Crownhill 100094, F&BI 201177 project. There are 25 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0201R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 16, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 201177 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
201177-01	MW-9-011612
201177-02	MW-5-011612

The acenaphthylene in the 8270D laboratory control sample duplicate failed the acceptance criteria. The data were flagged accordingly.

The 8270D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 02/01/12
Date Received: 01/16/12
Project: Crownhill 100094, F&BI 201177
Date Extracted: 01/19/12
Date Analyzed: 01/20/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-9-011612 201177-01	<50	<250	115
MW-5-011612 201177-02	2,100	610	106
Method Blank 02-091 MB2	<50	<250	102

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-9-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/20/12	Lab ID:	201177-01
Date Analyzed:	01/24/12	Data File:	201177-01.019
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	96	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-5-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/20/12	Lab ID:	201177-02
Date Analyzed:	01/24/12	Data File:	201177-02.022
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	72	60	125
Indium	78	60	125
Holmium	83	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/20/12	Lab ID:	I2-60 mb
Date Analyzed:	01/24/12	Data File:	I2-60 mb.017
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Indium	92	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/17/12	Lab ID:	201177-01
Date Analyzed:	01/17/12	Data File:	201177-01.043
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	92	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/17/12	Lab ID:	201177-02
Date Analyzed:	01/17/12	Data File:	201177-02.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	94	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	13.8
Arsenic	<1
Lead	1.35

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/17/12	Lab ID:	I2-45 mb
Date Analyzed:	01/17/12	Data File:	I2-45 mb.036
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	97	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/17/12	Lab ID:	201177-01
Date Analyzed:	01/17/12	Data File:	011714.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	1.2	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	11	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/17/12	Lab ID:	201177-02
Date Analyzed:	01/17/12	Data File:	011715.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	1.8
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	2.3	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/17/12	Lab ID:	02-0052 mb
Date Analyzed:	01/17/12	Data File:	011707.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-9-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/23/12	Lab ID:	201177-01
Date Analyzed:	01/30/12	Data File:	013009.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	52	32	162
Phenol-d6	35	10	170
Nitrobenzene-d5	83	50	150
2-Fluorobiphenyl	82	43	158
2,4,6-Tribromophenol	82	43	146
Terphenyl-d14	77	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-5-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/23/12	Lab ID:	201177-02
Date Analyzed:	01/30/12	Data File:	013010.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	32	162
Phenol-d6	41	10	170
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	90	43	158
2,4,6-Tribromophenol	95	43	146
Terphenyl-d14	88	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/23/12	Lab ID:	02-0108 mb
Date Analyzed:	01/30/12	Data File:	013008.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	50	32	162
Phenol-d6	36	10	170
Nitrobenzene-d5	86	50	150
2-Fluorobiphenyl	84	43	158
2,4,6-Tribromophenol	67	43	146
Terphenyl-d14	82	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-9-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/23/12	Lab ID:	201177-01
Date Analyzed:	01/24/12	Data File:	012410.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	78	50	150
Benzo(a)anthracene-d12	92	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-5-011612	Client:	Aspect Consulting, LLC
Date Received:	01/16/12	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/23/12	Lab ID:	201177-02
Date Analyzed:	01/24/12	Data File:	012418.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	96	50	150
Benzo(a)anthracene-d12	103	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201177
Date Extracted:	01/23/12	Lab ID:	02-0107 mb
Date Analyzed:	01/24/12	Data File:	012405.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	80	50	150
Benzo(a)anthracene-d12	74	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Date of Report: 02/01/12
Date Received: 01/16/12
Project: Crownhill 100094, F&BI 201177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	103	107	63-142	4

Date of Report: 02/01/12
Date Received: 01/16/12
Project: Crownhill 100094, F&BI 201177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 201177-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<5	99	92	50-144	7
Arsenic	ug/L (ppb)	10	<1	109	100	56-167	9
Lead	ug/L (ppb)	10	<1	102	97	76-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	99	66-134
Arsenic	ug/L (ppb)	10	95	55-128
Lead	ug/L (ppb)	10	98	67-135

Date of Report: 02/01/12
Date Received: 01/16/12
Project: Crownhill 100094, F&BI 201177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201176-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<1	99	96	50-144	3
Arsenic	ug/L (ppb)	10	1.47	103	97	56-167	6
Lead	ug/L (ppb)	10	<1	102	98	76-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	99	66-134
Arsenic	ug/L (ppb)	10	99	55-128
Lead	ug/L (ppb)	10	101	67-135

Date of Report: 02/01/12
Date Received: 01/16/12
Project: Crownhill 100094, F&BI 201177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 201177-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	105	10-172
Chloromethane	ug/L (ppb)	50	<10	102	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	105	36-166
Bromomethane	ug/L (ppb)	50	<1	104	47-169
Chloroethane	ug/L (ppb)	50	<1	112	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	110	44-165
Acetone	ug/L (ppb)	250	<10	98	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Methylene chloride	ug/L (ppb)	50	<5	91	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	106	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	98	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	99	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	112	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	1.2	108	71-127
Chloroform	ug/L (ppb)	50	<1	101	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	109	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	103	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	109	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	116	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	108	56-152
Benzene	ug/L (ppb)	50	<0.35	110	76-125
Trichloroethene	ug/L (ppb)	50	11	103 b	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	105	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	105	61-150
Dibromomethane	ug/L (ppb)	50	<1	102	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	111	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	113	72-132
Toluene	ug/L (ppb)	50	<1	105	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	108	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	102	68-131
2-Hexanone	ug/L (ppb)	250	<10	111	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	106	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	103	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	104	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	105	69-134
Chlorobenzene	ug/L (ppb)	50	<1	100	77-122
Ethylbenzene	ug/L (ppb)	50	<1	110	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	103	73-137
m,p-Xylene	ug/L (ppb)	100	<2	112	69-135
o-Xylene	ug/L (ppb)	50	<1	108	68-137
Styrene	ug/L (ppb)	50	<1	105	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	107	65-142
Bromoform	ug/L (ppb)	50	<1	107	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	116	58-144
Bromobenzene	ug/L (ppb)	50	<1	110	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	117	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	101	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	115	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	117	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	106	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	105	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	113	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	105	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	106	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	103	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	99	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	83	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	92	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	92	60-143
Naphthalene	ug/L (ppb)	50	<1	86	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	95	69-148

Date of Report: 02/01/12
Date Received: 01/16/12
Project: Crownhill 100094, F&BI 201177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	101	104	25-158	3
Chloromethane	ug/L (ppb)	50	96	95	45-156	1
Vinyl chloride	ug/L (ppb)	50	100	99	50-154	1
Bromomethane	ug/L (ppb)	50	97	95	55-143	2
Chloroethane	ug/L (ppb)	50	105	103	58-146	2
Trichlorofluoromethane	ug/L (ppb)	50	97	97	50-150	0
Acetone	ug/L (ppb)	250	92	90	60-155	2
1,1-Dichloroethene	ug/L (ppb)	50	94	94	67-136	0
Methylene chloride	ug/L (ppb)	50	86	86	39-148	0
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	101	101	64-147	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	93	94	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	94	94	79-121	0
2,2-Dichloropropane	ug/L (ppb)	50	111	109	55-143	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	106	106	80-123	0
Chloroform	ug/L (ppb)	50	94	94	80-121	0
2-Butanone (MEK)	ug/L (ppb)	250	106	104	57-149	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	91	91	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	100	100	83-130	0
1,1-Dichloropropene	ug/L (ppb)	50	110	111	77-129	1
Carbon tetrachloride	ug/L (ppb)	50	98	100	75-158	2
Benzene	ug/L (ppb)	50	107	107	69-134	0
Trichloroethene	ug/L (ppb)	50	97	98	80-120	1
1,2-Dichloropropane	ug/L (ppb)	50	101	102	77-123	1
Bromodichloromethane	ug/L (ppb)	50	98	99	81-133	1
Dibromomethane	ug/L (ppb)	50	97	100	82-125	3
4-Methyl-2-pentanone	ug/L (ppb)	250	108	109	70-140	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	108	110	82-132	2
Toluene	ug/L (ppb)	50	102	104	72-122	2
trans-1,3-Dichloropropene	ug/L (ppb)	50	102	104	80-136	2
1,1,2-Trichloroethane	ug/L (ppb)	50	97	98	75-124	1
2-Hexanone	ug/L (ppb)	250	103	103	64-152	0
1,3-Dichloropropane	ug/L (ppb)	50	102	104	76-126	2
Tetrachloroethene	ug/L (ppb)	50	102	105	76-121	3
Dibromochloromethane	ug/L (ppb)	50	99	101	84-133	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	100	102	82-125	2
Chlorobenzene	ug/L (ppb)	50	97	99	83-114	2
Ethylbenzene	ug/L (ppb)	50	104	106	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	95	96	84-127	1
m,p-Xylene	ug/L (ppb)	100	107	109	83-125	2
o-Xylene	ug/L (ppb)	50	102	104	86-121	2
Styrene	ug/L (ppb)	50	99	100	85-127	1
Isopropylbenzene	ug/L (ppb)	50	100	102	87-122	2
Bromoform	ug/L (ppb)	50	104	105	74-136	1
n-Propylbenzene	ug/L (ppb)	50	110	112	74-126	2
Bromobenzene	ug/L (ppb)	50	107	108	80-121	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	111	112	80-126	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	94	95	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	96	97	67-124	1
2-Chlorotoluene	ug/L (ppb)	50	108	110	77-127	2
4-Chlorotoluene	ug/L (ppb)	50	110	111	78-128	1
tert-Butylbenzene	ug/L (ppb)	50	100	102	85-127	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	99	100	82-125	1
sec-Butylbenzene	ug/L (ppb)	50	108	109	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	99	100	82-127	1
1,3-Dichlorobenzene	ug/L (ppb)	50	102	102	85-116	0
1,4-Dichlorobenzene	ug/L (ppb)	50	100	100	84-121	0
1,2-Dichlorobenzene	ug/L (ppb)	50	97	97	85-116	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	82	79	57-141	4
1,2,4-Trichlorobenzene	ug/L (ppb)	50	99	95	72-130	4
Hexachlorobutadiene	ug/L (ppb)	50	101	95	53-141	6
Naphthalene	ug/L (ppb)	50	91	86	64-133	6
1,2,3-Trichlorobenzene	ug/L (ppb)	50	104	98	65-136	6

Date of Report: 02/01/12
Date Received: 01/16/12
Project: Crownhill 100094, F&BI 201177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	50	47	18-52	6
Bis(2-chloroethyl) ether	ug/L (ppb)	50	87	84	52-113	4
2-Chlorophenol	ug/L (ppb)	50	88	84	50-110	5
1,3-Dichlorobenzene	ug/L (ppb)	50	87	86	45-109	1
1,4-Dichlorobenzene	ug/L (ppb)	50	88	87	44-118	1
1,2-Dichlorobenzene	ug/L (ppb)	50	89	87	46-116	2
Benzyl alcohol	ug/L (ppb)	50	80	75	42-100	6
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	87	84	51-124	4
2-Methylphenol	ug/L (ppb)	50	84	80	38-100	5
Hexachloroethane	ug/L (ppb)	50	88	87	42-117	1
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	92	88	48-124	4
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	80	76	48-87	5
Nitrobenzene	ug/L (ppb)	50	90	87	50-118	3
Isophorone	ug/L (ppb)	50	91	88	55-116	3
2-Nitrophenol	ug/L (ppb)	50	92	88	42-127	4
2,4-Dimethylphenol	ug/L (ppb)	50	74	73	45-100	1
Benzoic acid	ug/L (ppb)	75	25	11	10-46	78 vo
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	92	88	55-115	4
2,4-Dichlorophenol	ug/L (ppb)	50	90	86	55-113	5
1,2,4-Trichlorobenzene	ug/L (ppb)	50	86	84	50-109	2
Hexachlorobutadiene	ug/L (ppb)	50	89	87	50-109	2
4-Chloroaniline	ug/L (ppb)	100	65	61	34-85	6
4-Chloro-3-methylphenol	ug/L (ppb)	50	88	84	54-114	5
2-Methylnaphthalene	ug/L (ppb)	50	91	88	53-113	3
Hexachlorocyclopentadiene	ug/L (ppb)	50	69	64	26-94	8
2,4,6-Trichlorophenol	ug/L (ppb)	50	86	81	46-114	6
2,4,5-Trichlorophenol	ug/L (ppb)	50	89	82	57-122	8
2-Chloronaphthalene	ug/L (ppb)	50	90	84	52-112	7
2-Nitroaniline	ug/L (ppb)	50	86	81	47-128	6
Dimethyl phthalate	ug/L (ppb)	50	89	82	55-116	8
2,6-Dinitrotoluene	ug/L (ppb)	50	91	83	49-126	9
3-Nitroaniline	ug/L (ppb)	100	60	58	32-89	3
2,4-Dinitrophenol	ug/L (ppb)	50	84	60	29-130	33 vo
Dibenzofuran	ug/L (ppb)	50	89	84	53-113	6
2,4-Dinitrotoluene	ug/L (ppb)	50	93	85	48-129	9
4-Nitrophenol	ug/L (ppb)	50	58	53	12-59	9
Diethyl phthalate	ug/L (ppb)	50	84	78	55-116	7
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	90	83	52-115	8
N-Nitrosodiphenylamine	ug/L (ppb)	50	88	82	51-112	7
4-Nitroaniline	ug/L (ppb)	100	81	77	42-115	5
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	94	85	40-128	10
4-Bromophenyl phenyl ether	ug/L (ppb)	50	90	83	53-114	8
Hexachlorobenzene	ug/L (ppb)	50	91	84	54-115	8
Pentachlorophenol	ug/L (ppb)	50	78	69	49-114	12
Carbazole	ug/L (ppb)	50	88	81	54-115	8
Di-n-butyl phthalate	ug/L (ppb)	50	87	81	54-115	7
Benzyl butyl phthalate	ug/L (ppb)	50	86	78	53-122	10
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	86	77	54-122	11
Di-n-octyl phthalate	ug/L (ppb)	50	85	76	50-131	11

Date of Report: 02/01/12
Date Received: 01/16/12
Project: Crownhill 100094, F&BI 201177

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	74	68	64-100	8
Acenaphthylene	ug/L (ppb)	1	71	66 vo	67-104	7
Acenaphthene	ug/L (ppb)	1	76	70	65-103	8
Fluorene	ug/L (ppb)	1	72	68	64-106	6
Phenanthrene	ug/L (ppb)	1	77	70	66-106	10
Anthracene	ug/L (ppb)	1	76	69	67-112	10
Fluoranthene	ug/L (ppb)	1	81	70	69-116	15
Pyrene	ug/L (ppb)	1	69	69	68-115	0
Benz(a)anthracene	ug/L (ppb)	1	69	65	59-100	6
Chrysene	ug/L (ppb)	1	79	73	66-103	8
Benzo(b)fluoranthene	ug/L (ppb)	1	69	63	59-114	9
Benzo(k)fluoranthene	ug/L (ppb)	1	79	70	55-111	12
Benzo(a)pyrene	ug/L (ppb)	1	68	62	54-111	9
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	64	61	35-124	5
Dibenz(a,h)anthracene	ug/L (ppb)	1	68	64	35-116	6
Benzo(g,h,i)perylene	ug/L (ppb)	1	69	65	39-114	6

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

201177

SAMPLE CHAIN OF CUSTODY

ME 01-16-12

V1/AI5/C05

Page # 1 of 1

Send Report To Dana Cannon
Company Aspect Consulting
Address 401 2nd Ave. South Suite 201
City, State, ZIP Seattle, WA 98104
Phone #_____ Fax #_____

SAMPLERS (signature) M. Ravits
PROJECT NAME/NO. Crownhill 100094
PO#
REMARKS

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH_____
Rush charges authorized by

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Total Metals As, Pb, Cu	Diss. Metals As, Pb, Cu	PAHs by 8270 HOC				Notes
MW-9-011612	01 A-I	1/16/12	0955	H_2O	9	X			X	X		X	X	X				
MW-5-011612	02 A-I	↓	1000	↓	9	X			X	X		X	X	X				
												Samples received at 3.9 °C						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Molly Ravits	Molly Ravits	Aspect	1/16/12	1530
Received by:	Jay Shrivastava	FBT	↓	↓
Relinquished by:				
Received by:		Samples received at ___ °C NP		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 2, 2012

Dana Cannon, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on January 19, 2012 from the Crownhill 100094, F&BI 201193 project. There are 55 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0202R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 19, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 201193 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
201193-01	MW-7-011712
201193-02	MW-4-011712
201193-03	MW-10-011712
201193-04	MW-1-011712
201193-05	MW-2-011712
201193-06	MW-6-011712
201193-07	MW-11-011712
201193-08	MW-18-011712

The acenaphthylene in the 8270D laboratory control sample duplicate failed the acceptance criteria. The data were flagged accordingly.

The 8270D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193
Date Extracted: 01/24/12
Date Analyzed: 01/26/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-7-011712 201193-01	<50	<250	113
MW-4-011712 201193-02	<50	<250	111
MW-10-011712 201193-03	<50	<250	111
MW-1-011712 201193-04	<50	<250	112
MW-2-011712 201193-05	<50	<250	104
MW-6-011712 201193-06	<50	<250	105
MW-11-011712 201193-07	<50	<250	106
MW-18-011712 201193-08	<50	<250	109
Method Blank 02-112 MB	<50	<250	107

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-01
Date Analyzed:	01/24/12	Data File:	201193-01.023
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	90	60	125
Indium	93	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-02
Date Analyzed:	01/24/12	Data File:	201193-02.024
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	94	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	3.09
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-03
Date Analyzed:	01/24/12	Data File:	201193-03.025
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	95	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	6.17
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-04
Date Analyzed:	01/24/12	Data File:	201193-04.027
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	97	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-05
Date Analyzed:	01/24/12	Data File:	201193-05.028
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	95	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-06
Date Analyzed:	01/24/12	Data File:	201193-06.029
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	97	60	125
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	7.57
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-07
Date Analyzed:	01/24/12	Data File:	201193-07.030
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	99	60	125
Holmium	103	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-08
Date Analyzed:	01/24/12	Data File:	201193-08.031
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	97	60	125
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	I2-60 mb
Date Analyzed:	01/24/12	Data File:	I2-60 mb.017
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Indium	92	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-01
Date Analyzed:	01/23/12	Data File:	201193-01.011
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	93	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-02
Date Analyzed:	01/23/12	Data File:	201193-02.014
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	91	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	6.33
Arsenic	3.47
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-03
Date Analyzed:	01/23/12	Data File:	201193-03.015
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	90	60	125
Indium	89	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	6.12
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-04
Date Analyzed:	01/23/12	Data File:	201193-04.016
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	89	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	5.38
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-05
Date Analyzed:	01/23/12	Data File:	201193-05.017
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	92	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-06
Date Analyzed:	01/23/12	Data File:	201193-06.019
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	90	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	7.67
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-07
Date Analyzed:	01/23/12	Data File:	201193-07.020
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	92	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-08
Date Analyzed:	01/23/12	Data File:	201193-08.021
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	93	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	7.57
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	I2-59 mb
Date Analyzed:	01/23/12	Data File:	I2-59 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	97	60	125
Holmium	100	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-01
Date Analyzed:	01/31/12	Data File:	013122.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	106	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	1.1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-02
Date Analyzed:	01/31/12	Data File:	013123.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-03
Date Analyzed:	01/31/12	Data File:	013124.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-04
Date Analyzed:	01/31/12	Data File:	013125.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-05
Date Analyzed:	01/31/12	Data File:	013126.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-06
Date Analyzed:	01/31/12	Data File:	013127.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-07
Date Analyzed:	01/31/12	Data File:	013128.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-08
Date Analyzed:	01/31/12	Data File:	013121.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	02-0130 mb
Date Analyzed:	01/31/12	Data File:	013120.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	107	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-01
Date Analyzed:	01/30/12	Data File:	013011.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	86	50	150
2-Fluorobiphenyl	87	43	158
2,4,6-Tribromophenol	86	43	146
Terphenyl-d14	86	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-02
Date Analyzed:	01/30/12	Data File:	013012.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	32	162
Phenol-d6	40	10	170
Nitrobenzene-d5	90	50	150
2-Fluorobiphenyl	92	43	158
2,4,6-Tribromophenol	90	43	146
Terphenyl-d14	91	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-03
Date Analyzed:	01/30/12	Data File:	013013.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	90	43	158
2,4,6-Tribromophenol	89	43	146
Terphenyl-d14	91	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-04
Date Analyzed:	01/30/12	Data File:	013014.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	32	162
Phenol-d6	40	10	170
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	93	43	146
Terphenyl-d14	93	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-05
Date Analyzed:	01/30/12	Data File:	013015.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	85	50	150
2-Fluorobiphenyl	87	43	158
2,4,6-Tribromophenol	86	43	146
Terphenyl-d14	88	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-06
Date Analyzed:	01/31/12	Data File:	013016.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63	32	162
Phenol-d6	42	10	170
Nitrobenzene-d5	91	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	94	43	146
Terphenyl-d14	95	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-07
Date Analyzed:	01/31/12	Data File:	013017.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63	32	162
Phenol-d6	41	10	170
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	90	43	146
Terphenyl-d14	96	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-08
Date Analyzed:	01/31/12	Data File:	013018.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	65	32	162
Phenol-d6	42	10	170
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	95	43	146
Terphenyl-d14	95	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	02-0108 mb
Date Analyzed:	01/30/12	Data File:	013008.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	50	32	162
Phenol-d6	36	10	170
Nitrobenzene-d5	86	50	150
2-Fluorobiphenyl	84	43	158
2,4,6-Tribromophenol	67	43	146
Terphenyl-d14	82	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-01
Date Analyzed:	01/25/12	Data File:	012507.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	103	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-02
Date Analyzed:	01/25/12	Data File:	012508.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	100	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-03
Date Analyzed:	01/25/12	Data File:	012509.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	99	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.18
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-04
Date Analyzed:	01/25/12	Data File:	012510.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	101	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-05
Date Analyzed:	01/25/12	Data File:	012511.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	50	150
Benzo(a)anthracene-d12	96	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-06
Date Analyzed:	01/25/12	Data File:	012512.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	101	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-07
Date Analyzed:	01/25/12	Data File:	012513.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	103	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-08
Date Analyzed:	01/25/12	Data File:	012514.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	101	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	02-0107 mb
Date Analyzed:	01/24/12	Data File:	012405.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	80	50	150
Benzo(a)anthracene-d12	74	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	112	115	63-142	3

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 201177-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<5	99	92	50-144	7
Arsenic	ug/L (ppb)	10	<1	109	100	56-167	9
Lead	ug/L (ppb)	10	<1	102	97	76-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	99	66-134
Arsenic	ug/L (ppb)	10	95	55-128
Lead	ug/L (ppb)	10	98	67-135

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201193-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Copper	ug/L (ppb)	20	<5	105	50-144
Arsenic	ug/L (ppb)	10	<1	102	56-167
Lead	ug/L (ppb)	10	<1	110	76-125

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	107	66-134
Arsenic	ug/L (ppb)	10	98	55-128
Lead	ug/L (ppb)	10	106	67-135

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 201193-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	87	10-172
Chloromethane	ug/L (ppb)	50	<10	92	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	93	36-166
Bromomethane	ug/L (ppb)	50	<1	87	47-169
Chloroethane	ug/L (ppb)	50	<1	89	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	98	44-165
Acetone	ug/L (ppb)	250	<10	98	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	89	60-136
Methylene chloride	ug/L (ppb)	50	<5	86	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	98	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	93	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	97	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	91	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	71-127
Chloroform	ug/L (ppb)	50	<1	98	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	108	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	99	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	99	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	108	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	99	56-152
Benzene	ug/L (ppb)	50	<0.35	106	76-125
Trichloroethene	ug/L (ppb)	50	<1	93	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	102	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	99	61-150
Dibromomethane	ug/L (ppb)	50	<1	100	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	112	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	72-132
Toluene	ug/L (ppb)	50	<1	99	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	103	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	100	68-131
2-Hexanone	ug/L (ppb)	250	<10	113	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	106	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	100	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	101	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	103	69-134
Chlorobenzene	ug/L (ppb)	50	<1	99	77-122
Ethylbenzene	ug/L (ppb)	50	<1	105	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	100	73-137
m,p-Xylene	ug/L (ppb)	100	<2	107	69-135
o-Xylene	ug/L (ppb)	50	<1	107	68-137
Styrene	ug/L (ppb)	50	<1	101	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	104	65-142
Bromoform	ug/L (ppb)	50	<1	105	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	105	58-144
Bromobenzene	ug/L (ppb)	50	<1	100	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	98	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	95	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	96	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	105	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	107	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	100	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	98	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	98	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	101	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	101	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	96	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	101	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	97	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	105	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	90	60-143
Naphthalene	ug/L (ppb)	50	<1	102	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	105	69-148

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	106	103	25-158	3
Chloromethane	ug/L (ppb)	50	109	107	45-156	2
Vinyl chloride	ug/L (ppb)	50	103	100	50-154	3
Bromomethane	ug/L (ppb)	50	90	87	55-143	3
Chloroethane	ug/L (ppb)	50	90	88	58-146	2
Trichlorofluoromethane	ug/L (ppb)	50	93	90	50-150	3
Acetone	ug/L (ppb)	250	96	95	60-155	1
1,1-Dichloroethene	ug/L (ppb)	50	87	86	67-136	1
Methylene chloride	ug/L (ppb)	50	82	83	39-148	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	110	109	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	97	94	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	102	101	79-121	1
2,2-Dichloropropane	ug/L (ppb)	50	108	104	55-143	4
cis-1,2-Dichloroethene	ug/L (ppb)	50	113	111	80-123	2
Chloroform	ug/L (ppb)	50	103	102	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	115	113	57-149	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	102	100	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	106	104	83-130	2
1,1-Dichloropropene	ug/L (ppb)	50	119	116	77-129	3
Carbon tetrachloride	ug/L (ppb)	50	105	102	75-158	3
Benzene	ug/L (ppb)	50	114	112	69-134	2
Trichloroethene	ug/L (ppb)	50	100	98	80-120	2
1,2-Dichloropropane	ug/L (ppb)	50	113	111	77-123	2
Bromodichloromethane	ug/L (ppb)	50	106	104	81-133	2
Dibromomethane	ug/L (ppb)	50	107	104	82-125	3
4-Methyl-2-pentanone	ug/L (ppb)	250	116	114	70-140	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	118	115	82-132	3
Toluene	ug/L (ppb)	50	107	103	72-122	4
trans-1,3-Dichloropropene	ug/L (ppb)	50	108	106	80-136	2
1,1,2-Trichloroethane	ug/L (ppb)	50	105	102	75-124	3
2-Hexanone	ug/L (ppb)	250	115	113	64-152	2
1,3-Dichloropropane	ug/L (ppb)	50	111	110	76-126	1
Tetrachloroethene	ug/L (ppb)	50	111	108	76-121	3
Dibromochloromethane	ug/L (ppb)	50	108	106	84-133	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	111	110	82-125	1
Chlorobenzene	ug/L (ppb)	50	103	101	83-114	2
Ethylbenzene	ug/L (ppb)	50	111	107	77-124	4
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	103	100	84-127	3
m,p-Xylene	ug/L (ppb)	100	111	109	83-125	2
o-Xylene	ug/L (ppb)	50	113	109	86-121	4
Styrene	ug/L (ppb)	50	105	104	85-127	1
Isopropylbenzene	ug/L (ppb)	50	108	106	87-122	2
Bromoform	ug/L (ppb)	50	105	105	74-136	0
n-Propylbenzene	ug/L (ppb)	50	115	112	74-126	3
Bromobenzene	ug/L (ppb)	50	111	107	80-121	4
1,3,5-Trimethylbenzene	ug/L (ppb)	50	106	103	80-126	3
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	102	101	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	103	100	67-124	3
2-Chlorotoluene	ug/L (ppb)	50	116	113	77-127	3
4-Chlorotoluene	ug/L (ppb)	50	117	113	78-128	3
tert-Butylbenzene	ug/L (ppb)	50	109	107	85-127	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	105	102	82-125	3
sec-Butylbenzene	ug/L (ppb)	50	105	103	80-125	2
p-Isopropyltoluene	ug/L (ppb)	50	108	105	82-127	3
1,3-Dichlorobenzene	ug/L (ppb)	50	107	105	85-116	2
1,4-Dichlorobenzene	ug/L (ppb)	50	103	100	84-121	3
1,2-Dichlorobenzene	ug/L (ppb)	50	107	105	85-116	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	100	100	57-141	0
1,2,4-Trichlorobenzene	ug/L (ppb)	50	116	116	72-130	0
Hexachlorobutadiene	ug/L (ppb)	50	104	103	53-141	1
Naphthalene	ug/L (ppb)	50	110	110	64-133	0
1,2,3-Trichlorobenzene	ug/L (ppb)	50	113	114	65-136	1

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	50	47	18-52	6
Bis(2-chloroethyl) ether	ug/L (ppb)	50	87	84	52-113	4
2-Chlorophenol	ug/L (ppb)	50	88	84	50-110	5
1,3-Dichlorobenzene	ug/L (ppb)	50	87	86	45-109	1
1,4-Dichlorobenzene	ug/L (ppb)	50	88	87	44-118	1
1,2-Dichlorobenzene	ug/L (ppb)	50	89	87	46-116	2
Benzyl alcohol	ug/L (ppb)	50	80	75	42-100	6
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	87	84	51-124	4
2-Methylphenol	ug/L (ppb)	50	84	80	38-100	5
Hexachloroethane	ug/L (ppb)	50	88	87	42-117	1
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	92	88	48-124	4
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	80	76	48-87	5
Nitrobenzene	ug/L (ppb)	50	90	87	50-118	3
Isophorone	ug/L (ppb)	50	91	88	55-116	3
2-Nitrophenol	ug/L (ppb)	50	92	88	42-127	4
2,4-Dimethylphenol	ug/L (ppb)	50	74	73	45-100	1
Benzoic acid	ug/L (ppb)	75	25	11	10-46	78 vo
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	92	88	55-115	4
2,4-Dichlorophenol	ug/L (ppb)	50	90	86	55-113	5
1,2,4-Trichlorobenzene	ug/L (ppb)	50	86	84	50-109	2
Hexachlorobutadiene	ug/L (ppb)	50	89	87	50-109	2
4-Chloroaniline	ug/L (ppb)	100	65	61	34-85	6
4-Chloro-3-methylphenol	ug/L (ppb)	50	88	84	54-114	5
2-Methylnaphthalene	ug/L (ppb)	50	91	88	53-113	3
Hexachlorocyclopentadiene	ug/L (ppb)	50	69	64	26-94	8
2,4,6-Trichlorophenol	ug/L (ppb)	50	86	81	46-114	6
2,4,5-Trichlorophenol	ug/L (ppb)	50	89	82	57-122	8
2-Chloronaphthalene	ug/L (ppb)	50	90	84	52-112	7
2-Nitroaniline	ug/L (ppb)	50	86	81	47-128	6
Dimethyl phthalate	ug/L (ppb)	50	89	82	55-116	8
2,6-Dinitrotoluene	ug/L (ppb)	50	91	83	49-126	9
3-Nitroaniline	ug/L (ppb)	100	60	58	32-89	3
2,4-Dinitrophenol	ug/L (ppb)	50	84	60	29-130	33 vo
Dibenzofuran	ug/L (ppb)	50	89	84	53-113	6
2,4-Dinitrotoluene	ug/L (ppb)	50	93	85	48-129	9
4-Nitrophenol	ug/L (ppb)	50	58	53	12-59	9
Diethyl phthalate	ug/L (ppb)	50	84	78	55-116	7
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	90	83	52-115	8
N-Nitrosodiphenylamine	ug/L (ppb)	50	88	82	51-112	7
4-Nitroaniline	ug/L (ppb)	100	81	77	42-115	5
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	94	85	40-128	10
4-Bromophenyl phenyl ether	ug/L (ppb)	50	90	83	53-114	8
Hexachlorobenzene	ug/L (ppb)	50	91	84	54-115	8
Pentachlorophenol	ug/L (ppb)	50	78	69	49-114	12
Carbazole	ug/L (ppb)	50	88	81	54-115	8
Di-n-butyl phthalate	ug/L (ppb)	50	87	81	54-115	7
Benzyl butyl phthalate	ug/L (ppb)	50	86	78	53-122	10
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	86	77	54-122	11
Di-n-octyl phthalate	ug/L (ppb)	50	85	76	50-131	11

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	74	68	64-100	8
Acenaphthylene	ug/L (ppb)	1	71	66 vo	67-104	7
Acenaphthene	ug/L (ppb)	1	76	70	65-103	8
Fluorene	ug/L (ppb)	1	72	68	64-106	6
Phenanthrene	ug/L (ppb)	1	77	70	66-106	10
Anthracene	ug/L (ppb)	1	76	69	67-112	10
Fluoranthene	ug/L (ppb)	1	81	70	69-116	15
Pyrene	ug/L (ppb)	1	69	69	68-115	0
Benz(a)anthracene	ug/L (ppb)	1	69	65	59-100	6
Chrysene	ug/L (ppb)	1	79	73	66-103	8
Benzo(b)fluoranthene	ug/L (ppb)	1	69	63	59-114	9
Benzo(k)fluoranthene	ug/L (ppb)	1	79	70	55-111	12
Benzo(a)pyrene	ug/L (ppb)	1	68	62	54-111	9
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	64	61	35-124	5
Dibenz(a,h)anthracene	ug/L (ppb)	1	68	64	35-116	6
Benzo(g,h,i)perylene	ug/L (ppb)	1	69	65	39-114	6

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

1/19/12 MG. V_4/SI_4/CO_3

20193

Page # 1 of 1

Send Report To Dana Cannon
Company Aspect Consulting, LLC
Address 401 2nd Ave. South
City, State, ZIP Seattle, WA 98104
Phone # _____ Fax # _____

SAMPLERS (signature) M. Ravits
PROJECT NAME/NO. Crown Hill 100094
PO#
REMARKS Diss. metals are field filtered

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH _____
Rush charges authorized by _____

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	total metals As, Pb, Cu	Diss. metals As, Pb, Cu	PAHs by 8270 Mod				Notes
MW-7-011712	01	1/17/12	1005	H_2O	9	X			X	X		X	X	X				
MW-4-011712	02		1020		9	X			X	X		X	X	X				Notify shannon labels pb
MW-10-011712	03		1125		9	X			X	X		X	X	X				
MW-1-011712	04		1130		9	X			X	X		X	X	X				
MW-2-011712	05		1245		9	X			X	X		X	X	X				
MW-6-011712	06		1250		9	X			X	X		X	X	X				
MW-11-011712	07		1410		9	X			X	X		X	X	X				
MW-18-011712	08		—		9	X			X	X		X	X	X				

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Molly Ravits	Molly Ravits	Aspect	1/19/12	0800
Received by: Jim Bruya	James Bruya	F&B	1/19/12	9:30
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 2, 2012

Dana Cannon, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on January 19, 2012 from the Crownhill 100094, F&BI 201193 project. There are 55 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0202R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 19, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 201193 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
201193-01	MW-7-011712
201193-02	MW-4-011712
201193-03	MW-10-011712
201193-04	MW-1-011712
201193-05	MW-2-011712
201193-06	MW-6-011712
201193-07	MW-11-011712
201193-08	MW-18-011712

The acenaphthylene in the 8270D laboratory control sample duplicate failed the acceptance criteria. The data were flagged accordingly.

The 8270D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193
Date Extracted: 01/24/12
Date Analyzed: 01/26/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-7-011712 201193-01	<50	<250	113
MW-4-011712 201193-02	<50	<250	111
MW-10-011712 201193-03	<50	<250	111
MW-1-011712 201193-04	<50	<250	112
MW-2-011712 201193-05	<50	<250	104
MW-6-011712 201193-06	<50	<250	105
MW-11-011712 201193-07	<50	<250	106
MW-18-011712 201193-08	<50	<250	109
Method Blank 02-112 MB	<50	<250	107

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-01
Date Analyzed:	01/24/12	Data File:	201193-01.023
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	90	60	125
Indium	93	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-02
Date Analyzed:	01/24/12	Data File:	201193-02.024
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	94	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	3.09
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-03
Date Analyzed:	01/24/12	Data File:	201193-03.025
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	95	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	6.17
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-04
Date Analyzed:	01/24/12	Data File:	201193-04.027
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	97	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-05
Date Analyzed:	01/24/12	Data File:	201193-05.028
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	95	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-06
Date Analyzed:	01/24/12	Data File:	201193-06.029
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	97	60	125
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	7.57
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-07
Date Analyzed:	01/24/12	Data File:	201193-07.030
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	99	60	125
Holmium	103	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-08
Date Analyzed:	01/24/12	Data File:	201193-08.031
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	97	60	125
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	I2-60 mb
Date Analyzed:	01/24/12	Data File:	I2-60 mb.017
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Indium	92	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-01
Date Analyzed:	01/23/12	Data File:	201193-01.011
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	93	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-02
Date Analyzed:	01/23/12	Data File:	201193-02.014
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	91	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	6.33
Arsenic	3.47
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-03
Date Analyzed:	01/23/12	Data File:	201193-03.015
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	90	60	125
Indium	89	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	6.12
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-04
Date Analyzed:	01/23/12	Data File:	201193-04.016
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	89	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	5.38
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-05
Date Analyzed:	01/23/12	Data File:	201193-05.017
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	92	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-06
Date Analyzed:	01/23/12	Data File:	201193-06.019
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	90	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	7.67
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-07
Date Analyzed:	01/23/12	Data File:	201193-07.020
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	92	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	201193-08
Date Analyzed:	01/23/12	Data File:	201193-08.021
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	93	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	7.57
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/20/12	Lab ID:	I2-59 mb
Date Analyzed:	01/23/12	Data File:	I2-59 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	btb

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	97	60	125
Holmium	100	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<5
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-01
Date Analyzed:	01/31/12	Data File:	013122.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	106	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	1.1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-02
Date Analyzed:	01/31/12	Data File:	013123.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-03
Date Analyzed:	01/31/12	Data File:	013124.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-04
Date Analyzed:	01/31/12	Data File:	013125.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-05
Date Analyzed:	01/31/12	Data File:	013126.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-06
Date Analyzed:	01/31/12	Data File:	013127.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-07
Date Analyzed:	01/31/12	Data File:	013128.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	201193-08
Date Analyzed:	01/31/12	Data File:	013121.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/31/12	Lab ID:	02-0130 mb
Date Analyzed:	01/31/12	Data File:	013120.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	107	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-01
Date Analyzed:	01/30/12	Data File:	013011.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	86	50	150
2-Fluorobiphenyl	87	43	158
2,4,6-Tribromophenol	86	43	146
Terphenyl-d14	86	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-02
Date Analyzed:	01/30/12	Data File:	013012.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	32	162
Phenol-d6	40	10	170
Nitrobenzene-d5	90	50	150
2-Fluorobiphenyl	92	43	158
2,4,6-Tribromophenol	90	43	146
Terphenyl-d14	91	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-03
Date Analyzed:	01/30/12	Data File:	013013.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	90	43	158
2,4,6-Tribromophenol	89	43	146
Terphenyl-d14	91	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-04
Date Analyzed:	01/30/12	Data File:	013014.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	32	162
Phenol-d6	40	10	170
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	93	43	146
Terphenyl-d14	93	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-05
Date Analyzed:	01/30/12	Data File:	013015.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	85	50	150
2-Fluorobiphenyl	87	43	158
2,4,6-Tribromophenol	86	43	146
Terphenyl-d14	88	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-06
Date Analyzed:	01/31/12	Data File:	013016.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63	32	162
Phenol-d6	42	10	170
Nitrobenzene-d5	91	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	94	43	146
Terphenyl-d14	95	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-07
Date Analyzed:	01/31/12	Data File:	013017.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63	32	162
Phenol-d6	41	10	170
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	90	43	146
Terphenyl-d14	96	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-08
Date Analyzed:	01/31/12	Data File:	013018.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	65	32	162
Phenol-d6	42	10	170
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	95	43	146
Terphenyl-d14	95	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	02-0108 mb
Date Analyzed:	01/30/12	Data File:	013008.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	50	32	162
Phenol-d6	36	10	170
Nitrobenzene-d5	86	50	150
2-Fluorobiphenyl	84	43	158
2,4,6-Tribromophenol	67	43	146
Terphenyl-d14	82	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-7-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-01
Date Analyzed:	01/25/12	Data File:	012507.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	103	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-02
Date Analyzed:	01/25/12	Data File:	012508.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	100	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-10-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-03
Date Analyzed:	01/25/12	Data File:	012509.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	99	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.18
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-04
Date Analyzed:	01/25/12	Data File:	012510.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	101	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-05
Date Analyzed:	01/25/12	Data File:	012511.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	50	150
Benzo(a)anthracene-d12	96	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-6-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-06
Date Analyzed:	01/25/12	Data File:	012512.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	101	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-11-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-07
Date Analyzed:	01/25/12	Data File:	012513.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	103	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-18-011712	Client:	Aspect Consulting, LLC
Date Received:	01/19/12	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	201193-08
Date Analyzed:	01/25/12	Data File:	012514.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	101	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 201193
Date Extracted:	01/23/12	Lab ID:	02-0107 mb
Date Analyzed:	01/24/12	Data File:	012405.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	80	50	150
Benzo(a)anthracene-d12	74	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1 jl
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	112	115	63-142	3

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 201177-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<5	99	92	50-144	7
Arsenic	ug/L (ppb)	10	<1	109	100	56-167	9
Lead	ug/L (ppb)	10	<1	102	97	76-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	99	66-134
Arsenic	ug/L (ppb)	10	95	55-128
Lead	ug/L (ppb)	10	98	67-135

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201193-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Copper	ug/L (ppb)	20	<5	105	50-144
Arsenic	ug/L (ppb)	10	<1	102	56-167
Lead	ug/L (ppb)	10	<1	110	76-125

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	107	66-134
Arsenic	ug/L (ppb)	10	98	55-128
Lead	ug/L (ppb)	10	106	67-135

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 201193-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	87	10-172
Chloromethane	ug/L (ppb)	50	<10	92	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	93	36-166
Bromomethane	ug/L (ppb)	50	<1	87	47-169
Chloroethane	ug/L (ppb)	50	<1	89	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	98	44-165
Acetone	ug/L (ppb)	250	<10	98	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	89	60-136
Methylene chloride	ug/L (ppb)	50	<5	86	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	98	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	93	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	97	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	91	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	71-127
Chloroform	ug/L (ppb)	50	<1	98	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	108	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	99	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	99	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	108	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	99	56-152
Benzene	ug/L (ppb)	50	<0.35	106	76-125
Trichloroethene	ug/L (ppb)	50	<1	93	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	102	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	99	61-150
Dibromomethane	ug/L (ppb)	50	<1	100	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	112	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	72-132
Toluene	ug/L (ppb)	50	<1	99	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	103	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	100	68-131
2-Hexanone	ug/L (ppb)	250	<10	113	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	106	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	100	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	101	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	103	69-134
Chlorobenzene	ug/L (ppb)	50	<1	99	77-122
Ethylbenzene	ug/L (ppb)	50	<1	105	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	100	73-137
m,p-Xylene	ug/L (ppb)	100	<2	107	69-135
o-Xylene	ug/L (ppb)	50	<1	107	68-137
Styrene	ug/L (ppb)	50	<1	101	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	104	65-142
Bromoform	ug/L (ppb)	50	<1	105	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	105	58-144
Bromobenzene	ug/L (ppb)	50	<1	100	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	98	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	95	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	96	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	105	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	107	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	100	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	98	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	98	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	101	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	101	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	96	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	101	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	97	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	105	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	90	60-143
Naphthalene	ug/L (ppb)	50	<1	102	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	105	69-148

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	106	103	25-158	3
Chloromethane	ug/L (ppb)	50	109	107	45-156	2
Vinyl chloride	ug/L (ppb)	50	103	100	50-154	3
Bromomethane	ug/L (ppb)	50	90	87	55-143	3
Chloroethane	ug/L (ppb)	50	90	88	58-146	2
Trichlorofluoromethane	ug/L (ppb)	50	93	90	50-150	3
Acetone	ug/L (ppb)	250	96	95	60-155	1
1,1-Dichloroethene	ug/L (ppb)	50	87	86	67-136	1
Methylene chloride	ug/L (ppb)	50	82	83	39-148	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	110	109	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	97	94	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	102	101	79-121	1
2,2-Dichloropropane	ug/L (ppb)	50	108	104	55-143	4
cis-1,2-Dichloroethene	ug/L (ppb)	50	113	111	80-123	2
Chloroform	ug/L (ppb)	50	103	102	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	115	113	57-149	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	102	100	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	106	104	83-130	2
1,1-Dichloropropene	ug/L (ppb)	50	119	116	77-129	3
Carbon tetrachloride	ug/L (ppb)	50	105	102	75-158	3
Benzene	ug/L (ppb)	50	114	112	69-134	2
Trichloroethene	ug/L (ppb)	50	100	98	80-120	2
1,2-Dichloropropane	ug/L (ppb)	50	113	111	77-123	2
Bromodichloromethane	ug/L (ppb)	50	106	104	81-133	2
Dibromomethane	ug/L (ppb)	50	107	104	82-125	3
4-Methyl-2-pentanone	ug/L (ppb)	250	116	114	70-140	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	118	115	82-132	3
Toluene	ug/L (ppb)	50	107	103	72-122	4
trans-1,3-Dichloropropene	ug/L (ppb)	50	108	106	80-136	2
1,1,2-Trichloroethane	ug/L (ppb)	50	105	102	75-124	3
2-Hexanone	ug/L (ppb)	250	115	113	64-152	2
1,3-Dichloropropane	ug/L (ppb)	50	111	110	76-126	1
Tetrachloroethene	ug/L (ppb)	50	111	108	76-121	3
Dibromochloromethane	ug/L (ppb)	50	108	106	84-133	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	111	110	82-125	1
Chlorobenzene	ug/L (ppb)	50	103	101	83-114	2
Ethylbenzene	ug/L (ppb)	50	111	107	77-124	4
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	103	100	84-127	3
m,p-Xylene	ug/L (ppb)	100	111	109	83-125	2
o-Xylene	ug/L (ppb)	50	113	109	86-121	4
Styrene	ug/L (ppb)	50	105	104	85-127	1
Isopropylbenzene	ug/L (ppb)	50	108	106	87-122	2
Bromoform	ug/L (ppb)	50	105	105	74-136	0
n-Propylbenzene	ug/L (ppb)	50	115	112	74-126	3
Bromobenzene	ug/L (ppb)	50	111	107	80-121	4
1,3,5-Trimethylbenzene	ug/L (ppb)	50	106	103	80-126	3
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	102	101	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	103	100	67-124	3
2-Chlorotoluene	ug/L (ppb)	50	116	113	77-127	3
4-Chlorotoluene	ug/L (ppb)	50	117	113	78-128	3
tert-Butylbenzene	ug/L (ppb)	50	109	107	85-127	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	105	102	82-125	3
sec-Butylbenzene	ug/L (ppb)	50	105	103	80-125	2
p-Isopropyltoluene	ug/L (ppb)	50	108	105	82-127	3
1,3-Dichlorobenzene	ug/L (ppb)	50	107	105	85-116	2
1,4-Dichlorobenzene	ug/L (ppb)	50	103	100	84-121	3
1,2-Dichlorobenzene	ug/L (ppb)	50	107	105	85-116	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	100	100	57-141	0
1,2,4-Trichlorobenzene	ug/L (ppb)	50	116	116	72-130	0
Hexachlorobutadiene	ug/L (ppb)	50	104	103	53-141	1
Naphthalene	ug/L (ppb)	50	110	110	64-133	0
1,2,3-Trichlorobenzene	ug/L (ppb)	50	113	114	65-136	1

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	50	47	18-52	6
Bis(2-chloroethyl) ether	ug/L (ppb)	50	87	84	52-113	4
2-Chlorophenol	ug/L (ppb)	50	88	84	50-110	5
1,3-Dichlorobenzene	ug/L (ppb)	50	87	86	45-109	1
1,4-Dichlorobenzene	ug/L (ppb)	50	88	87	44-118	1
1,2-Dichlorobenzene	ug/L (ppb)	50	89	87	46-116	2
Benzyl alcohol	ug/L (ppb)	50	80	75	42-100	6
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	87	84	51-124	4
2-Methylphenol	ug/L (ppb)	50	84	80	38-100	5
Hexachloroethane	ug/L (ppb)	50	88	87	42-117	1
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	92	88	48-124	4
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	80	76	48-87	5
Nitrobenzene	ug/L (ppb)	50	90	87	50-118	3
Isophorone	ug/L (ppb)	50	91	88	55-116	3
2-Nitrophenol	ug/L (ppb)	50	92	88	42-127	4
2,4-Dimethylphenol	ug/L (ppb)	50	74	73	45-100	1
Benzoic acid	ug/L (ppb)	75	25	11	10-46	78 vo
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	92	88	55-115	4
2,4-Dichlorophenol	ug/L (ppb)	50	90	86	55-113	5
1,2,4-Trichlorobenzene	ug/L (ppb)	50	86	84	50-109	2
Hexachlorobutadiene	ug/L (ppb)	50	89	87	50-109	2
4-Chloroaniline	ug/L (ppb)	100	65	61	34-85	6
4-Chloro-3-methylphenol	ug/L (ppb)	50	88	84	54-114	5
2-Methylnaphthalene	ug/L (ppb)	50	91	88	53-113	3
Hexachlorocyclopentadiene	ug/L (ppb)	50	69	64	26-94	8
2,4,6-Trichlorophenol	ug/L (ppb)	50	86	81	46-114	6
2,4,5-Trichlorophenol	ug/L (ppb)	50	89	82	57-122	8
2-Chloronaphthalene	ug/L (ppb)	50	90	84	52-112	7
2-Nitroaniline	ug/L (ppb)	50	86	81	47-128	6
Dimethyl phthalate	ug/L (ppb)	50	89	82	55-116	8
2,6-Dinitrotoluene	ug/L (ppb)	50	91	83	49-126	9
3-Nitroaniline	ug/L (ppb)	100	60	58	32-89	3
2,4-Dinitrophenol	ug/L (ppb)	50	84	60	29-130	33 vo
Dibenzofuran	ug/L (ppb)	50	89	84	53-113	6
2,4-Dinitrotoluene	ug/L (ppb)	50	93	85	48-129	9
4-Nitrophenol	ug/L (ppb)	50	58	53	12-59	9
Diethyl phthalate	ug/L (ppb)	50	84	78	55-116	7
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	90	83	52-115	8
N-Nitrosodiphenylamine	ug/L (ppb)	50	88	82	51-112	7
4-Nitroaniline	ug/L (ppb)	100	81	77	42-115	5
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	94	85	40-128	10
4-Bromophenyl phenyl ether	ug/L (ppb)	50	90	83	53-114	8
Hexachlorobenzene	ug/L (ppb)	50	91	84	54-115	8
Pentachlorophenol	ug/L (ppb)	50	78	69	49-114	12
Carbazole	ug/L (ppb)	50	88	81	54-115	8
Di-n-butyl phthalate	ug/L (ppb)	50	87	81	54-115	7
Benzyl butyl phthalate	ug/L (ppb)	50	86	78	53-122	10
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	86	77	54-122	11
Di-n-octyl phthalate	ug/L (ppb)	50	85	76	50-131	11

Date of Report: 02/02/12
Date Received: 01/19/12
Project: Crownhill 100094, F&BI 201193

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	74	68	64-100	8
Acenaphthylene	ug/L (ppb)	1	71	66 vo	67-104	7
Acenaphthene	ug/L (ppb)	1	76	70	65-103	8
Fluorene	ug/L (ppb)	1	72	68	64-106	6
Phenanthrene	ug/L (ppb)	1	77	70	66-106	10
Anthracene	ug/L (ppb)	1	76	69	67-112	10
Fluoranthene	ug/L (ppb)	1	81	70	69-116	15
Pyrene	ug/L (ppb)	1	69	69	68-115	0
Benz(a)anthracene	ug/L (ppb)	1	69	65	59-100	6
Chrysene	ug/L (ppb)	1	79	73	66-103	8
Benzo(b)fluoranthene	ug/L (ppb)	1	69	63	59-114	9
Benzo(k)fluoranthene	ug/L (ppb)	1	79	70	55-111	12
Benzo(a)pyrene	ug/L (ppb)	1	68	62	54-111	9
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	64	61	35-124	5
Dibenz(a,h)anthracene	ug/L (ppb)	1	68	64	35-116	6
Benzo(g,h,i)perylene	ug/L (ppb)	1	69	65	39-114	6

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

1/19/12 MG. V_4/SI_4/CO_3

20193

Page # 1 of 1

Send Report To Dana Cannon
Company Aspect Consulting, LLC
Address 401 2nd Ave. South
City, State, ZIP Seattle, WA 98104
Phone # _____ Fax # _____

SAMPLERS (signature) M. Ravits
PROJECT NAME/NO. Crown Hill 100094
PO#
REMARKS Diss. metals are field filtered

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH _____
Rush charges authorized by _____

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	total metals As, Pb, Cu	Diss. metals As, Pb, Cu	PAHs by 8270 Mod				Notes
MW-7-011712	01	1/17/12	1005	H_2O	9	X			X	X		X	X	X				
MW-4-011712	02		1020		9	X			X	X		X	X	X				Notify shannon labels pb
MW-10-011712	03		1125		9	X			X	X		X	X	X				
MW-1-011712	04		1130		9	X			X	X		X	X	X				
MW-2-011712	05		1245		9	X			X	X		X	X	X				
MW-6-011712	06		1250		9	X			X	X		X	X	X				
MW-11-011712	07		1410		9	X			X	X		X	X	X				
MW-18-011712	08		—		9	X			X	X		X	X	X				

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Molly Ravits	Molly Ravits	Aspect	1/19/12	0800
Received by: Jim Bruya	James Bruya	F&B	1/19/12	9:30
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

April 27, 2012

Dana Cannon, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on April 13, 2012 from the Crownhill, 100094, F&BI 204214 project. There are 68 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0427R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 13, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill, 100094, F&BI 204214 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
204214-01	MW-9-041212
204214-02	MW-2-041212
204214-03	MW-4-041212
204214-04	MW-5-041212
204214-05	MW-7-041312
204214-06	MW-1-041312
204214-07	MW-6-041312
204214-08	MW-10-041312
204214-09	MW-11-041312
204214-10	MW-18-041312

The 8270D calibration verification for benzoic acid was outside of laboratory acceptance criteria. The results were flagged accordingly.

Several compounds in the 8270D SIM laboratory control sample and duplicate exceeded control limits. The compounds were not detected, therefore the data were considered acceptable.

All quality control requirements were acceptable.

Date of Report: 04/27/12
Date Received: 04/13/12
Project: Crownhill, 100094, F&BI 204214
Date Extracted: 04/17/12
Date Analyzed: 04/17/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-9-041212 204214-01	<50	<250	94
MW-2-041212 204214-02	<50	<250	104
MW-4-041212 204214-03	<50	<250	102
MW-5-041212 204214-04	2,300 x	990 x	112
MW-7-041312 204214-05	<50	<250	108
MW-1-041312 204214-06	<50	<250	93
MW-6-041312 204214-07	<50	<250	100
MW-10-041312 204214-08	<50	<250	98
MW-11-041312 204214-09	<50	<250	116
MW-18-041312 204214-10	<50	<250	99
Method Blank 02-644 MB	<50	<250	91

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-9-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-01
Date Analyzed:	04/17/12	Data File:	204214-01.034
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	80	60	125
Indium	78	60	125
Holmium	84	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.31
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-2-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-02
Date Analyzed:	04/17/12	Data File:	204214-02.035
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	91	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-4-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-03
Date Analyzed:	04/17/12	Data File:	204214-03.036
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	85	60	125
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	2.70
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-5-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-04
Date Analyzed:	04/17/12	Data File:	204214-04.037
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	83	60	125
Indium	84	60	125
Holmium	88	60	125

Analyte:	Concentration ug/L (ppb)
Copper	4.96
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-7-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-05
Date Analyzed:	04/17/12	Data File:	204214-05.038
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	90	60	125
Indium	91	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-1-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-06
Date Analyzed:	04/17/12	Data File:	204214-06.040
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	90	60	125
Indium	93	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-6-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-07
Date Analyzed:	04/17/12	Data File:	204214-07.041
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	90	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	9.15
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-10-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-08
Date Analyzed:	04/17/12	Data File:	204214-08.042
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Indium	88	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	5.20
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-09
Date Analyzed:	04/17/12	Data File:	204214-09.043
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	95	60	125
Holmium	102	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-18-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-10
Date Analyzed:	04/17/12	Data File:	204214-10.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	93	60	125
Holmium	102	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	I2-253 mb
Date Analyzed:	04/17/12	Data File:	I2-253 mb.026
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	97	60	125
Indium	101	60	125
Holmium	107	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-01
Date Analyzed:	04/17/12	Data File:	204214-01.010
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	95	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.63
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-02
Date Analyzed:	04/17/12	Data File:	204214-02.013
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	94	60	125
Indium	95	60	125
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-03
Date Analyzed:	04/17/12	Data File:	204214-03.014
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	97	60	125
Holmium	103	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	2.76
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-04
Date Analyzed:	04/17/12	Data File:	204214-04.015
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	84	60	125
Indium	87	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Copper	8.78
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-05
Date Analyzed:	04/17/12	Data File:	204214-05.016
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	96	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-06
Date Analyzed:	04/17/12	Data File:	204214-06.017
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	93	60	125
Holmium	100	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.54
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-07
Date Analyzed:	04/17/12	Data File:	204214-07.019
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	92	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	9.93
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-08
Date Analyzed:	04/17/12	Data File:	204214-08.020
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	93	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	5.10
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-09
Date Analyzed:	04/17/12	Data File:	204214-09.021
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	96	60	125
Holmium	103	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-18-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-10
Date Analyzed:	04/17/12	Data File:	204214-10.022
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	88	60	125
Indium	93	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.46
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	I2-252 mb
Date Analyzed:	04/17/12	Data File:	I2-252 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	98	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-9-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-01
Date Analyzed:	04/19/12	Data File:	041906.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	76	50	150
Benzo(a)anthracene-d12	102	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-02
Date Analyzed:	04/19/12	Data File:	041907.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	50	150
Benzo(a)anthracene-d12	120	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-03
Date Analyzed:	04/19/12	Data File:	041908.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	89	50	150
Benzo(a)anthracene-d12	113	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-5-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-04
Date Analyzed:	04/19/12	Data File:	041909.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	114	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-7-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-05
Date Analyzed:	04/19/12	Data File:	041910.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	102	50	150
Benzo(a)anthracene-d12	103	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-06
Date Analyzed:	04/19/12	Data File:	041911.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	101	50	150
Benzo(a)anthracene-d12	114	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-6-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-07
Date Analyzed:	04/19/12	Data File:	041912.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	109	50	150
Benzo(a)anthracene-d12	102	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-10-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-08
Date Analyzed:	04/19/12	Data File:	041913.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	111	50	150
Benzo(a)anthracene-d12	112	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.21
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-11-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-09
Date Analyzed:	04/19/12	Data File:	041914.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	107	50	150
Benzo(a)anthracene-d12	92	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.30
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-18-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-10
Date Analyzed:	04/20/12	Data File:	042017.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	104	50	150
Benzo(a)anthracene-d12	109	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	02-0651 mb
Date Analyzed:	04/19/12	Data File:	041905.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	102	50	150
Benzo(a)anthracene-d12	126	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	204214-01
Date Analyzed:	04/17/12	Data File:	041724.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	1.6	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	11	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	204214-02
Date Analyzed:	04/16/12	Data File:	041625.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	204214-03
Date Analyzed:	04/17/12	Data File:	041708.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	204214-04
Date Analyzed:	04/17/12	Data File:	041709.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	2.2
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	2.2	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	204214-05
Date Analyzed:	04/17/12	Data File:	041718A.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	107	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	1.8	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	204214-06
Date Analyzed:	04/17/12	Data File:	041719.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	204214-07
Date Analyzed:	04/17/12	Data File:	041720.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	106	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	204214-08
Date Analyzed:	04/17/12	Data File:	041721.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	204214-09
Date Analyzed:	04/17/12	Data File:	041722.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-18-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	204214-10
Date Analyzed:	04/17/12	Data File:	041723.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/17/12	Lab ID:	02-0544 mb
Date Analyzed:	04/17/12	Data File:	041707.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/16/12	Lab ID:	02-0543 mb
Date Analyzed:	04/16/12	Data File:	041619.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-9-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-01
Date Analyzed:	04/24/12	Data File:	042414.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	32	162
Phenol-d6	39	10	170
Nitrobenzene-d5	98	50	150
2-Fluorobiphenyl	99	43	158
2,4,6-Tribromophenol	106	43	146
Terphenyl-d14	102	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-2-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-02
Date Analyzed:	04/24/12	Data File:	042415.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	65	32	162
Phenol-d6	41	10	170
Nitrobenzene-d5	107	50	150
2-Fluorobiphenyl	109	43	158
2,4,6-Tribromophenol	113	43	146
Terphenyl-d14	103	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-4-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-03
Date Analyzed:	04/24/12	Data File:	042416.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	107	50	150
2-Fluorobiphenyl	108	43	158
2,4,6-Tribromophenol	108	43	146
Terphenyl-d14	102	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-5-041212	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-04
Date Analyzed:	04/25/12	Data File:	042417.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	32	162
Phenol-d6	40	10	170
Nitrobenzene-d5	109	50	150
2-Fluorobiphenyl	110	43	158
2,4,6-Tribromophenol	114	43	146
Terphenyl-d14	107	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-7-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-05
Date Analyzed:	04/25/12	Data File:	042503.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	38	32	162
Phenol-d6	22	10	170
Nitrobenzene-d5	66	50	150
2-Fluorobiphenyl	68	43	158
2,4,6-Tribromophenol	66	43	146
Terphenyl-d14	65	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-1-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-06
Date Analyzed:	04/25/12	Data File:	042419.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	32	162
Phenol-d6	37	10	170
Nitrobenzene-d5	109	50	150
2-Fluorobiphenyl	112	43	158
2,4,6-Tribromophenol	120	43	146
Terphenyl-d14	118	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-6-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-07
Date Analyzed:	04/25/12	Data File:	042420.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	68	32	162
Phenol-d6	42	10	170
Nitrobenzene-d5	112	50	150
2-Fluorobiphenyl	114	43	158
2,4,6-Tribromophenol	118	43	146
Terphenyl-d14	111	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-10-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-08
Date Analyzed:	04/25/12	Data File:	042421.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	32	162
Phenol-d6	37	10	170
Nitrobenzene-d5	114	50	150
2-Fluorobiphenyl	116	43	158
2,4,6-Tribromophenol	117	43	146
Terphenyl-d14	106	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-11-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-09
Date Analyzed:	04/25/12	Data File:	042422.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	44	32	162
Phenol-d6	36	10	170
Nitrobenzene-d5	111	50	150
2-Fluorobiphenyl	117	43	158
2,4,6-Tribromophenol	108	43	146
Terphenyl-d14	114	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-18-041312	Client:	Aspect Consulting, LLC
Date Received:	04/13/12	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	204214-10
Date Analyzed:	04/25/12	Data File:	042423.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	64	32	162
Phenol-d6	39	10	170
Nitrobenzene-d5	113	50	150
2-Fluorobiphenyl	114	43	158
2,4,6-Tribromophenol	117	43	146
Terphenyl-d14	106	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Crownhill, 100094, F&BI 204214
Date Extracted:	04/18/12	Lab ID:	02-0650 mb
Date Analyzed:	04/24/12	Data File:	042413.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	56	32	162
Phenol-d6	36	10	170
Nitrobenzene-d5	100	50	150
2-Fluorobiphenyl	100	43	158
2,4,6-Tribromophenol	94	43	146
Terphenyl-d14	98	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<1
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 ca	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Date of Report: 04/27/12
Date Received: 04/13/12
Project: Crownhill, 100094, F&BI 204214

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	93	97	58-134	4

Date of Report: 04/27/12
Date Received: 04/13/12
Project: Crownhill, 100094, F&BI 204214

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 203449-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<1	79	79	52-134	0
Arsenic	ug/L (ppb)	10	1.67	98	99	51-167	1
Lead	ug/L (ppb)	10	<1	101	101	85-115	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	109	81-120
Arsenic	ug/L (ppb)	10	101	81-118
Lead	ug/L (ppb)	10	112	84-120

Date of Report: 04/27/12
Date Received: 04/13/12
Project: Crownhill, 100094, F&BI 204214

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 204214-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	1.63	88	94	52-134	7
Arsenic	ug/L (ppb)	10	<1	102	107	51-167	5
Lead	ug/L (ppb)	10	<1	97	102	85-115	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	100	81-120
Arsenic	ug/L (ppb)	10	97	81-118
Lead	ug/L (ppb)	10	99	84-120

Date of Report: 04/27/12
Date Received: 04/13/12
Project: Crown hill, 100094, F&BI 204214

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	98	97	61-109	1
Acenaphthylene	ug/L (ppb)	1	106	105	60-110	1
Acenaphthene	ug/L (ppb)	1	101	100	61-110	1
Fluorene	ug/L (ppb)	1	98	98	55-120	0
Phenanthrene	ug/L (ppb)	1	100	101	61-111	1
Anthracene	ug/L (ppb)	1	102	102	58-112	0
Fluoranthene	ug/L (ppb)	1	110	109	60-118	1
Pyrene	ug/L (ppb)	1	110	110	54-120	0
Benz(a)anthracene	ug/L (ppb)	1	107	107	55-109	0
Chrysene	ug/L (ppb)	1	93	95	61-118	2
Benzo(b)fluoranthene	ug/L (ppb)	1	120	122 vo	54-121	2
Benzo(k)fluoranthene	ug/L (ppb)	1	108	108	61-119	0
Benzo(a)pyrene	ug/L (ppb)	1	120 vo	121 vo	57-118	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	127	127	51-135	0
Dibenz(a,h)anthracene	ug/L (ppb)	1	118 vo	117 vo	59-116	1
Benzo(g,h,i)perylene	ug/L (ppb)	1	116	115	58-117	1

Date of Report: 04/27/12
Date Received: 04/13/12
Project: Crownhill, 100094, F&BI 204214

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 204214-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	122	10-172
Chloromethane	ug/L (ppb)	50	<10	107	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	110	36-166
Bromomethane	ug/L (ppb)	50	<1	104	47-169
Chloroethane	ug/L (ppb)	50	<1	108	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	108	44-165
Acetone	ug/L (ppb)	250	<10	101	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	102	60-136
Methylene chloride	ug/L (ppb)	50	<5	97	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	102	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	100	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	92	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	102	71-127
Chloroform	ug/L (ppb)	50	<1	96	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	103	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	99	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	103	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	101	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	98	56-152
Benzene	ug/L (ppb)	50	<0.35	102	76-125
Trichloroethene	ug/L (ppb)	50	<1	91	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	99	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	99	61-150
Dibromomethane	ug/L (ppb)	50	<1	100	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	104	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	72-132
Toluene	ug/L (ppb)	50	<1	99	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	104	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	99	68-131
2-Hexanone	ug/L (ppb)	250	<10	107	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	99	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	96	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	99	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	100	69-134
Chlorobenzene	ug/L (ppb)	50	<1	98	77-122
Ethylbenzene	ug/L (ppb)	50	<1	101	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	100	73-137
m,p-Xylene	ug/L (ppb)	100	<2	102	69-135
o-Xylene	ug/L (ppb)	50	<1	105	68-137
Styrene	ug/L (ppb)	50	<1	103	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	103	65-142
Bromoform	ug/L (ppb)	50	<1	103	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	100	58-144
Bromobenzene	ug/L (ppb)	50	<1	97	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	99	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	96	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	97	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	99	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	100	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	99	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	99	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	97	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	98	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	96	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	96	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	94	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	90	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	98	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	82	60-143
Naphthalene	ug/L (ppb)	50	<1	106	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	101	69-148

Date of Report: 04/27/12
Date Received: 04/13/12
Project: Crownhill, 100094, F&BI 204214

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	129	121	25-158	6
Chloromethane	ug/L (ppb)	50	110	106	45-156	4
Vinyl chloride	ug/L (ppb)	50	110	108	50-154	2
Bromomethane	ug/L (ppb)	50	104	101	55-143	3
Chloroethane	ug/L (ppb)	50	106	102	58-146	4
Trichlorofluoromethane	ug/L (ppb)	50	102	99	50-150	3
Acetone	ug/L (ppb)	250	103	99	60-155	4
1,1-Dichloroethene	ug/L (ppb)	50	100	99	67-136	1
Methylene chloride	ug/L (ppb)	50	99	97	39-148	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	96	97	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	96	99	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	99	99	79-121	0
2,2-Dichloropropane	ug/L (ppb)	50	103	99	55-143	4
cis-1,2-Dichloroethene	ug/L (ppb)	50	103	101	80-123	2
Chloroform	ug/L (ppb)	50	95	94	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	104	102	57-149	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	95	73-132	3
1,1,1-Trichloroethane	ug/L (ppb)	50	101	98	83-130	3
1,1-Dichloropropene	ug/L (ppb)	50	104	102	77-129	2
Carbon tetrachloride	ug/L (ppb)	50	96	93	75-158	3
Benzene	ug/L (ppb)	50	104	101	69-134	3
Trichloroethene	ug/L (ppb)	50	94	91	80-120	3
1,2-Dichloropropane	ug/L (ppb)	50	100	98	77-123	2
Bromodichloromethane	ug/L (ppb)	50	99	97	81-133	2
Dibromomethane	ug/L (ppb)	50	99	97	82-125	2
4-Methyl-2-pentanone	ug/L (ppb)	250	106	104	70-140	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	104	101	82-132	3
Toluene	ug/L (ppb)	50	100	99	72-122	1
trans-1,3-Dichloropropene	ug/L (ppb)	50	104	102	80-136	2
1,1,2-Trichloroethane	ug/L (ppb)	50	100	98	75-124	2
2-Hexanone	ug/L (ppb)	250	105	104	64-152	1
1,3-Dichloropropane	ug/L (ppb)	50	100	97	76-126	3
Tetrachloroethene	ug/L (ppb)	50	100	98	76-121	2
Dibromochloromethane	ug/L (ppb)	50	100	99	84-133	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	101	99	82-125	2
Chlorobenzene	ug/L (ppb)	50	98	97	83-114	1
Ethylbenzene	ug/L (ppb)	50	102	100	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	98	97	84-127	1
m,p-Xylene	ug/L (ppb)	100	103	102	83-125	1
o-Xylene	ug/L (ppb)	50	105	104	86-121	1
Styrene	ug/L (ppb)	50	105	102	85-127	3
Isopropylbenzene	ug/L (ppb)	50	104	101	87-122	3
Bromoform	ug/L (ppb)	50	102	101	74-136	1
n-Propylbenzene	ug/L (ppb)	50	104	102	74-126	2
Bromobenzene	ug/L (ppb)	50	100	101	80-121	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	102	100	80-126	2
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	96	95	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	98	97	67-124	1
2-Chlorotoluene	ug/L (ppb)	50	102	101	77-127	1
4-Chlorotoluene	ug/L (ppb)	50	103	102	78-128	1
tert-Butylbenzene	ug/L (ppb)	50	102	100	85-127	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	102	100	82-125	2
sec-Butylbenzene	ug/L (ppb)	50	100	99	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	102	99	82-127	3
1,3-Dichlorobenzene	ug/L (ppb)	50	99	97	85-116	2
1,4-Dichlorobenzene	ug/L (ppb)	50	98	97	84-121	1
1,2-Dichlorobenzene	ug/L (ppb)	50	94	92	85-116	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	88	86	57-141	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	98	97	72-130	1
Hexachlorobutadiene	ug/L (ppb)	50	90	85	53-141	6
Naphthalene	ug/L (ppb)	50	104	105	64-133	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	99	99	65-136	0

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Project: Crownhill, 100094, F&BI 204214

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 204214-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	106	10-172
Chloromethane	ug/L (ppb)	50	<10	97	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	108	36-166
Bromomethane	ug/L (ppb)	50	<1	101	47-169
Chloroethane	ug/L (ppb)	50	<1	106	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	103	44-165
Acetone	ug/L (ppb)	250	<10	95	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	100	60-136
Methylene chloride	ug/L (ppb)	50	<5	97	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	102	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	100	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	101	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	101	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	103	71-127
Chloroform	ug/L (ppb)	50	<1	96	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	105	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	99	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	101	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	104	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	101	56-152
Benzene	ug/L (ppb)	50	<0.35	105	76-125
Trichloroethene	ug/L (ppb)	50	2.2	94	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	102	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	101	61-150
Dibromomethane	ug/L (ppb)	50	<1	101	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	108	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	105	72-132
Toluene	ug/L (ppb)	50	<1	100	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	108	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	100	68-131
2-Hexanone	ug/L (ppb)	250	<10	114	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	102	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	98	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	101	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	101	69-134
Chlorobenzene	ug/L (ppb)	50	2.2	101	77-122
Ethylbenzene	ug/L (ppb)	50	<1	103	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	100	73-137
m,p-Xylene	ug/L (ppb)	100	<2	104	69-135
o-Xylene	ug/L (ppb)	50	<1	106	68-137
Styrene	ug/L (ppb)	50	<1	105	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	106	65-142
Bromoform	ug/L (ppb)	50	<1	104	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	104	58-144
Bromobenzene	ug/L (ppb)	50	<1	99	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	102	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	98	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	102	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	103	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	101	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	102	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	100	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	101	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	99	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	98	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	95	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	99	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	107	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	93	60-143
Naphthalene	ug/L (ppb)	50	<1	116	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	108	69-148

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Project: Crownhill, 100094, F&BI 204214

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	114	120	25-158	5
Chloromethane	ug/L (ppb)	50	103	106	45-156	3
Vinyl chloride	ug/L (ppb)	50	107	107	50-154	0
Bromomethane	ug/L (ppb)	50	102	102	55-143	0
Chloroethane	ug/L (ppb)	50	105	104	58-146	1
Trichlorofluoromethane	ug/L (ppb)	50	103	103	50-150	0
Acetone	ug/L (ppb)	250	97	103	60-155	6
1,1-Dichloroethene	ug/L (ppb)	50	98	100	67-136	2
Methylene chloride	ug/L (ppb)	50	94	95	39-148	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	95	100	64-147	5
trans-1,2-Dichloroethene	ug/L (ppb)	50	96	97	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	97	97	79-121	0
2,2-Dichloropropane	ug/L (ppb)	50	99	99	55-143	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	99	101	80-123	2
Chloroform	ug/L (ppb)	50	93	94	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	101	104	57-149	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	96	96	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	98	98	83-130	0
1,1-Dichloropropene	ug/L (ppb)	50	100	101	77-129	1
Carbon tetrachloride	ug/L (ppb)	50	95	97	75-158	2
Benzene	ug/L (ppb)	50	100	102	69-134	2
Trichloroethene	ug/L (ppb)	50	89	90	80-120	1
1,2-Dichloropropane	ug/L (ppb)	50	98	99	77-123	1
Bromodichloromethane	ug/L (ppb)	50	96	98	81-133	2
Dibromomethane	ug/L (ppb)	50	95	98	82-125	3
4-Methyl-2-pentanone	ug/L (ppb)	250	102	103	70-140	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	102	103	82-132	1
Toluene	ug/L (ppb)	50	97	98	72-122	1
trans-1,3-Dichloropropene	ug/L (ppb)	50	103	102	80-136	1
1,1,2-Trichloroethane	ug/L (ppb)	50	98	98	75-124	0
2-Hexanone	ug/L (ppb)	250	106	106	64-152	0
1,3-Dichloropropane	ug/L (ppb)	50	96	98	76-126	2
Tetrachloroethene	ug/L (ppb)	50	95	96	76-121	1
Dibromochloromethane	ug/L (ppb)	50	98	98	84-133	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	97	99	82-125	2
Chlorobenzene	ug/L (ppb)	50	95	96	83-114	1
Ethylbenzene	ug/L (ppb)	50	99	100	77-124	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	96	97	84-127	1
m,p-Xylene	ug/L (ppb)	100	100	101	83-125	1
o-Xylene	ug/L (ppb)	50	101	103	86-121	2
Styrene	ug/L (ppb)	50	101	101	85-127	0
Isopropylbenzene	ug/L (ppb)	50	100	101	87-122	1
Bromoform	ug/L (ppb)	50	99	99	74-136	0
n-Propylbenzene	ug/L (ppb)	50	100	102	74-126	2
Bromobenzene	ug/L (ppb)	50	96	98	80-121	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	98	99	80-126	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	94	93	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	95	96	67-124	1
2-Chlorotoluene	ug/L (ppb)	50	99	100	77-127	1
4-Chlorotoluene	ug/L (ppb)	50	100	101	78-128	1
tert-Butylbenzene	ug/L (ppb)	50	98	99	85-127	1
1,2,4-Trimethylbenzene	ug/L (ppb)	50	98	100	82-125	2
sec-Butylbenzene	ug/L (ppb)	50	97	98	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	97	99	82-127	2
1,3-Dichlorobenzene	ug/L (ppb)	50	94	96	85-116	2
1,4-Dichlorobenzene	ug/L (ppb)	50	94	96	84-121	2
1,2-Dichlorobenzene	ug/L (ppb)	50	91	91	85-116	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	89	88	57-141	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	97	97	72-130	0
Hexachlorobutadiene	ug/L (ppb)	50	84	87	53-141	4
Naphthalene	ug/L (ppb)	50	105	103	64-133	2
1,2,3-Trichlorobenzene	ug/L (ppb)	50	98	98	65-136	0

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Project: Crownhill, 100094, F&BI 204214

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	39	39	18-52	0
Bis(2-chloroethyl) ether	ug/L (ppb)	50	87	93	52-113	7
2-Chlorophenol	ug/L (ppb)	50	77	75	50-110	3
1,3-Dichlorobenzene	ug/L (ppb)	50	87	89	45-109	2
1,4-Dichlorobenzene	ug/L (ppb)	50	87	92	44-118	6
1,2-Dichlorobenzene	ug/L (ppb)	50	84	89	46-116	6
Benzyl alcohol	ug/L (ppb)	50	70	75	42-100	7
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	96	102	51-124	6
2-Methylphenol	ug/L (ppb)	50	69	64	38-100	8
Hexachloroethane	ug/L (ppb)	50	86	90	42-117	5
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	84	95	48-124	12
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	63	60	48-87	5
Nitrobenzene	ug/L (ppb)	50	94	95	50-118	1
Isophorone	ug/L (ppb)	50	93	101	55-116	8
2-Nitrophenol	ug/L (ppb)	50	91	93	42-127	2
2,4-Dimethylphenol	ug/L (ppb)	50	74	73	45-100	1
Benzoic acid	ug/L (ppb)	75	15	17	10-46	12
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	91	96	55-115	5
2,4-Dichlorophenol	ug/L (ppb)	50	84	87	55-113	4
1,2,4-Trichlorobenzene	ug/L (ppb)	50	91	92	50-109	1
Hexachlorobutadiene	ug/L (ppb)	50	94	94	50-109	0
4-Chloroaniline	ug/L (ppb)	100	65	71	34-85	9
4-Chloro-3-methylphenol	ug/L (ppb)	50	86	89	54-114	3
2-Methylnaphthalene	ug/L (ppb)	50	89	96	53-113	8
Hexachlorocyclopentadiene	ug/L (ppb)	50	75	66	26-94	13
2,4,6-Trichlorophenol	ug/L (ppb)	50	88	88	46-114	0
2,4,5-Trichlorophenol	ug/L (ppb)	50	92	93	57-122	1
2-Chloronaphthalene	ug/L (ppb)	50	93	91	52-112	2
2-Nitroaniline	ug/L (ppb)	50	96	98	47-128	2
Dimethyl phthalate	ug/L (ppb)	50	94	98	55-116	4
2,6-Dinitrotoluene	ug/L (ppb)	50	93	96	49-126	3
3-Nitroaniline	ug/L (ppb)	100	69	65	32-89	6
2,4-Dinitrophenol	ug/L (ppb)	50	88	86	29-130	2
Dibenzofuran	ug/L (ppb)	50	92	95	53-113	3
2,4-Dinitrotoluene	ug/L (ppb)	50	97	95	48-129	2
4-Nitrophenol	ug/L (ppb)	50	59	50	12-59	17
Diethyl phthalate	ug/L (ppb)	50	95	97	55-116	2
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	93	97	52-115	4
N-Nitrosodiphenylamine	ug/L (ppb)	50	90	98	51-112	9
4-Nitroaniline	ug/L (ppb)	100	81	78	42-115	4
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	88	87	40-128	1
4-Bromophenyl phenyl ether	ug/L (ppb)	50	92	101	53-114	9
Hexachlorobenzene	ug/L (ppb)	50	93	97	54-115	4
Pentachlorophenol	ug/L (ppb)	50	83	82	49-114	1
Carbazole	ug/L (ppb)	50	90	85	54-115	6
Di-n-butyl phthalate	ug/L (ppb)	50	90	91	54-115	1
Benzyl butyl phthalate	ug/L (ppb)	50	88	93	53-122	6
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	86	83	54-122	4
Di-n-octyl phthalate	ug/L (ppb)	50	89	86	50-131	3

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

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204713 (ND) 4/13/12

SAMPLE CHAIN OF CUSTODY

ME 04/13/12

D03 / AI4 / V3

Page # 1 of 1

Send Report To Dana Cannon
Company Aspect consulting
Address 401 2nd Ave. South, Suite 201
City, State, ZIP Seattle, WA 98104
Phone # _____ Fax # _____

SAMPLERS (signature) M. Ravitz
PROJECT NAME/NO. Crownhill 100094
PO#
REMARKS Dissolved metals ARE field filtered

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH _____
Rush charges authorized by _____

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total Metals As, Pb, Cu	Diss. Metals As, Pb, Cu	PAHs by 8270 SIM				Notes
MW-9-041212	01A-I	4/12/12	1050	H_2O	9	X			X	X		X	X	X				
MW-2-041212	02		1100		9	X			X	X		X	X	X				
MW-4-041212	03		1300		9	X			X	X		X	X	X				
MW-5-041212	04		1300		9	X			X	X		X	X	X				
MW-7-041312	05	4/13/12	1015		9	X			X	X		X	X	X				
MW-1-041312	06		1020		9	X			X	X		X	X	X				
MW-6-041312	07		1140		9	X			X	X		X	X	X				
MW-10-041312	08		1145		9	X			X	X		X	X	X				Samples received at 2 °C
MW-11-041312	09		1300		9	X			X	X		X	X	X				
MW-18-041312	10				9	X			X	X		X	X	X				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Molly Ravitz	MOLLY RAVITZ	Aspect	4/13/12	1545
Received by:	HONG NGUYEN	FBI	"	"
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
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July 25, 2012

Doug Hillman, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Hillman:

Included are the results from the testing of material submitted on July 11, 2012 from the Crown Hill PO 100094, F&BI 207145 project. There are 68 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman, Dana Cannon
ASP0725R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 11, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crown Hill PO 100094, F&BI 207145 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
207145-01	MW-6-071012
207145-02	MW-9-071012
207145-03	MW-2-071012
207145-04	MW-5-071012
207145-05	MW-4-071012
207145-06	MW-7-071112
207145-07	MW-1-071112
207145-08	MW-10-071112
207145-09	MW-11-071112
207145-10	MW-18-071112

Several NWTPH-Dx surrogates exceeded the acceptance criteria. No material was detected in the samples, therefore the data were acceptable.

The 8260C calibration standard failed the acceptance criteria for bromoform in several samples. The data were flagged accordingly.

The 8270D calibration standard failed the acceptance criteria for 2,4-dinitrophenol in several samples. The data were flagged accordingly.

The 8270D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

Several compounds in the 8270D laboratory control sample and laboratory control sample duplicate exceeded the acceptance criteria. The analytes were not detected in the sample, therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 07/25/12
Date Received: 07/11/12
Project: Crown Hill PO 100094, F&BI 207145
Date Extracted: 07/12/12
Date Analyzed: 07/12/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-6-071012 207145-01	<50	<250	130
MW-9-071012 207145-02	<50	<250	108
MW-2-071012 207145-03	<50	<250	114
MW-5-071012 207145-04	2,900	800 x	ip
MW-4-071012 207145-05	<50	<250	130
MW-7-071112 207145-06	<50	<250	137 vo
MW-1-071112 207145-07	<50	<250	117
MW-10-071112 207145-08	<50	<250	143 vo
MW-11-071112 207145-09	<50	<250	137

Date of Report: 07/25/12
Date Received: 07/11/12
Project: Crown Hill PO 100094, F&BI 207145
Date Extracted: 07/12/12
Date Analyzed: 07/12/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-18-071112 207145-10	<50	<250	150 vo
Method Blank 02-1228 MB	<50	<250	116

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-6-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-01
Date Analyzed:	07/13/12	Data File:	207145-01.034
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	94	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	10.0
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-9-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-02
Date Analyzed:	07/13/12	Data File:	207145-02.037
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	90	60	125
Holmium	85	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-2-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-03
Date Analyzed:	07/13/12	Data File:	207145-03.038
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	81	60	125
Indium	85	60	125
Holmium	82	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-5-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-04
Date Analyzed:	07/13/12	Data File:	207145-04.039
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	78	60	125
Indium	79	60	125
Holmium	81	60	125

Analyte:	Concentration ug/L (ppb)
Copper	4.27
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-4-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-05
Date Analyzed:	07/13/12	Data File:	207145-05.040
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	82	60	125
Indium	84	60	125
Holmium	85	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	2.88
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-7-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-06
Date Analyzed:	07/13/12	Data File:	207145-06.041
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	80	60	125
Indium	86	60	125
Holmium	82	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-1-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-07
Date Analyzed:	07/13/12	Data File:	207145-07.043
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	83	60	125
Indium	89	60	125
Holmium	86	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-10-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-08
Date Analyzed:	07/13/12	Data File:	207145-08.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	82	60	125
Indium	86	60	125
Holmium	81	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	3.91
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-09
Date Analyzed:	07/13/12	Data File:	207145-09.045
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	80	60	125
Indium	84	60	125
Holmium	81	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-18-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-10
Date Analyzed:	07/13/12	Data File:	207145-10.046
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	80	60	125
Indium	85	60	125
Holmium	84	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	I2-468 mb
Date Analyzed:	07/13/12	Data File:	I2-468 mb.032
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	95	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-01
Date Analyzed:	07/13/12	Data File:	207145-01.050
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	84	60	125
Indium	86	60	125
Holmium	83	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	10.2
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-02
Date Analyzed:	07/13/12	Data File:	207145-02.054
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	76	60	125
Indium	82	60	125
Holmium	77	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-03
Date Analyzed:	07/13/12	Data File:	207145-03.055
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	68	60	125
Indium	73	60	125
Holmium	70	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-04
Date Analyzed:	07/13/12	Data File:	207145-04.056
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	74	60	125
Indium	79	60	125
Holmium	80	60	125

Analyte:	Concentration ug/L (ppb)
Copper	6.55
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-05
Date Analyzed:	07/13/12	Data File:	207145-05.057
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	76	60	125
Indium	82	60	125
Holmium	78	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	2.76
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-06
Date Analyzed:	07/13/12	Data File:	207145-06.058
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	75	60	125
Indium	82	60	125
Holmium	78	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-07
Date Analyzed:	07/13/12	Data File:	207145-07.059
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	72	60	125
Indium	79	60	125
Holmium	76	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-08
Date Analyzed:	07/13/12	Data File:	207145-08.060
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	76	60	125
Indium	82	60	125
Holmium	79	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	3.71
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-09
Date Analyzed:	07/13/12	Data File:	207145-09.061
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	73	60	125
Indium	78	60	125
Holmium	74	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-18-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	207145-10
Date Analyzed:	07/13/12	Data File:	207145-10.062
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	72	60	125
Indium	78	60	125
Holmium	73	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/13/12	Lab ID:	I2-469 mb
Date Analyzed:	07/13/12	Data File:	I2-469 mb.048
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	84	60	125
Indium	89	60	125
Holmium	87	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-01
Date Analyzed:	07/12/12	Data File:	071210.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-02
Date Analyzed:	07/12/12	Data File:	071211.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	2.0	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	8.5	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-03
Date Analyzed:	07/12/12	Data File:	071224.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1 ca
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-04
Date Analyzed:	07/12/12	Data File:	071225.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	2.1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1 ca
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	2.2	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-05
Date Analyzed:	07/12/12	Data File:	071226.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1 ca
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-06
Date Analyzed:	07/12/12	Data File:	071227.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1 ca
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	1.7	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-07
Date Analyzed:	07/12/12	Data File:	071228.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1 ca
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-08
Date Analyzed:	07/12/12	Data File:	071229.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1 ca
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-09
Date Analyzed:	07/12/12	Data File:	071230.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1 ca
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-18-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-10
Date Analyzed:	07/12/12	Data File:	071231.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1 ca
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	02-1218 mb
Date Analyzed:	07/12/12	Data File:	071208.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-6-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-01
Date Analyzed:	07/16/12	Data File:	071616A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	98	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-9-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-02
Date Analyzed:	07/16/12	Data File:	071617A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	99	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-03
Date Analyzed:	07/16/12	Data File:	071618A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	89	50	150
Benzo(a)anthracene-d12	100	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-5-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-04
Date Analyzed:	07/16/12	Data File:	071619A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	101	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-05
Date Analyzed:	07/16/12	Data File:	071620A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	95	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-7-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-06
Date Analyzed:	07/16/12	Data File:	071621A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	97	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-07
Date Analyzed:	07/16/12	Data File:	071622A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	95	50	150
Benzo(a)anthracene-d12	97	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-10-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-08
Date Analyzed:	07/16/12	Data File:	071623A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	50	150
Benzo(a)anthracene-d12	96	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-11-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-09
Date Analyzed:	07/16/12	Data File:	071624A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	98	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-18-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-10
Date Analyzed:	07/16/12	Data File:	071625A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	95	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	02-1232 mb
Date Analyzed:	07/13/12	Data File:	071314.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	102	50	150
Benzo(a)anthracene-d12	110	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-6-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-01 1/5
Date Analyzed:	07/13/12	Data File:	071316.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	47	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	97	50	150
2-Fluorobiphenyl	95	43	158
2,4,6-Tribromophenol	103	43	146
Terphenyl-d14	101	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-9-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-02 1/5
Date Analyzed:	07/13/12	Data File:	071317.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	32	162
Phenol-d6	37	10	170
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	100	43	146
Terphenyl-d14	112	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-2-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-03 1/5
Date Analyzed:	07/16/12	Data File:	071605.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	32	162
Phenol-d6	36	10	170
Nitrobenzene-d5	97	50	150
2-Fluorobiphenyl	99	43	158
2,4,6-Tribromophenol	96	43	146
Terphenyl-d14	108	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30 ca
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-5-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-04 1/5
Date Analyzed:	07/13/12	Data File:	071319.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	47	32	162
Phenol-d6	34	10	170
Nitrobenzene-d5	94	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	104	43	146
Terphenyl-d14	96	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-4-071012	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-05 1/5
Date Analyzed:	07/13/12	Data File:	071320.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	55	32	162
Phenol-d6	40	10	170
Nitrobenzene-d5	96	50	150
2-Fluorobiphenyl	95	43	158
2,4,6-Tribromophenol	99	43	146
Terphenyl-d14	103	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-7-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-06 1/5
Date Analyzed:	07/16/12	Data File:	071606.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	32	162
Phenol-d6	39	10	170
Nitrobenzene-d5	93	50	150
2-Fluorobiphenyl	96	43	158
2,4,6-Tribromophenol	100	43	146
Terphenyl-d14	107	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30 ca
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-1-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-07 1/5
Date Analyzed:	07/16/12	Data File:	071607.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	42	32	162
Phenol-d6	40	10	170
Nitrobenzene-d5	94	50	150
2-Fluorobiphenyl	96	43	158
2,4,6-Tribromophenol	105	43	146
Terphenyl-d14	110	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30 ca
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-10-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-08 1/5
Date Analyzed:	07/14/12	Data File:	071323.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	57	32	162
Phenol-d6	39	10	170
Nitrobenzene-d5	97	50	150
2-Fluorobiphenyl	95	43	158
2,4,6-Tribromophenol	100	43	146
Terphenyl-d14	98	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-11-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/16/12	Lab ID:	207145-09 1/5 rex
Date Analyzed:	07/16/12	Data File:	071611.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	84	32	162
Phenol-d6	59	10	170
Nitrobenzene-d5	106	50	150
2-Fluorobiphenyl	105	43	158
2,4,6-Tribromophenol	98	43	146
Terphenyl-d14	109	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30 ca
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-18-071112	Client:	Aspect Consulting, LLC
Date Received:	07/11/12	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	207145-10 1/5
Date Analyzed:	07/14/12	Data File:	071325.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	45	32	162
Phenol-d6	37	10	170
Nitrobenzene-d5	98	50	150
2-Fluorobiphenyl	96	43	158
2,4,6-Tribromophenol	96	43	146
Terphenyl-d14	96	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/12/12	Lab ID:	02-1231 mb 1/5
Date Analyzed:	07/13/12	Data File:	071305.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	32	162
Phenol-d6	41	10	170
Nitrobenzene-d5	96	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	92	43	146
Terphenyl-d14	108	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill PO 100094, F&BI 207145
Date Extracted:	07/16/12	Lab ID:	02-1244 mb 1/5
Date Analyzed:	07/16/12	Data File:	071610.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	79	32	162
Phenol-d6	51	10	170
Nitrobenzene-d5	101	50	150
2-Fluorobiphenyl	104	43	158
2,4,6-Tribromophenol	100	43	146
Terphenyl-d14	128	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30 ca
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	121	114	58-134	6

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 207145-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<1	91	100	52-134	9
Arsenic	ug/L (ppb)	10	10.0	99 b	105 b	51-167	6 b
Lead	ug/L (ppb)	10	<1	93	94	85-115	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	103	81-120
Arsenic	ug/L (ppb)	10	98	81-118
Lead	ug/L (ppb)	10	98	84-120

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 207145-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<1	88	88	52-134	0
Arsenic	ug/L (ppb)	10	10.2	92 b	94 b	51-167	2 b
Lead	ug/L (ppb)	10	<1	88	86	85-115	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	98	81-120
Arsenic	ug/L (ppb)	10	92	81-118
Lead	ug/L (ppb)	10	90	84-120

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 207145-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	102	50-150
Chloromethane	ug/L (ppb)	50	<10	97	50-150
Vinyl chloride	ug/L (ppb)	50	<0.2	99	50-150
Bromomethane	ug/L (ppb)	50	<1	104	50-150
Chloroethane	ug/L (ppb)	50	<1	105	50-150
Trichlorofluoromethane	ug/L (ppb)	50	<1	105	50-150
Acetone	ug/L (ppb)	250	<10	98	50-150
1,1-Dichloroethene	ug/L (ppb)	50	<1	100	50-150
Methylene chloride	ug/L (ppb)	50	<5	99	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	100	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	50-150
1,1-Dichloroethane	ug/L (ppb)	50	<1	99	50-150
2,2-Dichloropropane	ug/L (ppb)	50	<1	104	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	50-150
Chloroform	ug/L (ppb)	50	<1	99	50-150
2-Butanone (MEK)	ug/L (ppb)	250	<10	96	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	98	50-150
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	102	50-150
1,1-Dichloropropene	ug/L (ppb)	50	<1	100	50-150
Carbon tetrachloride	ug/L (ppb)	50	<1	100	50-150
Benzene	ug/L (ppb)	50	<0.35	97	50-150
Trichloroethene	ug/L (ppb)	50	<1	93	50-150
1,2-Dichloropropane	ug/L (ppb)	50	<1	98	50-150
Bromodichloromethane	ug/L (ppb)	50	<1	99	50-150
Dibromomethane	ug/L (ppb)	50	<1	99	50-150
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	104	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	103	50-150
Toluene	ug/L (ppb)	50	<1	100	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	102	50-150
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	98	50-150
2-Hexanone	ug/L (ppb)	250	<10	99	50-150
1,3-Dichloropropane	ug/L (ppb)	50	<1	100	50-150
Tetrachloroethene	ug/L (ppb)	50	<1	99	50-150
Dibromochloromethane	ug/L (ppb)	50	<1	95	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	101	50-150
Chlorobenzene	ug/L (ppb)	50	<1	98	50-150
Ethylbenzene	ug/L (ppb)	50	<1	99	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	102	50-150
m,p-Xylene	ug/L (ppb)	100	<2	100	50-150
o-Xylene	ug/L (ppb)	50	<1	100	50-150
Styrene	ug/L (ppb)	50	<1	104	50-150
Isopropylbenzene	ug/L (ppb)	50	<1	101	50-150
Bromoform	ug/L (ppb)	50	<1	86	50-150
n-Propylbenzene	ug/L (ppb)	50	<1	97	50-150
Bromobenzene	ug/L (ppb)	50	<1	96	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	98	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	101	50-150
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	95	50-150
2-Chlorotoluene	ug/L (ppb)	50	<1	96	50-150
4-Chlorotoluene	ug/L (ppb)	50	<1	97	50-150
tert-Butylbenzene	ug/L (ppb)	50	<1	98	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	98	50-150
sec-Butylbenzene	ug/L (ppb)	50	<1	97	50-150
p-Isopropyltoluene	ug/L (ppb)	50	<1	98	50-150
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	97	50-150
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	95	50-150
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	97	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	93	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	96	50-150
Hexachlorobutadiene	ug/L (ppb)	50	<1	90	50-150
Naphthalene	ug/L (ppb)	50	<1	98	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	97	50-150

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	101	104	70-130	3
Chloromethane	ug/L (ppb)	50	94	98	70-130	4
Vinyl chloride	ug/L (ppb)	50	97	101	70-130	4
Bromomethane	ug/L (ppb)	50	99	104	70-130	5
Chloroethane	ug/L (ppb)	50	102	106	70-130	4
Trichlorofluoromethane	ug/L (ppb)	50	101	106	70-130	5
Acetone	ug/L (ppb)	250	93	96	70-130	3
1,1-Dichloroethene	ug/L (ppb)	50	97	101	70-130	4
Methylene chloride	ug/L (ppb)	50	95	101	70-130	6
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	98	101	70-130	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	96	100	70-130	4
1,1-Dichloroethane	ug/L (ppb)	50	97	101	70-130	4
2,2-Dichloropropane	ug/L (ppb)	50	103	107	70-130	4
cis-1,2-Dichloroethene	ug/L (ppb)	50	97	102	70-130	5
Chloroform	ug/L (ppb)	50	97	101	70-130	4
2-Butanone (MEK)	ug/L (ppb)	250	93	98	70-130	5
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	96	99	70-130	3
1,1,1-Trichloroethane	ug/L (ppb)	50	99	104	70-130	5
1,1-Dichloropropene	ug/L (ppb)	50	98	101	70-130	3
Carbon tetrachloride	ug/L (ppb)	50	101	105	70-130	4
Benzene	ug/L (ppb)	50	95	99	70-130	4
Trichloroethene	ug/L (ppb)	50	90	95	70-130	5
1,2-Dichloropropane	ug/L (ppb)	50	97	101	70-130	4
Bromodichloromethane	ug/L (ppb)	50	97	102	70-130	5
Dibromomethane	ug/L (ppb)	50	97	100	70-130	3
4-Methyl-2-pentanone	ug/L (ppb)	250	102	104	70-130	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	101	105	70-130	4
Toluene	ug/L (ppb)	50	95	101	70-130	6
trans-1,3-Dichloropropene	ug/L (ppb)	50	100	103	70-130	3
1,1,2-Trichloroethane	ug/L (ppb)	50	93	99	70-130	6
2-Hexanone	ug/L (ppb)	250	94	99	70-130	5
1,3-Dichloropropane	ug/L (ppb)	50	95	99	70-130	4
Tetrachloroethene	ug/L (ppb)	50	96	99	70-130	3
Dibromochloromethane	ug/L (ppb)	50	96	97	70-130	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	96	101	70-130	5
Chlorobenzene	ug/L (ppb)	50	94	99	70-130	5
Ethylbenzene	ug/L (ppb)	50	95	100	70-130	5
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	100	105	70-130	5
m,p-Xylene	ug/L (ppb)	100	96	101	70-130	5
o-Xylene	ug/L (ppb)	50	96	100	70-130	4
Styrene	ug/L (ppb)	50	98	103	70-130	5
Isopropylbenzene	ug/L (ppb)	50	96	101	70-130	5
Bromoform	ug/L (ppb)	50	91	87	70-130	4
n-Propylbenzene	ug/L (ppb)	50	94	97	70-130	3
Bromobenzene	ug/L (ppb)	50	92	96	70-130	4
1,3,5-Trimethylbenzene	ug/L (ppb)	50	95	98	70-130	3
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	96	101	70-130	5
1,2,3-Trichloropropane	ug/L (ppb)	50	91	94	70-130	3
2-Chlorotoluene	ug/L (ppb)	50	93	96	70-130	3
4-Chlorotoluene	ug/L (ppb)	50	93	97	70-130	4
tert-Butylbenzene	ug/L (ppb)	50	96	98	70-130	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	95	99	70-130	4
sec-Butylbenzene	ug/L (ppb)	50	94	97	70-130	3
p-Isopropyltoluene	ug/L (ppb)	50	96	99	70-130	3
1,3-Dichlorobenzene	ug/L (ppb)	50	94	97	70-130	3
1,4-Dichlorobenzene	ug/L (ppb)	50	93	96	70-130	3
1,2-Dichlorobenzene	ug/L (ppb)	50	93	97	70-130	4
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	95	95	70-130	0
1,2,4-Trichlorobenzene	ug/L (ppb)	50	94	98	70-130	4
Hexachlorobutadiene	ug/L (ppb)	50	92	94	70-130	2
Naphthalene	ug/L (ppb)	50	97	99	70-130	2
1,2,3-Trichlorobenzene	ug/L (ppb)	50	96	99	70-130	3

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	97	98	61-109	1
Acenaphthylene	ug/L (ppb)	1	103	103	60-110	0
Acenaphthene	ug/L (ppb)	1	100	100	61-110	0
Fluorene	ug/L (ppb)	1	102	101	55-120	1
Phenanthrene	ug/L (ppb)	1	99	99	61-111	0
Anthracene	ug/L (ppb)	1	102	102	58-112	0
Fluoranthene	ug/L (ppb)	1	101	101	60-118	0
Pyrene	ug/L (ppb)	1	108	107	54-120	1
Benz(a)anthracene	ug/L (ppb)	1	97	97	55-109	0
Chrysene	ug/L (ppb)	1	101	99	61-118	2
Benzo(b)fluoranthene	ug/L (ppb)	1	105	98	54-121	7
Benzo(k)fluoranthene	ug/L (ppb)	1	92	97	61-119	5
Benzo(a)pyrene	ug/L (ppb)	1	96	97	57-118	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	93	82	51-135	13
Dibenz(a,h)anthracene	ug/L (ppb)	1	86	82	59-116	5
Benzo(g,h,i)perylene	ug/L (ppb)	1	85	80	58-117	6

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	38	41	18-52	8
Bis(2-chloroethyl) ether	ug/L (ppb)	50	87	95	52-113	9
2-Chlorophenol	ug/L (ppb)	50	88	88	50-110	0
1,3-Dichlorobenzene	ug/L (ppb)	50	90	98	45-109	9
1,4-Dichlorobenzene	ug/L (ppb)	50	91	97	44-118	6
1,2-Dichlorobenzene	ug/L (ppb)	50	90	98	46-116	9
Benzyl alcohol	ug/L (ppb)	50	75	77	42-100	3
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	88	94	51-124	7
2-Methylphenol	ug/L (ppb)	50	81	79	38-100	2
Hexachloroethane	ug/L (ppb)	50	90	99	42-117	10
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	88	101	48-124	14
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	74	71	48-87	4
Nitrobenzene	ug/L (ppb)	50	92	99	50-118	7
Isophorone	ug/L (ppb)	50	94	98	55-116	4
2-Nitrophenol	ug/L (ppb)	50	103	108	42-127	5
2,4-Dimethylphenol	ug/L (ppb)	50	88	83	45-100	6
Benzoic acid	ug/L (ppb)	75	32	17	10-46	61 vo
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	94	98	55-115	4
2,4-Dichlorophenol	ug/L (ppb)	50	97	94	55-113	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	101	104	50-109	3
Hexachlorobutadiene	ug/L (ppb)	50	96	98	50-109	2
4-Chloroaniline	ug/L (ppb)	100	76	73	34-85	4
4-Chloro-3-methylphenol	ug/L (ppb)	50	100	93	54-114	7
2-Methylnaphthalene	ug/L (ppb)	50	93	96	53-113	3
Hexachlorocyclopentadiene	ug/L (ppb)	50	78	88	26-94	12
2,4,6-Trichlorophenol	ug/L (ppb)	50	96	101	46-114	5
2,4,5-Trichlorophenol	ug/L (ppb)	50	100	106	57-122	6
2-Chloronaphthalene	ug/L (ppb)	50	93	99	52-112	6
2-Nitroaniline	ug/L (ppb)	50	108	109	47-128	1
Dimethyl phthalate	ug/L (ppb)	50	107	103	55-116	4
2,6-Dinitrotoluene	ug/L (ppb)	50	111	109	49-126	2
3-Nitroaniline	ug/L (ppb)	100	103 vo	100 vo	32-89	3
2,4-Dinitrophenol	ug/L (ppb)	50	90	98	29-130	9
Dibenzofuran	ug/L (ppb)	50	99	101	53-113	2
2,4-Dinitrotoluene	ug/L (ppb)	50	108	108	48-129	0
4-Nitrophenol	ug/L (ppb)	50	44	44	12-59	0
Diethyl phthalate	ug/L (ppb)	50	112	105	55-116	6
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	103	101	52-115	2
N-Nitrosodiphenylamine	ug/L (ppb)	50	102	102	51-112	0
4-Nitroaniline	ug/L (ppb)	100	95	101	42-115	6
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	91	106	40-128	15
4-Bromophenyl phenyl ether	ug/L (ppb)	50	104	102	53-114	2
Hexachlorobenzene	ug/L (ppb)	50	98	99	54-115	1
Pentachlorophenol	ug/L (ppb)	50	90	104	49-114	14
Carbazole	ug/L (ppb)	50	91	105	54-115	14
Di-n-butyl phthalate	ug/L (ppb)	50	82	107	54-115	26 vo
Benzyl butyl phthalate	ug/L (ppb)	50	105	116	53-122	10
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	110	122	54-122	10
Di-n-octyl phthalate	ug/L (ppb)	50	108	114	50-131	5

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	50	39	40	18-52	3
Bis(2-chloroethyl) ether	ug/L (ppb)	50	90	89	52-113	1
2-Chlorophenol	ug/L (ppb)	50	85	88	50-110	3
1,3-Dichlorobenzene	ug/L (ppb)	50	91	92	45-109	1
1,4-Dichlorobenzene	ug/L (ppb)	50	92	93	44-118	1
1,2-Dichlorobenzene	ug/L (ppb)	50	92	93	46-116	1
Benzyl alcohol	ug/L (ppb)	50	81	84	42-100	4
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	85	87	51-124	2
2-Methylphenol	ug/L (ppb)	50	76	81	38-100	6
Hexachloroethane	ug/L (ppb)	50	90	91	42-117	1
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	90	90	48-124	0
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	70	74	48-87	6
Nitrobenzene	ug/L (ppb)	50	96	96	50-118	0
Isophorone	ug/L (ppb)	50	99	99	55-116	0
2-Nitrophenol	ug/L (ppb)	50	102	102	42-127	0
2,4-Dimethylphenol	ug/L (ppb)	50	89	90	45-100	1
Benzoic acid	ug/L (ppb)	75	11	24	10-46	74 vo
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	98	96	55-115	2
2,4-Dichlorophenol	ug/L (ppb)	50	96	96	55-113	0
1,2,4-Trichlorobenzene	ug/L (ppb)	50	102	101	50-109	1
Hexachlorobutadiene	ug/L (ppb)	50	98	98	50-109	0
4-Chloroaniline	ug/L (ppb)	100	94 vo	92 vo	34-85	2
4-Chloro-3-methylphenol	ug/L (ppb)	50	93	94	54-114	1
2-Methylnaphthalene	ug/L (ppb)	50	92	93	53-113	1
Hexachlorocyclopentadiene	ug/L (ppb)	50	78	77	26-94	1
2,4,6-Trichlorophenol	ug/L (ppb)	50	99	98	46-114	1
2,4,5-Trichlorophenol	ug/L (ppb)	50	98	99	57-122	1
2-Chloronaphthalene	ug/L (ppb)	50	97	97	52-112	0
2-Nitroaniline	ug/L (ppb)	50	99	99	47-128	0
Dimethyl phthalate	ug/L (ppb)	50	97	95	55-116	2
2,6-Dinitrotoluene	ug/L (ppb)	50	104	101	49-126	3
3-Nitroaniline	ug/L (ppb)	100	100 vo	97 vo	32-89	3
2,4-Dinitrophenol	ug/L (ppb)	50	87	88	29-130	1
Dibenzofuran	ug/L (ppb)	50	97	96	53-113	1
2,4-Dinitrotoluene	ug/L (ppb)	50	95	96	48-129	1
4-Nitrophenol	ug/L (ppb)	50	47	48	12-59	2
Diethyl phthalate	ug/L (ppb)	50	97	95	55-116	2
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	97	95	52-115	2
N-Nitrosodiphenylamine	ug/L (ppb)	50	99	99	51-112	0
4-Nitroaniline	ug/L (ppb)	100	98	100	42-115	2
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	95	97	40-128	2
4-Bromophenyl phenyl ether	ug/L (ppb)	50	100	101	53-114	1
Hexachlorobenzene	ug/L (ppb)	50	97	98	54-115	1
Pentachlorophenol	ug/L (ppb)	50	100	102	49-114	2
Carbazole	ug/L (ppb)	50	99	101	54-115	2
Di-n-butyl phthalate	ug/L (ppb)	50	99	102	54-115	3
Benzyl butyl phthalate	ug/L (ppb)	50	101	103	53-122	2
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	104	104	54-122	0
Di-n-octyl phthalate	ug/L (ppb)	50	99	98	50-131	1

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

207145

SAMPLE CHAIN OF CUSTODY

ME 07-11-12

Page # 1 of 1 Doy/Bry/V3

Send Report To Doug Hillman Dana Cannon

Company Aspect Consulting

Address 401 2nd Ave S, #201

City, State, ZIP Seattle WA 98104

Phone # ______ Fax # ______

SAMPLERS (signature) [signature]

PROJECT NAME/NO. Crown hill

PO # 100094

REMARKS Dissolved metals ARE field filtered

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH ______
- Rush charges authorized by: ______

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	total metals As, Pb, Cu	Dissolved metals As, Pb, Cu	PAHs 8270mod			Notes
MW-6-071012	01 A-I	7/10/12	1010	water	9	X			X	X		X	X	X			
MW-9-071012	02		1115			X			X	X		X	X	X			
MW-2-071012	03		1215			X			X	X		X	X	X			
MW-5-071012	04		1330			X			X	X		X	X	X			
MW-4-071012	05	↓	1435			X			X	X		X	X	X			
MW-7-071112	06	7/11/12	0940			X			X	X		X	X	X			
MW-1-071112	07		1104			X			X	X		X	X	X			
MW-10-071112	08		1245			X			X	X		X	X	X			
MW-11-071112	09		1340			X			X	X		X	X	X			
MW-18-071112	10 ↓	↓	—	↓	↓	X			X	X		X	X	X			

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Amy Tice	Aspect	7/11/12	1635
Received by: [signature]	HONG NGUYEN	FBI	✓	✓
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

Samples received at 6 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 7, 2012

Dana Cannon, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Cannon:

Included are the results from the testing of material submitted on October 26, 2012 from the Crownhill 100094, F&BI 210484 project. There are 65 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP1107R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 26, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 210484 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
210484-01	MW-10-102512
210484-02	MW-9-102512
210484-03	MW-2-102512
210484-04	MW-5-102512
210484-05	MW-6-102512
210484-06	MW-4-102512
210484-07	MW-7-102512
210484-08	MW-11-102612
210484-09	MW-1-102612
210484-10	MW-18-102612

Both poly bottles for sample MW-4-102512 were labeled as total metals. The lower of the two results was reported as the dissolved result.

Benzoic acid in the 8270D laboratory control sample and laboratory control sample duplicate failed the acceptance criteria. The data were flagged accordingly.

1,2,3-Trichlorobenzene failed above the acceptance criteria in the matrix spike samples. 1,2,3-Trichlorobenzene was not detected in the samples, therefore the data were acceptable.

1,1,1-Dichloroethane in the 8260C laboratory control sample exceeded the acceptance criteria. The analyte was not detected in the sample, therefore the data were acceptable.

The 8270D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 11/07/12
Date Received: 10/26/12
Project: Crownhill 100094, F&BI 210484
Date Extracted: 10/31/12
Date Analyzed: 11/02/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-10-102512 210484-01	58	<250	103
MW-9-102512 210484-02	110	<250	85
MW-2-102512 210484-03	<50	<250	94
MW-5-102512 210484-04	2,300	700 x	99
MW-6-102512 210484-05	<50	<250	103
MW-4-102512 210484-06	<50	<250	101
MW-7-102512 210484-07	<50	<250	104
MW-11-102612 210484-08	<50	<250	99
MW-1-102612 210484-09	<50	<250	100
MW-18-102612 210484-10 1/1.1	<55	<280	105
Method Blank 02-1986 MB2	<50	<250	101

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-10-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-01
Date Analyzed:	10/30/12	Data File:	210484-01.041
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	74	60	125
Indium	79	60	125
Holmium	75	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	3.60
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-9-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-02
Date Analyzed:	10/30/12	Data File:	210484-02.042
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	71	60	125
Indium	77	60	125
Holmium	72	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-2-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-03
Date Analyzed:	10/30/12	Data File:	210484-03.043
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	68	60	125
Indium	74	60	125
Holmium	70	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	1.46
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-5-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-04
Date Analyzed:	10/30/12	Data File:	210484-04.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	63	60	125
Indium	69	60	125
Holmium	72	60	125

Analyte:	Concentration ug/L (ppb)
Copper	4.47
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-6-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-05
Date Analyzed:	10/30/12	Data File:	210484-05.045
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	67	60	125
Indium	73	60	125
Holmium	75	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	10.6
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-4-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-06e
Date Analyzed:	10/30/12	Data File:	210484-06e.020
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	90	60	125
Holmium	84	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	3.09
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-7-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-07
Date Analyzed:	10/30/12	Data File:	210484-07.047
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	68	60	125
Indium	76	60	125
Holmium	75	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-08
Date Analyzed:	10/30/12	Data File:	210484-08.048
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	68	60	125
Indium	78	60	125
Holmium	76	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-1-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-09
Date Analyzed:	10/30/12	Data File:	210484-09.049
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	66	60	125
Indium	74	60	125
Holmium	74	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-18-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-10
Date Analyzed:	10/30/12	Data File:	210484-10.050
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	66	60	125
Indium	75	60	125
Holmium	77	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	I2-739 mb
Date Analyzed:	10/30/12	Data File:	I2-739 mb.051
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	68	60	125
Indium	77	60	125
Holmium	80	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-01
Date Analyzed:	10/30/12	Data File:	210484-01.015
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	100	60	125
Indium	100	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	3.63
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-02
Date Analyzed:	10/30/12	Data File:	210484-02.016
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	96	60	125
Holmium	88	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-2-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-03
Date Analyzed:	10/30/12	Data File:	210484-03.017
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	93	60	125
Holmium	85	60	125

Analyte:	Concentration ug/L (ppb)
Copper	3.09
Arsenic	1.23
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-04
Date Analyzed:	10/30/12	Data File:	210484-04.018
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	83	60	125
Indium	83	60	125
Holmium	87	60	125

Analyte:	Concentration ug/L (ppb)
Copper	7.50
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-05
Date Analyzed:	10/30/12	Data File:	210484-05.019
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	88	60	125
Holmium	85	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	12.2
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-06f
Date Analyzed:	10/30/12	Data File:	210484-06f.021
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	82	60	125
Indium	86	60	125
Holmium	80	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	3.38
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-07
Date Analyzed:	10/30/12	Data File:	210484-07.022
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	84	60	125
Indium	89	60	125
Holmium	81	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-08
Date Analyzed:	10/30/12	Data File:	210484-08.023
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	88	60	125
Indium	93	60	125
Holmium	86	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-09
Date Analyzed:	10/30/12	Data File:	210484-09.025
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	85	60	125
Indium	88	60	125
Holmium	83	60	125

Analyte:	Concentration ug/L (ppb)
Copper	2.02
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-18-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-10
Date Analyzed:	10/30/12	Data File:	210484-10.026
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	85	60	125
Indium	88	60	125
Holmium	82	60	125

Analyte:	Concentration ug/L (ppb)
Copper	1.95
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/29/12	Lab ID:	I2-735 mb
Date Analyzed:	10/30/12	Data File:	I2-735 mb.014
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	94	60	125
Indium	97	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Copper	<1
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-01
Date Analyzed:	10/30/12	Data File:	103015.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-02
Date Analyzed:	10/30/12	Data File:	103016.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	1.1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	11	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-03
Date Analyzed:	10/30/12	Data File:	103017.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-04
Date Analyzed:	10/30/12	Data File:	103018.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	2.3
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	2.4	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-05
Date Analyzed:	10/30/12	Data File:	103019.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	96	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-06
Date Analyzed:	10/30/12	Data File:	103020.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-07
Date Analyzed:	10/30/12	Data File:	103021.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-08
Date Analyzed:	10/30/12	Data File:	103030.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-09
Date Analyzed:	10/30/12	Data File:	103031.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-18-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	210484-10
Date Analyzed:	10/30/12	Data File:	103032.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/30/12	Lab ID:	02-1946 mb
Date Analyzed:	10/30/12	Data File:	103008.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-10-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-01
Date Analyzed:	11/01/12	Data File:	110104.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	67	50	150
Benzo(a)anthracene-d12	72	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-9-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-02
Date Analyzed:	11/01/12	Data File:	110105.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	81	50	150
Benzo(a)anthracene-d12	92	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-2-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-03
Date Analyzed:	11/01/12	Data File:	110106.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	97	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-5-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-04
Date Analyzed:	11/01/12	Data File:	110107.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	70	50	150
Benzo(a)anthracene-d12	75	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-6-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-05
Date Analyzed:	11/01/12	Data File:	110108.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	101	50	150
Benzo(a)anthracene-d12	85	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-4-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-06
Date Analyzed:	11/01/12	Data File:	110109.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	131	50	150
Benzo(a)anthracene-d12	91	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-7-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-07
Date Analyzed:	11/01/12	Data File:	110110.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	108	50	150
Benzo(a)anthracene-d12	92	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-11-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-08
Date Analyzed:	11/01/12	Data File:	110111.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	124	50	150
Benzo(a)anthracene-d12	88	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-1-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-09
Date Analyzed:	11/01/12	Data File:	110112.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	108	50	150
Benzo(a)anthracene-d12	85	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-18-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-10
Date Analyzed:	11/01/12	Data File:	110113.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	129	50	150
Benzo(a)anthracene-d12	88	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	02-1993 mb
Date Analyzed:	10/31/12	Data File:	103117.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	50	150
Benzo(a)anthracene-d12	99	50	129

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	<0.1
Phenanthrene	<0.1
Anthracene	<0.1
Fluoranthene	<0.1
Pyrene	<0.1
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1
Benzo(g,h,i)perylene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-10-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-01
Date Analyzed:	11/01/12	Data File:	110109.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	32	162
Phenol-d6	37	10	170
Nitrobenzene-d5	96	50	150
2-Fluorobiphenyl	100	43	158
2,4,6-Tribromophenol	97	43	146
Terphenyl-d14	119	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-9-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-02
Date Analyzed:	11/01/12	Data File:	110110.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	57	32	162
Phenol-d6	34	10	170
Nitrobenzene-d5	95	50	150
2-Fluorobiphenyl	101	43	158
2,4,6-Tribromophenol	104	43	146
Terphenyl-d14	120	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-2-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-03
Date Analyzed:	11/02/12	Data File:	110210.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	57	32	162
Phenol-d6	33	10	170
Nitrobenzene-d5	91	50	150
2-Fluorobiphenyl	93	43	158
2,4,6-Tribromophenol	93	43	146
Terphenyl-d14	111	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-5-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-04
Date Analyzed:	11/02/12	Data File:	110211.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	54	32	162
Phenol-d6	32	10	170
Nitrobenzene-d5	94	50	150
2-Fluorobiphenyl	89	43	158
2,4,6-Tribromophenol	97	43	146
Terphenyl-d14	104	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-6-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-05
Date Analyzed:	11/01/12	Data File:	110113.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	99	50	150
2-Fluorobiphenyl	104	43	158
2,4,6-Tribromophenol	102	43	146
Terphenyl-d14	120	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-4-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-06
Date Analyzed:	11/01/12	Data File:	110114.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	32	162
Phenol-d6	37	10	170
Nitrobenzene-d5	101	50	150
2-Fluorobiphenyl	104	43	158
2,4,6-Tribromophenol	100	43	146
Terphenyl-d14	124	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-7-102512	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-07
Date Analyzed:	11/01/12	Data File:	110115.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	62	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	100	50	150
2-Fluorobiphenyl	102	43	158
2,4,6-Tribromophenol	102	43	146
Terphenyl-d14	121	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-11-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-08
Date Analyzed:	11/01/12	Data File:	110116.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59	32	162
Phenol-d6	35	10	170
Nitrobenzene-d5	98	50	150
2-Fluorobiphenyl	103	43	158
2,4,6-Tribromophenol	100	43	146
Terphenyl-d14	123	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-1-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-09
Date Analyzed:	11/01/12	Data File:	110117.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	32	162
Phenol-d6	36	10	170
Nitrobenzene-d5	97	50	150
2-Fluorobiphenyl	102	43	158
2,4,6-Tribromophenol	111	43	146
Terphenyl-d14	147	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	MW-18-102612	Client:	Aspect Consulting, LLC
Date Received:	10/26/12	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	210484-10
Date Analyzed:	11/02/12	Data File:	110212.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	58	32	162
Phenol-d6	35	10	170
Nitrobenzene-d5	92	50	150
2-Fluorobiphenyl	89	43	158
2,4,6-Tribromophenol	88	43	146
Terphenyl-d14	100	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 210484
Date Extracted:	10/31/12	Lab ID:	02-1995 mb
Date Analyzed:	11/01/12	Data File:	110108.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	63	32	162
Phenol-d6	38	10	170
Nitrobenzene-d5	100	50	150
2-Fluorobiphenyl	104	43	158
2,4,6-Tribromophenol	94	43	146
Terphenyl-d14	120	39	168

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	2,4,6-Trichlorophenol	<10
Bis(2-chloroethyl) ether	<10	2,4,5-Trichlorophenol	<10
2-Chlorophenol	<10	2-Chloronaphthalene	<1
1,3-Dichlorobenzene	<1	2-Nitroaniline	<3
1,4-Dichlorobenzene	<1	Dimethyl phthalate	<1
1,2-Dichlorobenzene	<1	2,6-Dinitrotoluene	<1
Benzyl alcohol	<10	3-Nitroaniline	<3
Bis(2-chloroisopropyl) ether	<10	2,4-Dinitrophenol	<30
2-Methylphenol	<10	Dibenzofuran	<1
Hexachloroethane	<1	2,4-Dinitrotoluene	<1
N-Nitroso-di-n-propylamine	<10	4-Nitrophenol	<10
3-Methylphenol + 4-Methylphenol	<20	Diethyl phthalate	<1
Nitrobenzene	<1	4-Chlorophenyl phenyl ether	<1
Isophorone	<1	N-Nitrosodiphenylamine	<1
2-Nitrophenol	<10	4-Nitroaniline	<10
2,4-Dimethylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Benzoic acid	<50 jl	4-Bromophenyl phenyl ether	<1
Bis(2-chloroethoxy)methane	<1	Hexachlorobenzene	<1
2,4-Dichlorophenol	<10	Pentachlorophenol	<10
1,2,4-Trichlorobenzene	<1	Carbazole	<1
Hexachlorobutadiene	<1	Di-n-butyl phthalate	<1
4-Chloroaniline	<3	Benzyl butyl phthalate	<1
4-Chloro-3-methylphenol	<10	Bis(2-ethylhexyl) phthalate	<10
2-Methylnaphthalene	<1	Di-n-octyl phthalate	<1
Hexachlorocyclopentadiene	<3		

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	94	99	63-142	5

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 210477-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<1	72	71	52-134	1
Arsenic	ug/L (ppb)	10	1.84	94	94	51-167	0
Lead	ug/L (ppb)	10	<1	100	102	85-115	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	99	81-120
Arsenic	ug/L (ppb)	10	84	81-118
Lead	ug/L (ppb)	10	104	84-120

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 210472-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Copper	ug/L (ppb)	20	<1	100	98	52-134	2
Arsenic	ug/L (ppb)	10	<1	96	92	51-167	4
Lead	ug/L (ppb)	10	<1	92	91	85-115	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Copper	ug/L (ppb)	20	106	81-120
Arsenic	ug/L (ppb)	10	96	81-118
Lead	ug/L (ppb)	10	96	84-120

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 210484-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	113	59-141
Chloromethane	ug/L (ppb)	50	<10	99	67-131
Vinyl chloride	ug/L (ppb)	50	<0.2	109	73-131
Bromomethane	ug/L (ppb)	50	<1	109	68-131
Chloroethane	ug/L (ppb)	50	<1	115	70-127
Trichlorofluoromethane	ug/L (ppb)	50	<1	118	73-127
Acetone	ug/L (ppb)	250	<10	105	60-143
1,1-Dichloroethene	ug/L (ppb)	50	<1	104	74-123
Methylene chloride	ug/L (ppb)	50	<5	103	62-125
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	102	73-123
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	105	74-123
1,1-Dichloroethane	ug/L (ppb)	50	<1	109	82-110
2,2-Dichloropropane	ug/L (ppb)	50	<1	89	63-126
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	75-117
Chloroform	ug/L (ppb)	50	<1	102	82-110
2-Butanone (MEK)	ug/L (ppb)	250	<10	104	73-121
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	97	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	103	79-117
1,1-Dichloropropene	ug/L (ppb)	50	<1	100	81-110
Carbon tetrachloride	ug/L (ppb)	50	<1	106	74-123
Benzene	ug/L (ppb)	50	<0.35	100	80-108
Trichloroethene	ug/L (ppb)	50	<1	97	78-108
1,2-Dichloropropane	ug/L (ppb)	50	<1	98	83-110
Bromodichloromethane	ug/L (ppb)	50	<1	100	80-117
Dibromomethane	ug/L (ppb)	50	<1	99	83-110
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	107	80-122
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	100	77-121
Toluene	ug/L (ppb)	50	<1	98	77-113
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	95	76-121
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	100	83-110
2-Hexanone	ug/L (ppb)	250	<10	98	77-124
1,3-Dichloropropane	ug/L (ppb)	50	<1	99	82-110
Tetrachloroethene	ug/L (ppb)	50	<1	100	70-115
Dibromochloromethane	ug/L (ppb)	50	<1	103	71-130
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	107	85-112
Chlorobenzene	ug/L (ppb)	50	<1	97	74-115
Ethylbenzene	ug/L (ppb)	50	<1	103	71-120
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	107	79-120
m,p-Xylene	ug/L (ppb)	100	<2	102	81-112
o-Xylene	ug/L (ppb)	50	<1	108	82-112
Styrene	ug/L (ppb)	50	<1	109	67-124
Isopropylbenzene	ug/L (ppb)	50	<1	94	77-118
Bromoform	ug/L (ppb)	50	<1	87	52-144
n-Propylbenzene	ug/L (ppb)	50	<1	105	74-117
Bromobenzene	ug/L (ppb)	50	<1	95	69-123
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	105	79-114
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	107	82-117
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	104	77-114
2-Chlorotoluene	ug/L (ppb)	50	<1	99	80-110
4-Chlorotoluene	ug/L (ppb)	50	<1	103	81-111
tert-Butylbenzene	ug/L (ppb)	50	<1	105	81-116
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	104	74-118
sec-Butylbenzene	ug/L (ppb)	50	<1	114	78-116
p-Isopropyltoluene	ug/L (ppb)	50	<1	115	79-117
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	102	81-111
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	99	78-110
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	104	81-111
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	108	70-126
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	106	74-115
Hexachlorobutadiene	ug/L (ppb)	50	<1	106	67-120
Naphthalene	ug/L (ppb)	50	<1	110	78-123
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	126 vo	80-114

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	125	107	54-149	16
Chloromethane	ug/L (ppb)	50	117	97	67-133	19
Vinyl chloride	ug/L (ppb)	50	123	120	73-132	2
Bromomethane	ug/L (ppb)	50	109	108	74-126	1
Chloroethane	ug/L (ppb)	50	113	113	72-125	0
Trichlorofluoromethane	ug/L (ppb)	50	119	114	76-125	4
Acetone	ug/L (ppb)	250	114	113	58-133	1
1,1-Dichloroethene	ug/L (ppb)	50	114	114	75-119	0
Methylene chloride	ug/L (ppb)	50	109	109	71-112	0
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	109	108	79-117	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	114	115	76-118	1
1,1-Dichloroethane	ug/L (ppb)	50	111 vo	100	82-110	10
2,2-Dichloropropane	ug/L (ppb)	50	103	95	77-128	8
cis-1,2-Dichloroethene	ug/L (ppb)	50	105	101	83-110	4
Chloroform	ug/L (ppb)	50	109	99	82-110	10
2-Butanone (MEK)	ug/L (ppb)	250	110	101	69-118	9
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	109	97	80-110	12
1,1,1-Trichloroethane	ug/L (ppb)	50	110	101	80-116	9
1,1-Dichloropropene	ug/L (ppb)	50	105	98	83-110	7
Carbon tetrachloride	ug/L (ppb)	50	111	107	72-128	4
Benzene	ug/L (ppb)	50	101	98	81-108	3
Trichloroethene	ug/L (ppb)	50	98	94	77-108	4
1,2-Dichloropropane	ug/L (ppb)	50	103	96	82-109	7
Bromodichloromethane	ug/L (ppb)	50	108	104	76-120	4
Dibromomethane	ug/L (ppb)	50	104	98	84-109	6
4-Methyl-2-pentanone	ug/L (ppb)	250	106	104	81-118	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	105	103	76-128	2
Toluene	ug/L (ppb)	50	97	99	83-108	2
trans-1,3-Dichloropropene	ug/L (ppb)	50	101	104	76-128	3
1,1,2-Trichloroethane	ug/L (ppb)	50	100	103	84-108	3
2-Hexanone	ug/L (ppb)	250	107	104	78-119	3
1,3-Dichloropropane	ug/L (ppb)	50	101	102	83-110	1
Tetrachloroethene	ug/L (ppb)	50	96	102	81-109	6
Dibromochloromethane	ug/L (ppb)	50	107	108	63-140	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	105	106	85-113	1
Chlorobenzene	ug/L (ppb)	50	99	99	84-108	0
Ethylbenzene	ug/L (ppb)	50	102	101	84-110	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	106	106	76-125	0
m,p-Xylene	ug/L (ppb)	100	101	102	84-112	1
o-Xylene	ug/L (ppb)	50	106	110	82-113	4
Styrene	ug/L (ppb)	50	106	111	84-116	5
Isopropylbenzene	ug/L (ppb)	50	110	113	84-114	3
Bromoform	ug/L (ppb)	50	109	114	40-161	4
n-Propylbenzene	ug/L (ppb)	50	103	97	81-115	6
Bromobenzene	ug/L (ppb)	50	97	95	80-113	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	103	98	83-117	5
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	102	94	82-118	8
1,2,3-Trichloropropane	ug/L (ppb)	50	99	89	74-116	11
2-Chlorotoluene	ug/L (ppb)	50	96	90	81-112	6
4-Chlorotoluene	ug/L (ppb)	50	99	93	81-113	6
tert-Butylbenzene	ug/L (ppb)	50	106	103	81-119	3
1,2,4-Trimethylbenzene	ug/L (ppb)	50	102	99	83-116	3
sec-Butylbenzene	ug/L (ppb)	50	111	108	83-116	3
p-Isopropyltoluene	ug/L (ppb)	50	114	113	82-119	1
1,3-Dichlorobenzene	ug/L (ppb)	50	102	102	83-111	0
1,4-Dichlorobenzene	ug/L (ppb)	50	100	99	82-109	1
1,2-Dichlorobenzene	ug/L (ppb)	50	103	101	83-111	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	102	95	62-133	7
1,2,4-Trichlorobenzene	ug/L (ppb)	50	104	107	77-117	3
Hexachlorobutadiene	ug/L (ppb)	50	109	108	74-118	1
Naphthalene	ug/L (ppb)	50	104	101	75-131	3
1,2,3-Trichlorobenzene	ug/L (ppb)	50	110	106	87-115	4

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	1	91	94	67-116	3
Acenaphthylene	ug/L (ppb)	1	95	96	65-119	1
Acenaphthene	ug/L (ppb)	1	91	94	66-118	3
Fluorene	ug/L (ppb)	1	101	104	64-125	3
Phenanthrene	ug/L (ppb)	1	94	96	67-120	2
Anthracene	ug/L (ppb)	1	94	95	65-122	1
Fluoranthene	ug/L (ppb)	1	96	100	65-127	4
Pyrene	ug/L (ppb)	1	103	105	62-130	2
Benz(a)anthracene	ug/L (ppb)	1	99	100	60-118	1
Chrysene	ug/L (ppb)	1	100	103	66-125	3
Benzo(b)fluoranthene	ug/L (ppb)	1	106	107	55-135	1
Benzo(k)fluoranthene	ug/L (ppb)	1	108	109	62-125	1
Benzo(a)pyrene	ug/L (ppb)	1	112	113	58-127	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	111	111	36-142	0
Dibenz(a,h)anthracene	ug/L (ppb)	1	104	105	37-133	1
Benzo(g,h,i)perylene	ug/L (ppb)	1	100	101	34-135	1

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
N-Nitrosodimethylamine	ug/L (ppb)	50	63	68	12-99	8
Phenol	ug/L (ppb)	50	36	39	18-52	8
Bis(2-chloroethyl) ether	ug/L (ppb)	50	89	90	52-113	1
2-Chlorophenol	ug/L (ppb)	50	84	85	50-110	1
1,3-Dichlorobenzene	ug/L (ppb)	50	86	89	45-109	3
1,4-Dichlorobenzene	ug/L (ppb)	50	87	90	44-118	3
1,2-Dichlorobenzene	ug/L (ppb)	50	86	88	46-116	2
Benzyl alcohol	ug/L (ppb)	50	74	76	42-100	3
Bis(2-chloroisopropyl) ether	ug/L (ppb)	50	87	90	51-124	3
2-Methylphenol	ug/L (ppb)	50	75	78	38-100	4
Hexachloroethane	ug/L (ppb)	50	85	89	42-117	5
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	83	83	48-124	0
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	50	67	70	48-87	4
Nitrobenzene	ug/L (ppb)	50	90	90	50-118	0
Isophorone	ug/L (ppb)	50	89	89	55-116	0
2-Nitrophenol	ug/L (ppb)	50	89	90	42-127	1
2,4-Dimethylphenol	ug/L (ppb)	50	80	83	45-100	4
Benzoic acid	ug/L (ppb)	75	8 vo	4 vo	10-46	67 vo
Bis(2-chloroethoxy)methane	ug/L (ppb)	50	91	90	55-115	1
2,4-Dichlorophenol	ug/L (ppb)	50	88	90	55-113	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	89	92	50-109	3
Naphthalene	ug/L (ppb)	50	89	90	53-112	1
Hexachlorobutadiene	ug/L (ppb)	50	88	92	50-109	4
4-Chloroaniline	ug/L (ppb)	100	66	86	30-109	26 vo
4-Chloro-3-methylphenol	ug/L (ppb)	50	87	88	54-114	1
2-Methylnaphthalene	ug/L (ppb)	50	88	90	53-113	2
Hexachlorocyclopentadiene	ug/L (ppb)	50	68	77	26-94	12
2,4,6-Trichlorophenol	ug/L (ppb)	50	90	85	46-114	6
2,4,5-Trichlorophenol	ug/L (ppb)	50	90	89	57-122	1
2-Chloronaphthalene	ug/L (ppb)	50	90	88	52-112	2
2-Nitroaniline	ug/L (ppb)	50	91	92	47-128	1
Dimethyl phthalate	ug/L (ppb)	50	94	93	55-116	1
Acenaphthylene	ug/L (ppb)	50	90	89	52-112	1
2,6-Dinitrotoluene	ug/L (ppb)	50	95	95	49-126	0
3-Nitroaniline	ug/L (ppb)	100	82	93	21-125	13
Acenaphthene	ug/L (ppb)	50	90	90	52-114	0
2,4-Dinitrophenol	ug/L (ppb)	50	80	78	29-130	3
Dibenzofuran	ug/L (ppb)	50	92	91	53-113	1
2,4-Dinitrotoluene	ug/L (ppb)	50	97	96	48-129	1
4-Nitrophenol	ug/L (ppb)	50	40	44	12-59	10
Diethyl phthalate	ug/L (ppb)	50	95	95	55-116	0
Fluorene	ug/L (ppb)	50	92	92	54-115	0
4-Chlorophenyl phenyl ether	ug/L (ppb)	50	93	92	52-115	1
1,2-Diphenylhydrazine	ug/L (ppb)	50	93	92	47-131	1
N-Nitrosodiphenylamine	ug/L (ppb)	50	91	90	51-112	1
4-Nitroaniline	ug/L (ppb)	100	89	91	42-115	2
4,6-Dinitro-2-methylphenol	ug/L (ppb)	50	87	85	40-128	2
4-Bromophenyl phenyl ether	ug/L (ppb)	50	90	90	53-114	0
Hexachlorobenzene	ug/L (ppb)	50	93	91	54-115	2
Pentachlorophenol	ug/L (ppb)	50	88	84	49-114	5
Phenanthrene	ug/L (ppb)	50	93	91	53-113	2
Anthracene	ug/L (ppb)	50	93	91	56-119	2
Carbazole	ug/L (ppb)	50	93	91	54-115	2
Di-n-butyl phthalate	ug/L (ppb)	50	92	88	54-115	4
Fluoranthene	ug/L (ppb)	50	92	88	55-116	4
Benzidine	ug/L (ppb)	75	28	53	10-88	62 vo
Pyrene	ug/L (ppb)	50	94	95	54-121	1
Benzyl butyl phthalate	ug/L (ppb)	50	87	84	53-122	4
3,3'-Dichlorobenzidine	ug/L (ppb)	75	78	83	30-118	6
Benz(a)anthracene	ug/L (ppb)	50	89	86	52-114	3
Chrysene	ug/L (ppb)	50	94	92	54-119	2
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	50	86	83	54-122	4
Di-n-octyl phthalate	ug/L (ppb)	50	84	83	50-131	1
Benzo(a)pyrene	ug/L (ppb)	50	92	92	54-120	0
Benzo(b)fluoranthene	ug/L (ppb)	50	95	94	46-118	1
Benzo(k)fluoranthene	ug/L (ppb)	50	98	97	56-125	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	50	87	87	52-120	0
Dibenz(a,h)anthracene	ug/L (ppb)	50	90	89	54-122	1
Benzo(g,h,i)perylene	ug/L (ppb)	50	90	90	54-118	0

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

210484

SAMPLE CHAIN OF CUSTODY

ME 10/26/12

V5/A05/BLY

Page 1 of 1

Send Report To Dana Cannon

Company Aspect

Address 401 2nd Ave S.

City, State, ZIP Seattle

Phone # _____ Fax # _____

SAMPLERS (signature) Molly Ravits

PROJECT NAME/NO. Crown Hill 100094

PO# _____

REMARKS Diss/Metals: As, Pb, Cu (total) Silica gel cleanup on Dx
Diss Metals ARE field filtered

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH _____
- Rush charges authorized by _____

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	PAH (cPAH)	Diss. Metals	Total Metals				Notes
						ANALYSES REQUESTED												
MW-10-102512	01A-I	10/25/12	1020	Water	9	X			X	X		X	X	X				
MW-9-102512	02		1125		9	X			X	X		X	X	X				
MW-2-102512	03		1135		9	X			X	X		X	X	X				
MW-5-102512	04		1235		9	X			X	X		X	X	X				
MW-6-102512	05		1315		9	X			X	X		X	X	X				
MW-4-102512	06		1400		9	X			X	X		X	X	X				
MW-7-102512	07		1422		9	X			X	X		X	X	X				
MW-11-102612	08	10/26/12	0945		9	X			X	X		X	X	X				
MW-1-102612	09		1100		9	X			X	X		X	X	X				
MW-18-102612	10				9	X			X	X		X	X	X				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	M Ravits	Molly Ravits	Aspect	10/26/12	1430
Received by:		Matt Laystrom	FBInc	10/26/12	1630
Relinquished by:					
Received by:			Samples received at 4 °C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 19, 2012

Doug Hillman, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Hillman:

Included are the results from the testing of material submitted on November 2, 2012 from the Crownhill 100094, F&BI 211041 project. There are 12 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman, Dave Heffner
ASP1119R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 2, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 211041 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
211041-01	MW-12-110112
211041-02	MW-13-110112
211041-03	MW-14-110112
211041-04	MW-15-110112
211041-05	MW-16-110112

The 8260C vinyl chloride concentrations are considered estimates due to hydrochloric acid preservation per EPA SW-846 table 4-1.

All other quality control requirements were acceptable.

Date of Report: 11/19/12
Date Received: 11/02/12
Project: Crownhill 100094, F&BI 211041
Date Extracted: 11/05/12
Date Analyzed: 11/06/12, 11/07/12, and 11/09/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-12-110112 211041-01	2,500	750 x	93
MW-13-110112 211041-02 1/10	43,000	39,000	118
MW-14-110112 211041-03	1,600	680	106
MW-15-110112 211041-04 1/1.1	70 x	<280	105
MW-16-110112 211041-05	2,100	420 x	103
Method Blank 02-2042 MB	<50	<250	98

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-110112	Client:	Aspect Consulting, LLC
Date Received:	11/02/12	Project:	Crownhill 100094, F&BI 211041
Date Extracted:	11/13/12	Lab ID:	211041-01
Date Analyzed:	11/13/12	Data File:	111320.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2 pr
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-13-110112	Client:	Aspect Consulting, LLC
Date Received:	11/02/12	Project:	Crownhill 100094, F&BI 211041
Date Extracted:	11/06/12	Lab ID:	211041-02
Date Analyzed:	11/07/12	Data File:	110629.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2 pr
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-14-110112	Client:	Aspect Consulting, LLC
Date Received:	11/02/12	Project:	Crownhill 100094, F&BI 211041
Date Extracted:	11/06/12	Lab ID:	211041-03
Date Analyzed:	11/06/12	Data File:	110622.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	108	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2 pr
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	2.3
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-15-110112	Client:	Aspect Consulting, LLC
Date Received:	11/02/12	Project:	Crownhill 100094, F&BI 211041
Date Extracted:	11/06/12	Lab ID:	211041-04
Date Analyzed:	11/06/12	Data File:	110623.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	110	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2 pr
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-16-110112	Client:	Aspect Consulting, LLC
Date Received:	11/02/12	Project:	Crownhill 100094, F&BI 211041
Date Extracted:	11/13/12	Lab ID:	211041-05
Date Analyzed:	11/13/12	Data File:	111321.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2 pr
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 211041
Date Extracted:	11/06/12	Lab ID:	02-2018 mb
Date Analyzed:	11/06/12	Data File:	110619.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	109	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 211041
Date Extracted:	11/13/12	Lab ID:	02-2028 mb
Date Analyzed:	11/13/12	Data File:	111308.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 11/19/12
Date Received: 11/02/12
Project: Crownhill 100094, F&BI 211041

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	96	98	58-134	2

Date of Report: 11/19/12
Date Received: 11/02/12
Project: Crownhill 100094, F&BI 211041

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 211041-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	106	36-166
Chloroethane	ug/L (ppb)	50	<1	100	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	98	60-136
Methylene chloride	ug/L (ppb)	50	<5	93	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	98	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	98	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	102	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	97	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	99	60-146
Trichloroethene	ug/L (ppb)	50	<1	100	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	104	73-129

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	109	108	50-154	1
Chloroethane	ug/L (ppb)	50	101	101	58-146	0
1,1-Dichloroethene	ug/L (ppb)	50	100	101	67-136	1
Methylene chloride	ug/L (ppb)	50	99	97	39-148	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	102	101	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	100	100	79-121	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	105	104	80-123	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	99	99	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	103	101	83-130	2
Trichloroethene	ug/L (ppb)	50	104	103	80-120	1
Tetrachloroethene	ug/L (ppb)	50	107	105	76-121	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

211041 Doug Hillman

SAMPLE CHAIN OF CUSTODY

ME 11-2-12

Page # V2 / A02 of 1

Send Report To Dave Heffner

Company Aspect

Address 401 2nd Ave S. Suite 201

City, State, ZIP Seattle, WA 98104

Phone # _____ Fax # _____

SAMPLERS (signature) M. Pavits

PROJECT NAME/NO. Crown Hill #100094

PO#

REMARKS

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH _____
- Rush charges authorized by _____

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	~~SVOCs~~ VOCs by 8260B	SVOCs by 8270	HFS							Notes
MW-12-110112	01 A-D	11/1/12	1210	Water	4	X			X									
MW-13-110112	02	"	1450	"	4	X			X									~~HOLD~~
MW-14-110112	03	"	1240	"	4	X			X									analyze per DA 11/5/12 mg
MW-15-110112	04	"	1145	"	4	X			X									Do not include
MW-16-110112	05	"	1330	"	4	X			X									product laser-ma

ANALYSES REQUESTED

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMSVOCCOC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: M. Pavits	Molly Pavits	Aspect	11/2/12	0930
Received by: Nhan Phan	Nhan Phan	FEBI	11/2/12	1335
Relinquished by:				
Received by:		Samples received at 4 °C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 29, 2012

Dave Heffner, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Heffner:

Included are the results from the testing of material submitted on November 26, 2012 from the Crownhill 100094, F&BI 211413 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP1129R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 26, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 211413 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
211413-01	MW-13-Product

Sample MW-13-Product was sent to Spectra for flashpoint and viscosity analyses. Review of the enclosed report indicates that all quality assurance were acceptable.

‘

All quality control requirements were acceptable.

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413
Date Extracted: 11/28/12
Date Analyzed: 11/28/12

RESULTS FROM THE ANALYSIS OF PRODUCT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-13-Product 211413-01 1/10	370,000	350,000	88
Method Blank 02-2197 MB	<1,000	<5,000	105

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413
Date Extracted: 11/28/12
Date Analyzed: 11/28/12

RESULTS FROM THE ANALYSIS OF PRODUCT SAMPLES FOR SPECIFIC GRAVITY @ 15.56 °C

Sample ID Laboratory ID	Specific Gravity
MW-13-Product 211413-01	0.9

Note: Due to high sample viscosity, the result reported should be considered an estimate.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-13-Product	Client:	Aspect Consulting, LLC
Date Received:	11/26/12	Project:	Crownhill 100094, F&BI 211413
Date Extracted:	11/28/12	Lab ID:	211413-01
Date Analyzed:	11/29/12	Data File:	112828.D
Matrix:	Product	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	49	132
Toluene-d8	102	44	140
4-Bromofluorobenzene	105	38	156

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<100
Chloroethane	<100
1,1-Dichloroethene	<100
Methylene chloride	<500
trans-1,2-Dichloroethene	<100
1,1-Dichloroethane	<100
cis-1,2-Dichloroethene	<100
1,2-Dichloroethane (EDC)	<100
1,1,1-Trichloroethane	<100
Trichloroethene	<100
Tetrachloroethene	<100

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 211413
Date Extracted:	11/28/12	Lab ID:	02-2146 mb
Date Analyzed:	11/28/12	Data File:	112826.D
Matrix:	Product	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	49	132
Toluene-d8	101	44	140
4-Bromofluorobenzene	104	38	156

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<100
Chloroethane	<100
1,1-Dichloroethene	<100
Methylene chloride	<500
trans-1,2-Dichloroethene	<100
1,1-Dichloroethane	<100
cis-1,2-Dichloroethene	<100
1,2-Dichloroethane (EDC)	<100
1,1,1-Trichloroethane	<100
Trichloroethene	<100
Tetrachloroethene	<100

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF PRODUCT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 211413-01 (Duplicate) 1/10

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	560,000	560,000	0	0-20

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	100,000	110	116	74-139	5

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF PRODUCT SAMPLES FOR SPECIFIC GRAVITY @ 15.56 °C

Laboratory Code: 211378-01 (Duplicate)

Analyte	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Specific Gravity	0.81	0.81	0	0-2

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF PRODUCT SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 211429-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Vinyl chloride	mg/kg (ppm)	<100	<100	nm
Chloroethane	mg/kg (ppm)	<100	<100	nm
1,1-Dichloroethene	mg/kg (ppm)	<100	<100	nm
Methylene chloride	mg/kg (ppm)	<500	<500	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<100	<100	nm
1,1-Dichloroethane	mg/kg (ppm)	<100	<100	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<100	<100	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<100	<100	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<100	<100	nm
Trichloroethene	mg/kg (ppm)	<100	<100	nm
Tetrachloroethene	mg/kg (ppm)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	500	71	69	38-134	3
Chloroethane	mg/kg (ppm)	500	104	104	10-152	0
1,1-Dichloroethene	mg/kg (ppm)	500	83	81	39-154	2
Methylene chloride	mg/kg (ppm)	500	90	89	31-150	1
trans-1,2-Dichloroethene	mg/kg (ppm)	500	89	87	44-141	2
1,1-Dichloroethane	mg/kg (ppm)	500	90	88	60-130	2
cis-1,2-Dichloroethene	mg/kg (ppm)	500	95	93	53-130	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	500	92	90	41-149	2
1,1,1-Trichloroethane	mg/kg (ppm)	500	92	89	35-154	3
Trichloroethene	mg/kg (ppm)	500	96	93	65-127	3
Tetrachloroethene	mg/kg (ppm)	500	88	80	69-132	10

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

11/27/2012

Friedman & Bruya, Inc
3012 16th Ave West
Seattle, WA 98119-2029
Attn: Michael Erdahl

P.O.#: C-161
Project: 211413
Client ID: MW-13-Product
Sample Matrix: Product
Date Sampled: 11/21/2012
Date Received: 11/26/2012
Spectra Project: 2012110518
Spectra Number: 1
Rush

Analyte	Result	Units	Method
Viscosity, Kin, @ 20 °C	1737	cSt	ASTM D-445
Flashpoint (PMCC)	>210	°F	ASTM D-93

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager
a6/mh

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2012110518

Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Spectra.

PROJECT NAME/NO. 211413

PO # C-161

REMARKS

Please Email Results

TURNAROUND TIME

☐ Standard (2 Weeks)

☒ RUSH 11/28/12.

Rush charges authorized by: MS

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity	Kinematic Viscosity @ 20°C	PM cc Flashpoint D-93			Notes
MW-13-Product		11/21/12.	1200	product								X	X			

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	11/26/12	1200
Received by:	Marie Holt	Marie Holt	Spectra	11-26-12	2:10 pm
Relinquished by:					
Received by:					

211413

SAMPLE CHAIN OF CUSTODY

ME 11/26/12

D02

Page # 1 of 1

Send Report To Dave Heffner
Company Aspect
Address 401 2nd Ave S. Suite 201
City, State, ZIP Seattle, WA
Phone # _____ Fax # _____

SAMPLERS (signature) M. Ravits
PROJECT NAME/NO. Crownhill 100094
PO#
REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH 3-DAY
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel + Heavy oil	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Chlorinated solvents 8260B	Specific gravity (ASTM D-1298)	Kinematic Viscosity (ASTM D445 @ 20 °C)	Pensky-Martin closed cup flash point (ASTM D-93)	Notes
MW-13-PRODUCT	01 A-B	11/21/12	1200	free phase product	2	X						X	X	X	X	

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: M Ravits	Molly Ravits	Aspect	11/26/12	1030
Received by: Nhan Phan	Nhan Phan	FEBI	11/26/12	1230
Relinquished by:				
Received by:		Samples received at 4 °C		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 30, 2012

Dave Heffner, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Heffner:

Included are the amended results from the testing of material submitted on November 26, 2012 from the Crownhill 100094, F&BI 211413 project. A second significant figure was added to the specific gravity per your request.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP1129R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

November 29, 2012

Dave Heffner, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Heffner:

Included are the results from the testing of material submitted on November 26, 2012 from the Crownhill 100094, F&BI 211413 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP1129R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 26, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 211413 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
211413-01	MW-13-Product

Sample MW-13-Product was sent to Spectra for flashpoint and viscosity analyses. Review of the enclosed report indicates that all quality assurance were acceptable.

‘

All quality control requirements were acceptable.

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413
Date Extracted: 11/28/12
Date Analyzed: 11/28/12

RESULTS FROM THE ANALYSIS OF PRODUCT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW-13-Product 211413-01 1/10	370,000	350,000	88
Method Blank 02-2197 MB	<1,000	<5,000	105

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413
Date Extracted: 11/28/12
Date Analyzed: 11/28/12

RESULTS FROM THE ANALYSIS OF PRODUCT SAMPLES FOR SPECIFIC GRAVITY @ 15.56 °C

Sample ID Laboratory ID	Specific Gravity
MW-13-Product 211413-01	0.89

Note: Due to high sample viscosity, the result reported should be considered an estimate.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-13-Product	Client:	Aspect Consulting, LLC
Date Received:	11/26/12	Project:	Crownhill 100094, F&BI 211413
Date Extracted:	11/28/12	Lab ID:	211413-01
Date Analyzed:	11/29/12	Data File:	112828.D
Matrix:	Product	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	49	132
Toluene-d8	102	44	140
4-Bromofluorobenzene	105	38	156

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<100
Chloroethane	<100
1,1-Dichloroethene	<100
Methylene chloride	<500
trans-1,2-Dichloroethene	<100
1,1-Dichloroethane	<100
cis-1,2-Dichloroethene	<100
1,2-Dichloroethane (EDC)	<100
1,1,1-Trichloroethane	<100
Trichloroethene	<100
Tetrachloroethene	<100

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 211413
Date Extracted:	11/28/12	Lab ID:	02-2146 mb
Date Analyzed:	11/28/12	Data File:	112826.D
Matrix:	Product	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	49	132
Toluene-d8	101	44	140
4-Bromofluorobenzene	104	38	156

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<100
Chloroethane	<100
1,1-Dichloroethene	<100
Methylene chloride	<500
trans-1,2-Dichloroethene	<100
1,1-Dichloroethane	<100
cis-1,2-Dichloroethene	<100
1,2-Dichloroethane (EDC)	<100
1,1,1-Trichloroethane	<100
Trichloroethene	<100
Tetrachloroethene	<100

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF PRODUCT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 211413-01 (Duplicate) 1/10

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	560,000	560,000	0	0-20

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	100,000	110	116	74-139	5

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF PRODUCT SAMPLES FOR SPECIFIC GRAVITY @ 15.56 °C

Laboratory Code: 211378-01 (Duplicate)

Analyte	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Specific Gravity	0.81	0.81	0	0-2

Date of Report: 11/29/12
Date Received: 11/26/12
Project: Crownhill 100094, F&BI 211413

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF PRODUCT SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 211429-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Vinyl chloride	mg/kg (ppm)	<100	<100	nm
Chloroethane	mg/kg (ppm)	<100	<100	nm
1,1-Dichloroethene	mg/kg (ppm)	<100	<100	nm
Methylene chloride	mg/kg (ppm)	<500	<500	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<100	<100	nm
1,1-Dichloroethane	mg/kg (ppm)	<100	<100	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<100	<100	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<100	<100	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<100	<100	nm
Trichloroethene	mg/kg (ppm)	<100	<100	nm
Tetrachloroethene	mg/kg (ppm)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	500	71	69	38-134	3
Chloroethane	mg/kg (ppm)	500	104	104	10-152	0
1,1-Dichloroethene	mg/kg (ppm)	500	83	81	39-154	2
Methylene chloride	mg/kg (ppm)	500	90	89	31-150	1
trans-1,2-Dichloroethene	mg/kg (ppm)	500	89	87	44-141	2
1,1-Dichloroethane	mg/kg (ppm)	500	90	88	60-130	2
cis-1,2-Dichloroethene	mg/kg (ppm)	500	95	93	53-130	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	500	92	90	41-149	2
1,1,1-Trichloroethane	mg/kg (ppm)	500	92	89	35-154	3
Trichloroethene	mg/kg (ppm)	500	96	93	65-127	3
Tetrachloroethene	mg/kg (ppm)	500	88	80	69-132	10

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 12, 2013

Doug Hillman, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Hillman:

Included are the results from the testing of material submitted on February 1, 2013 from the Crownhill 100094, F&BI 302026 project. There are 24 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman, Dave Heffner
ASP0212R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 1, 2013 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 302026 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
302026 -01	MW-6-020113
302026 -02	MW-10-020113
302026 -03	MW-4-020113
302026 -04	MW-5-020113
302026 -05	MW-9-020113
302026 -06	MW-15-020113
302026 -07	MW-14-020113
302026 -08	MW-12-020113

All quality control requirements were acceptable.

Date of Report: 02/12/13
Date Received: 02/01/13
Project: Crownhill 100094, F&BI 302026
Date Extracted: 02/04/13
Date Analyzed: 02/04/13

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 47-140)
MW-6-020113 302026-01	<50	<250	95
MW-10-020113 302026-02	<50	<250	81
MW-4-020113 302026-03	<50	<250	94
MW-5-020113 302026-04	1,800 x	530 x	101
MW-9-020113 302026-05	<50	<250	87
MW-15-020113 302026-06	<50	<250	84
MW-14-020113 302026-07	2,900 x	740 x	85
MW-12-020113 302026-08	2,100 x	610 x	76
Method Blank 03-215 MB	<50	<250	88

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/07/13	Lab ID:	302026-01
Date Analyzed:	02/08/13	Data File:	302026-01.029
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	86	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	10.7
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/07/13	Lab ID:	302026-02
Date Analyzed:	02/08/13	Data File:	302026-02.030
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	84	60	125
Holmium	84	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	3.59
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/07/13	Lab ID:	302026-03
Date Analyzed:	02/08/13	Data File:	302026-03.031
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	87	60	125
Holmium	88	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	3.40
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/07/13	Lab ID:	302026-04
Date Analyzed:	02/08/13	Data File:	302026-04.032
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	75	60	125
Holmium	79	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/07/13	Lab ID:	302026-05
Date Analyzed:	02/08/13	Data File:	302026-05.033
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	81	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-15-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/07/13	Lab ID:	302026-06
Date Analyzed:	02/08/13	Data File:	302026-06.034
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	81	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	1.25
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-14-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/07/13	Lab ID:	302026-07
Date Analyzed:	02/08/13	Data File:	302026-07.035
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	69	60	125
Holmium	74	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	2.61
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-12-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/07/13	Lab ID:	302026-08
Date Analyzed:	02/08/13	Data File:	302026-08.036
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	74	60	125
Holmium	79	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	1.93
Lead	1.10

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/07/13	Lab ID:	I3-49 mb
Date Analyzed:	02/08/13	Data File:	I3-49 mb.017
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	80	60	125
Holmium	83	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/04/13	Lab ID:	302026-01
Date Analyzed:	02/04/13	Data File:	020413.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/04/13	Lab ID:	302026-02
Date Analyzed:	02/04/13	Data File:	020414.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/04/13	Lab ID:	302026-03
Date Analyzed:	02/04/13	Data File:	020415.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/04/13	Lab ID:	302026-04
Date Analyzed:	02/04/13	Data File:	020416.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	104	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.5
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/04/13	Lab ID:	302026-05
Date Analyzed:	02/04/13	Data File:	020417.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	95	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	1.8
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	9.7
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-15-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/04/13	Lab ID:	302026-06
Date Analyzed:	02/04/13	Data File:	020418.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-14-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/04/13	Lab ID:	302026-07
Date Analyzed:	02/04/13	Data File:	020424.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-020113	Client:	Aspect Consulting, LLC
Date Received:	02/01/13	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/04/13	Lab ID:	302026-08
Date Analyzed:	02/04/13	Data File:	020425.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 302026
Date Extracted:	02/04/13	Lab ID:	03-0125 MB
Date Analyzed:	02/04/13	Data File:	020410.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	104	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 02/12/13
Date Received: 02/01/13
Project: Crownhill 100094, F&BI 302026

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	97	105	61-133	8

Date of Report: 02/12/13
Date Received: 02/01/13
Project: Crownhill 100094, F&BI 302026

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 302009-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	5.27	99 b	103 b	51-167	4 b
Lead	ug/L (ppb)	10	<1	97	101	85-115	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	98	81-118
Lead	ug/L (ppb)	10	109	84-120

Date of Report: 02/12/13
Date Received: 02/01/13
Project: Crownhill 100094, F&BI 302026

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 302026-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	92	61-139
Chloroethane	ug/L (ppb)	50	<1	84	70-127
1,1-Dichloroethene	ug/L (ppb)	50	<1	85	74-123
Methylene chloride	ug/L (ppb)	50	<5	83	62-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	85	74-123
1,1-Dichloroethane	ug/L (ppb)	50	<1	90	82-110
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	85	75-117
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	87	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	88	79-117
Trichloroethene	ug/L (ppb)	50	<1	87	78-108
Tetrachloroethene	ug/L (ppb)	50	<1	91	70-115

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	94	93	73-132	1
Chloroethane	ug/L (ppb)	50	87	85	68-126	2
1,1-Dichloroethene	ug/L (ppb)	50	88	87	75-119	1
Methylene chloride	ug/L (ppb)	50	79	78	66-132	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	86	85	76-118	1
1,1-Dichloroethane	ug/L (ppb)	50	91	90	80-116	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	85	85	83-110	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	88	88	80-110	0
1,1,1-Trichloroethane	ug/L (ppb)	50	93	91	80-116	2
Trichloroethene	ug/L (ppb)	50	88	87	77-108	1
Tetrachloroethene	ug/L (ppb)	50	91	91	81-109	0

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

302026 Doug Hillman

SAMPLE CHAIN OF CUSTODY ME 02-01-13

V3/AI3/2013

Page # 1 of 1

Send Report To Dave Heffner

Company Aspect Consulting

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Crownhill

PO# 100094

REMARKS
*Diesel and oil range
**chlorinated VOCs only

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: *TPH-Diesel	TPH-Gasoline	BTEX by 8021B	**VOCs by 8260B	SVOCs by 8270	HFS	total As,Pb						Notes
MW-6-020113	01	2/1/13	0955	water	6	X			X			X						
MW-10-020113	02		1030		6	X			X			X						
MW-4-020113	03		1110		6	X			X			X						
MW-5-020113	04		1150		6	X			X			X						
MW-9-020113	05		1235		6	X			X			X						
MW-15-020113	06		1228		6	X			X			X						
MW-14-020113	07		1320		6	X			X			X						
MW-12-020113	08		1330		6	X			X			X						
																		received at 6 °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Amy Tice	Aspect	2/1/13	1640
Received by:		M. Langston	FB	2/1/13	1640
Relinquished by:					
Received by:					

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 10, 2013

Doug Hillman, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Hillman:

Included are the results from the testing of material submitted on May 6, 2013 from the Crown Hill, PO 100094, F&BI 305097 project. There are 24 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman, Dave Heffner
ASP0510R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 6, 2012 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crown Hill, PO 100094, F&BI 305097 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
305097-01	MW-10-050313
305097-02	MW-4-050313
305097-03	MW-15-050313
305097-04	MW-9-050313
305097-05	MW-14-050313
305097-06	MW-6-050313
305097-07	MW-5-050313
305097-08	MW-12-050313

All quality control requirements were acceptable.

Date of Report: 05/10/13
Date Received: 05/06/13
Project: Crown Hill, PO 100094, F&BI 305097
Date Extracted: 05/07/13
Date Analyzed: 05/08/13

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
MW-10-050313 305097-01	<50	<250	89
MW-4-050313 305097-02	<50	<250	97
MW-15-050313 305097-03	<50	<250	95
MW-9-050313 305097-04	<50	<250	95
MW-14-050313 305097-05	2,900 x	770 x	97
MW-6-050313 305097-06 1/1.1	<55	<280	105
MW-5-050313 305097-07	1,900 x	590 x	100
MW-12-050313 305097-08	1,900 x	550 x	104
Method Blank 03-837 MB2	<50	<250	76

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/07/13	Lab ID:	305097-01
Date Analyzed:	05/07/13	Data File:	305097-01.050
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	85	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	3.83
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/07/13	Lab ID:	305097-02
Date Analyzed:	05/07/13	Data File:	305097-02.047
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	80	60	125
Holmium	85	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	4.05
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-15-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/07/13	Lab ID:	305097-03
Date Analyzed:	05/07/13	Data File:	305097-03.051
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	84	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	1.59
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/07/13	Lab ID:	305097-04
Date Analyzed:	05/07/13	Data File:	305097-04.052
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	88	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-14-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/07/13	Lab ID:	305097-05
Date Analyzed:	05/07/13	Data File:	305097-05.053
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	71	60	125
Holmium	76	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	3.04
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/07/13	Lab ID:	305097-06
Date Analyzed:	05/07/13	Data File:	305097-06.055
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	78	60	125
Holmium	83	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	11.9
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/07/13	Lab ID:	305097-07
Date Analyzed:	05/07/13	Data File:	305097-07.056
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	69	60	125
Holmium	74	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	1.08
Lead	1.11

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-12-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/07/13	Lab ID:	305097-08
Date Analyzed:	05/07/13	Data File:	305097-08.057
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	74	60	125
Holmium	78	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	2.51
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/07/13	Lab ID:	I3-238 mb
Date Analyzed:	05/07/13	Data File:	I3-238 mb.045
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	85	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/06/13	Lab ID:	305097-01
Date Analyzed:	05/06/13	Data File:	050613.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/06/13	Lab ID:	305097-02
Date Analyzed:	05/06/13	Data File:	050614.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-15-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/06/13	Lab ID:	305097-03
Date Analyzed:	05/06/13	Data File:	050615.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/06/13	Lab ID:	305097-04
Date Analyzed:	05/06/13	Data File:	050616.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	1.9
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	9.6
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-14-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/06/13	Lab ID:	305097-05
Date Analyzed:	05/07/13	Data File:	050705.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/06/13	Lab ID:	305097-06
Date Analyzed:	05/07/13	Data File:	050706.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/06/13	Lab ID:	305097-07
Date Analyzed:	05/07/13	Data File:	050707.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.3
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-050313	Client:	Aspect Consulting, LLC
Date Received:	05/06/13	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/06/13	Lab ID:	305097-08
Date Analyzed:	05/07/13	Data File:	050708.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crown Hill, PO 100094, F&BI 305097
Date Extracted:	05/06/13	Lab ID:	03-0779 mb
Date Analyzed:	05/06/13	Data File:	050612.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 05/10/13
Date Received: 05/06/13
Project: Crown Hill, PO 100094, F&BI 305097

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	100	102	58-134	2

Date of Report: 05/10/13
Date Received: 05/06/13
Project: Crown Hill, PO 100094, F&BI 305097

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 305097-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	4.05	108 b	109 b	60-150	1 b
Lead	ug/L (ppb)	10	<1	107	106	79-121	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	102	80-111
Lead	ug/L (ppb)	10	109	83-115

Date of Report: 05/10/13
Date Received: 05/06/13
Project: Crown Hill, PO 100094, F&BI 305097

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 305097-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	85	61-139
Chloroethane	ug/L (ppb)	50	<1	105	68-126
1,1-Dichloroethene	ug/L (ppb)	50	<1	91	71-123
Methylene chloride	ug/L (ppb)	50	<5	86	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	92	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	92	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	94	73-119
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	92	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	98	79-116
Trichloroethene	ug/L (ppb)	50	<1	90	75-109
Tetrachloroethene	ug/L (ppb)	50	<1	94	72-113

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	96	82	73-132	16
Chloroethane	ug/L (ppb)	50	115	99	68-126	15
1,1-Dichloroethene	ug/L (ppb)	50	98	89	75-119	10
Methylene chloride	ug/L (ppb)	50	93	86	63-132	8
trans-1,2-Dichloroethene	ug/L (ppb)	50	97	89	76-118	9
1,1-Dichloroethane	ug/L (ppb)	50	99	90	80-116	10
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	92	81-111	8
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	97	87	79-109	11
1,1,1-Trichloroethane	ug/L (ppb)	50	98	91	80-116	7
Trichloroethene	ug/L (ppb)	50	97	89	77-108	9
Tetrachloroethene	ug/L (ppb)	50	95	86	78-109	10

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

305097 Doug Hillman

SAMPLE CHAIN OF CUSTODY

ME 05/06/13 1 2 coolers

Page # 1 of 1

Send Report To Dave Heffner

Company Aspect Consulting

Address

City, State, ZIP Seattle

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO.: Crown Hill

PO#: 100094

REMARKS
* Diesel & motor oil range, no silica gel cleanup
** chlorinated VOCs only

TURNAROUND TIME
~~Standard~~ (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: * TPH-Diesel	TPH-Gasoline	BTEX by 8021B	**VOCs by 8260B	SVOCs by 8270	HFS	total As, Pb						Notes
MW-10-050313	01 A-F	5/3/13	1320	water	6	X			X			X						
MW-4-050313	02		1230			X			X			X						
MW-15-050313	03		1140			X			X			X						
MW-9-050313	04		1045			X			X			X						
MW-14-050313	05		950			X			X			X						
MW-6-050313	06		1250			X			X			X						
MW-5-050313	07		1150			X			X			X						
MW-12-050313	08		1115			X			X			X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Seann McClure	Aspect	5/6/13	0900
Received by:	Nhan Phan	FEBI	5/6/13	11:10
Relinquished by:				
Received by:		~~Samples received at~~ 5 °C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Kurt Johnson, B.S.
Eric Young, B.S.

3012 16th Avenue West
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August 20, 2013

Dave Heffner, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Heffner:

Included are the results from the testing of material submitted on August 8, 2013 from the Crownhill 100094, F&BI 308148 project. There are 22 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0820R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 8, 2013 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Crownhill 100094, F&BI 308148 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
308148 -01	MW-4-080713
308148 -02	MW-6-080713
308148 -03	MW-10-080713
308148 -04	MW-5-080713
308148 -05	MW-9-080713
308148 -06	MW-12-080813
308148 -07	MW-15-080813

Several 8260C compounds failed below the acceptance criteria in the matrix spike sample. The laboratory control samples met the acceptance criteria, therefore the data were likely due to sample matrix effect.

All other quality control requirements were acceptable.

Date of Report: 08/20/13
Date Received: 08/08/13
Project: Crownhill 100094, F&BI 308148
Date Extracted: 08/09/13
Date Analyzed: 08/09/13

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 47-140)
MW-4-080713 308148-01	<50	<250	81
MW-6-080713 308148-02	<50	<250	82
MW-10-080713 308148-03	<50	<250	80
MW-5-080713 308148-04	2,200 x	780 x	87
MW-9-080713 308148-05	96 x	<250	68
MW-12-080813 308148-06	2,200 x	820 x	83
MW-15-080813 308148-07	<50	<250	79
Method Blank 03-1576 MB2	<50	<250	75

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-4-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/14/13	Lab ID:	308148-01
Date Analyzed:	08/14/13	Data File:	308148-01.046
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	92	60	125
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	2.83
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-6-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/14/13	Lab ID:	308148-02
Date Analyzed:	08/14/13	Data File:	308148-02.047
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	83	60	125
Holmium	88	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	13.5
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/14/13	Lab ID:	308148-03
Date Analyzed:	08/14/13	Data File:	308148-03.048
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	86	60	125
Holmium	91	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	3.00
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-5-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/14/13	Lab ID:	308148-04
Date Analyzed:	08/14/13	Data File:	308148-04.050
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/14/13	Lab ID:	308148-05
Date Analyzed:	08/14/13	Data File:	308148-05.051
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	85	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-12-080813	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/14/13	Lab ID:	308148-06
Date Analyzed:	08/14/13	Data File:	308148-06.052
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	82	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	1.81
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-15-080813	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/14/13	Lab ID:	308148-07
Date Analyzed:	08/14/13	Data File:	308148-07.053
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	81	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/14/13	Lab ID:	I3-500 mb
Date Analyzed:	08/14/13	Data File:	I3-500 mb.030
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Indium	97	60	125
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/09/13	Lab ID:	308148-01
Date Analyzed:	08/09/13	Data File:	080912.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/09/13	Lab ID:	308148-02
Date Analyzed:	08/09/13	Data File:	080913.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/09/13	Lab ID:	308148-03
Date Analyzed:	08/09/13	Data File:	080914.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-5-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/09/13	Lab ID:	308148-04
Date Analyzed:	08/09/13	Data File:	080915.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.7
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9-080713	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/09/13	Lab ID:	308148-05
Date Analyzed:	08/09/13	Data File:	080916.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	93	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	1.6
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	11
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-080813	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/09/13	Lab ID:	308148-06
Date Analyzed:	08/09/13	Data File:	080917.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-15-080813	Client:	Aspect Consulting, LLC
Date Received:	08/08/13	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/09/13	Lab ID:	308148-07
Date Analyzed:	08/09/13	Data File:	080918.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Crownhill 100094, F&BI 308148
Date Extracted:	08/09/13	Lab ID:	03-1547 mb
Date Analyzed:	08/09/13	Data File:	080907.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	57	121
Toluene-d8	94	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 08/20/13
Date Received: 08/08/13
Project: Crownhill 100094, F&BI 308148

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	109	96	58-134	13

Date of Report: 08/20/13
Date Received: 08/08/13
Project: Crownhill 100094, F&BI 308148

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 308111-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	8.11	97 b	92 b	60-150	5 b
Lead	ug/L (ppb)	10	<1	94	91	79-121	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	88	80-111
Lead	ug/L (ppb)	10	96	83-115

Date of Report: 08/20/13
Date Received: 08/08/13
Project: Crownhill 100094, F&BI 308148

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 308150-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	102	36-166
Chloroethane	ug/L (ppb)	50	<1	107	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	58 vo	60-136
Methylene chloride	ug/L (ppb)	50	<5	59 vo	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	107	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	106	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	4.4	108	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	109	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	112	60-146
Trichloroethene	ug/L (ppb)	50	9.3	107	66-135
Tetrachloroethene	ug/L (ppb)	50	1.3	93	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	113	113	50-154	0
Chloroethane	ug/L (ppb)	50	119	117	58-146	2
1,1-Dichloroethene	ug/L (ppb)	50	122	122	67-136	0
Methylene chloride	ug/L (ppb)	50	87	91	39-148	4
trans-1,2-Dichloroethene	ug/L (ppb)	50	104	117	68-128	12
1,1-Dichloroethane	ug/L (ppb)	50	102	118	79-121	15
cis-1,2-Dichloroethene	ug/L (ppb)	50	105	115	80-123	9
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	103	104	73-132	1
1,1,1-Trichloroethane	ug/L (ppb)	50	109	109	83-130	0
Trichloroethene	ug/L (ppb)	50	103	104	80-120	1
Tetrachloroethene	ug/L (ppb)	50	91	93	76-121	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

308148

SAMPLE CHAIN OF CUSTODY ME 08-08-13

AI 5X ~~C04~~ C04 / V3

Page # ______ of ______

Send Report To Dave Heffner

Company Aspect Consulting

Address ______

City, State, ZIP Seattle, WA

Phone # ______ Fax # ______

SAMPLERS (signature) [signature]

PROJECT NAME/NO.	PO#
Crown hill	100094

REMARKS
* Diesel and motor oil range, no silica gel
** chlorinated VOCs only

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH ______
Rush charges authorized by ______

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	*TPH-Diesel	TPH-Gasoline	BTEX by 8021B	**VOCs by8260B	SVOCs by 8270	HFS	total As, Pb						Notes
MW-4-080713	01 A-E	8/7/13	0935	water	6	X			X			X						
MW-6-080713	02	↓	1045	↓	↓	X			X			X						
MW-10-080713	03	↓	1200	↓	↓	X			X			X						
MW-5-080713	04	↓	1235	↓	↓	X			X			X						
MW-9-080713	05	↓	1345	↓	↓	X			X			X						
MW-12-080813	06	8/8/13	1010	↓	↓	X			X			X						
MW-15-080813	07	↓	1055	↓	↓	X			X			X						
												Samples received at 5 °C						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Amy Tice	Aspect	8/8/13	2:25
Received by:	[signature]	S Cam	PestelX	8/8/13	2:25
Relinquished by:					
Received by:	[signature]	HONG NGUYEN	FBI	8/8/13	15:30

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