



Stantec

**Shallow Soil Excavation
Engineering Design Report**

**Bee-Jay Scales Site
116 N 1st Street
Sunnyside, WA 98944**

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1.0 Introduction

Stantec Consulting Services Inc. (Stantec) is submitting this *Shallow Soil Excavation Engineering Design Report* (EDR) to the Washington Department of Ecology (Ecology) for the Bee-Jay Scales Site (the Site), on behalf of Chevron Environmental Management Company (CEMC) and Atlantic Richfield Company (ARC). This EDR has been prepared under the provisions of the Washington State Model Toxics Control Act (MTCA) Washington Administrative Code (WAC) 173-340 to address Consent Decree No. 132017660 between Ecology, CEMC, and ARC.

Elements of this EDR address requirements of WAC 173-340-400 (WAC, 2007), including but not limited to:

- A description of the Site background and current conditions;
- A description and conceptual plan of the cleanup action;
- Definition of the goals of the cleanup action;
- Design criteria of the cleanup action; and
- Schedule for implementation of the cleanup action plan.

The cleanup action plan (CAP) prepared for the Site by Ecology consists of both soil and groundwater cleanup objectives. The proposed cleanup action includes a combination of shallow soil excavation, *in situ* bioremediation injection wells/boreholes (for delivery of a sodium acetate solution or calcium acetate), institutional controls, natural attenuation, and construction of vertical barrier wall treatment system(s) or other Ecology-approved treatment method following public comment for the off-property groundwater plume attributable to the Site.

This EDR documents the engineering concepts and design criteria used in the design of the shallow soil excavation portion of the overall CAP, which addresses the soil cleanup objectives for the Site. In addition, this report provides necessary information for the review of the *Shallow Soil Excavation Construction Plans and Specifications* (CPS), which is included as **Appendix A**.

The remaining sections of this report are organized as follows:

- Section 2 includes a summary of the Site background, historical operations, area geology and hydrogeology, previous investigations, the CAP, and the additional soil delineation investigation;

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- Section 3 describes the objectives of the CAP and the shallow soil excavation cleanup actions;
- Section 4 describes the design of the shallow soil excavation areas;
- Section 5 provides an overview of the main construction activities to be performed as part of the shallow soil excavation cleanup action;
- Section 6 gives a general description of the compliance monitoring and construction testing that will be performed as part of the cleanup action;
- Section 7 presents the schedule and reporting requirements; and
- Section 8 lists references.

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2.0 Site Description & Background

The Site is located in the City of Sunnyside (City), within Yakima County, and consists of the following two parcels: Parcel No. 22102522014 and Parcel No. 22102522015 as recorded by the Yakima County Department of Assessment. Parcel No. 22102522014 is located at 116 North 1st Street and is owned by Bee-Jay Scales, Inc. Parcel No. 22102522015 is located at 301 Warehouse Avenue and is currently owned by Western General Land, LLC (formerly owned by Hickenbottom & Sons, Inc.).

The Site location is shown on **Figure 1**. The Site layout, including monitoring well locations, building locations, and additional Site features, is shown on **Figure 2**. Historically, the Site was divided into six main study areas as follows:

- Area 1 – Liquid Fertilizer Plant and Truck Wash Area;
- Area 2 – Dry Fertilizer Area;
- Area 3 – Drum Storage Area;
- Area 4 – Suspected Historic Washdown Area;
- Area 5 – North Area; and
- Area 6 – Hickenbottom Property.

The Site is bordered to the north and west by Warehouse Avenue and North 1st Street and to the south by active railroad tracks. One property to the north of the Site across Warehouse Avenue is a residence. The remaining adjacent properties to the north, east, and south of the Site are commercial/industrial facilities. The property west of the Site across North 1st Street is owned by the City and is currently vacant.

The Site and adjacent properties have been the location of agricultural warehouses, lumber yards, coal storage, and railroad transportation activities since approximately 1906. Portions of the Site were owned by the Northern Pacific Railroad Company from 1906 until 1989 when they were purchased by the Glacier Park Company. An agricultural distribution facility operated at the Site from the 1960s through at least 1986. This facility consisted of buildings and aboveground storage tanks (ASTs), and was operated by at least two separate companies: Laneger Agricultural Services and Valley Agricultural, Inc. The ASTs have since been removed from the Site. Documentation also indicates that American Oil Company (Amoco), now part of BP, leased portions of this property from Northern Pacific Railroad between 1965 and 1972. A lagoon was constructed by Valley Agricultural, Inc. in the early 1980s to collect water from the washdown of farm chemical applicator vehicles.

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The western portion of Lot 10 was purchased by Chevron Chemical Company in 1981 and sold to Bee-Jay Scales, Inc. in 1987. Bee-Jay Scales, Inc. purchased additional portions of Lots 10 and 11 in 1995 and 1996. Lots 10 and 11 are referenced in the Summary of Ownership included as Appendix B of the RI/FS Work Plan and are not shown on any available figures. Three businesses currently operate at the Bee-Jay Scales portion of the property: Sandy Farms, a local trucking company; Sanleco, Inc., an interstate trucking company with an on-site tractor-trailer repair garage; and Bee-Jay Scales, a commercial scale operation.

Hickenbottom & Sons, Inc. leased a portion of the Site from the Northern Pacific Railroad Company beginning in 1961 and purchased portions of Lots 10 and 11 in 1992. The Hickenbottom & Sons property was previously used as pastureland; since 1961, it has been used for food packing, storage, and a transportation business, and is currently owned by Western General Land, LLC.

2.1 REGIONAL AND LOCAL GEOLOGY AND SOILS

The Site is located in the Columbia Basin, an intermontane basin located between the Cascade and Rocky Mountains, and within the Yakima Fold Belt, a structural subprovince characterized by dominantly east-west trending anticlinal ridges and synclinal valleys (Reidel *et al*, 1994). Snipes Mountain, located just west of Sunnyside, is an anticlinal ridge measuring approximately 8 miles in length and 1 mile in width. Cenozoic age volcanic rocks from the Columbia River Basalt Group (CRBG) and sediments fill the basin. Underlying the CRBG are Tertiary and Quaternary fluvial and glaciofluvial deposits on top of Tertiary age continental sedimentary rocks.

Three geologic units have been identified in the vicinity of the Site based on subsurface information derived from well-drilling logs. They are, from youngest to oldest, Quaternary Alluvium, the Ellensberg Formation, and Columbia River Basalts.

The Quaternary Alluvium consists of sandy silt and extends to a depth of 30 feet below ground surface (bgs) (SECOR, 2003). The Ellensberg Formation, interbedded silt, sand, gravel, and clay, underlies the alluvium and extends to a depth of approximately 450 feet bgs, based on logs for nearby City water wells. The Ellensberg Formation is underlain by CRBG rocks to an unknown depth.

According to past assessment activities, soil at the Site consists mostly of sand and silt in various proportions to 30 feet bgs. At 30 feet bgs, soils consisting of clayey silt were found to a depth of 31.5 feet bgs and may indicate a confining layer of soil.

The topography of the area surrounding the Site generally slopes gradually to the southwest. Based on survey data collected at the Site, the Site topography gently slopes to the south, but there is a low spot in the topography located in the southeast corner of the Site near MW-3.

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Most of the grades on-site are less than 2 percent (%); however, some localized grades of about 5% exist over short distances.

2.2 REGIONAL AND LOCAL HYDROGEOLOGY

The Site is located in the lower Yakima River basin, which covers about 4,350 square miles in Yakima and Benton counties in south-central Washington. The lower Yakima River basin is bounded by the Cascade Mountains on the west, Cleman Mountain to the north, the Rattlesnake Hills on the east, and the Heaven Hills to the south. Surface waters join the Yakima River which flows to the southeast to join the Columbia River, which eventually flows westward to the Pacific Ocean. Groundwater in the area occurs principally in: 1) the unconsolidated alluvial sand and gravel of Quaternary age; 2) partially consolidated sand, silt, and gravel, and consolidated sandstone, siltstone, and conglomerate of the Ellensburg Formation, and; 3) basalt lava flows and associated sedimentary interbeds of the CRBG of Miocene age (Molenaar, 1985).

The alluvium of the Quaternary age is composed of unconsolidated sedimentary material deposited by streams along their flood plains with thicknesses of a few feet to more than 150 feet. The alluvium is generally permeable and contains groundwater under unconfined conditions. Shallow drilled or dug wells readily obtain water from coarser material in the alluvium at rates up to 10 to 20 gallons per minute (gpm).

The Ellensburg Formation comprises partly consolidated sand and gravel and consolidated sedimentary rocks, with some conglomerate and claystone. The formation occurs at depths of 100 feet or more at the centers of major valleys and gradually rises to the ground surface at valley margins. The thickness of the formation can range from a few feet to 1,000 feet. The sand and gravel strata form the principal water-yielding materials. Where these materials are less than 50 feet bgs the aquifer is unconfined. In deeper zones underlying finer-grained and more consolidated sand, the water occurs under confined conditions. Yields of properly constructed wells in the more productive zones of this formation are as much as 1,500 gpm.

The basalt flows and associated sedimentary interbeds of the CRBG form the most productive aquifer system in the basin. Groundwater occurs principally in fracture and rubble zones, in vesicular and scoriaceous interflow zones, and in sand and gravel layers that occur between some flow units. Water yielding zones range from a few feet to 50 feet in thickness and may extend laterally only short distances or several miles. Yields of basalt wells range from 50 to more than 2,200 gpm.

Groundwater at the Site monitoring wells has been measured since 2005 to be approximately 5 to 12 feet bgs depending on the location. The groundwater flow direction is generally to the northeast in the northern portion of the Site and to the southeast in the southern portion of the Site, with a groundwater flow divide observed at the southern edge of Area 5. The groundwater gradient observed at the Site typically ranges from approximately 0.003 to 0.014 feet per foot.

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2.3 PREVIOUS INVESTIGATIONS

Investigations conducted by previous consultants before July 2003 are summarized in the RI/FS Work Plan. Key investigations, evaluations, and interim remedial measures conducted by Stantec (formerly SECOR) at the Site since 2003 are documented in the following reports:

- *Bee-Jay Scales Site Phase I Remedial Investigation Report* (SECOR, 2003);
- *Phase II Remedial Investigation Report for the Bee-Jay Scales Site* (SECOR, 2005);
- *Phase III Remedial Investigation Report for the Bee-Jay Scales Site* (SECOR, 2007a);
- *2006 Interim Remedial Measures Completion Report for the Bee-Jay Scales Site* (SECOR, 2007b);
- *Down-Gradient Assessment Documentation Report for the Bee-Jay Scales Site* (SECOR, 2008);
- *Human Health Risk Assessment* (Stantec, 2008);
- *Revised Feasibility Study Report* (Stantec, 2009);
- *Nitrate Synthetic Precipitation Leaching Procedure Shallow Soil Assessment Results and Discussion Draft 3/4/2011 Draft Cleanup Action Plan Comments for the Bee-Jay Scales Site* (Stantec, 2011); and
- *Storm Drain Assessment Results for the Bee-Jay Scales Site* (Stantec, 2012).

The following subsections summarize the key findings of each investigation and evaluation.

2.3.1 Phase I Remedial Investigation

The Phase I remedial investigation (RI) activities were conducted in July 2003 and consisted of soil and groundwater investigations. SECOR collected soil samples from boreholes completed to depths of up to 11 feet bgs in each of the six identified main study areas at the Site and installed three groundwater monitoring wells (MW-5, MW-6, and MW-7) to supplement groundwater quality information provided by three previously installed wells (MW-1, MW-3, and MW-4). Eight soil boreholes were advanced in Area 1, seven soil boreholes in Area 2, two soil boreholes in Area 3, six soil boreholes in Area 4, five shallow soil boreholes in Area 5, and seven soil boreholes in Area 6 (two of which were shallow). The soil data suggested an above-ground source of stored fertilizer that had leached nitrogen compounds to the soil. The major nitrogen source area appeared to be directly east of the Dry Fertilizer Manufacturing Building in Area 2, and two source areas appeared to be located adjacent to the lagoon.

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2.3.2 Phase II Remedial Investigation

The Phase II RI, conducted in 2004, included soil, groundwater, and surface water/sediment investigations. The Phase II groundwater investigation consisted of the advancement of 18 vertical profile boreholes in Areas 1, 5, and 6, and installation of five permanent monitoring wells (MW-8 through MW-12). Nitrate concentration isopleths showed source areas primarily located in the southeastern portion of the property (Area 1 and the southern section of Area 6). The average hydraulic conductivity from single well pump tests was 1.45E-04 centimeters per second (cm/s).

In the Phase II soil investigation, soil samples were collected from boreholes advanced in Areas 3 and 5. In Area 3, concentrations of total petroleum hydrocarbons as gasoline (TPH-Gx) at a depth of 7.5 feet bgs were above the MTCA Method B cleanup level (CUL). In Area 5, concentrations of constituents in subsurface soil (ammonia, iron, nitrate, nitrite, phosphate, and sulfate) did not exceed MTCA Method B CULs or other screening criteria. Ten of the soil samples from Area 5 were selected for synthetic precipitate leaching procedure (SPLP) analysis to evaluate the soil leaching to groundwater pathway. Comparing the detected results to MTCA Method B CULs or secondary Maximum Contaminant Levels (MCLs), nitrite and sulfate did not exceed CULs. Nitrate and iron did exceed MTCA Method B CULs and secondary MCLs, respectively.

A treatability investigation, including both a bench-scale study and field pilot study (consisting of *in situ* injection of sodium acetate into four injection wells around well MW-4), was conducted as part of the Phase II RI to guide potential nitrate and herbicide remediation activities. The treatability study determined the most effective treatment was denitrification using acetate as an electron donor. The pilot study demonstrated that injection of acetate was successful in remediating nitrate, nitrite, and dinoseb concentrations to below detectable limits in groundwater at well MW-4 within a 10-foot radius for the duration of the monitoring period and reducing concentrations of those constituents in saturated soils.

2.3.3 Interim Remedial Measures

In 2006, SECOR conducted interim remedial measures including: 1) lagoon closure activities; and 2) treatment of petroleum hydrocarbon impacts in Area 3 using persulfate injections. The former lagoon was removed as a potential source and safety hazard, and calcium acetate was placed into the excavation to mitigate residual impacts remaining in the soil. *In situ* injection of sodium persulfate into four injection wells was conducted in Area 3 for the treatment of petroleum hydrocarbons, and favorable geochemical conditions were observed in the injection wells during and immediately after injection. Groundwater samples collected from a nearby well three months after injection showed an average % reduction in petroleum hydrocarbon concentrations of over 78%.

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2.3.4 Phase III Remedial Investigation

The Phase III RI was conducted in 2007 and included additional soil and groundwater investigation to evaluate horizontal and vertical extent of nitrate impacts down-gradient of the Bee-Jay Scales property. Twelve vertical profile boreholes and one permanent groundwater monitoring well (MW-13) were installed. The Phase III RI determined the nitrate plume extends off-property and is delineated to the east and west; however, the plume was not fully delineated to the south because a probable second source of nitrate and ammonia was encountered.

2.3.5 Down-Gradient Assessment

The down-gradient assessment was conducted in 2008 to further evaluate: 1) the off-property down-gradient extent of nitrate concentrations; and 2) a potential separate off-property source. One off-property vertical profile boring was advanced and sampled. The assessment results provided further evidence of a potential additional source based on the detached ammonia plumes and relatively higher concentrations of several constituents down-gradient rather than up-gradient of the potential off-property source. However, a commingled nitrate plume was observed.

2.3.6 Human Health Risk Assessment

A *Human Health Risk Assessment* (HHRA) was completed to quantify risks associated with indicator hazardous substances (IHSs) in the soil and groundwater both on-site and off-property (Stantec, 2008). The HHRA indicated that the groundwater ingestion exposure pathway for nitrate is potentially complete for off-property receptors due to the lack of regulatory restrictions on installing water wells. Based on current land use (including locations of existing buildings on-site), risks to current on-site exposure populations are within acceptable limits. However, for hypothetical future commercial or residential land use on-site, ingestion of groundwater containing nitrate and indoor inhalation of vapors containing 1,2,4-trimethylbenzene (from soil) and 1,2-dichloropropane (from groundwater) could result in risk that exceeds acceptable limits.

2.3.7 Revised Feasibility Study Report

Stantec evaluated remedial alternatives to address soil and groundwater concentrations of IHSs above specified CULs at the Site. The remedial alternatives were evaluated with respect to threshold criteria that must be met for all cleanup actions conducted under Ecology's authority. Based on the evaluation of on- and off-property remedial alternatives, the following combination of remedial actions was recommended:

- On-site *in situ* bioremediation, groundwater monitoring, soil excavation with off-site disposal and/or *ex situ* biological treatment, and institutional controls; and

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- Off-property monitored natural attenuation (MNA), institutional controls, and a contingency plan.

Following review, Ecology requested modifications to the off-property remedial alternatives, and revised alternatives are presented in the CAP (discussed in Section 2.4).

2.3.8 Nitrate SPLP Soil Assessment

A nitrate SPLP shallow soil assessment was conducted in 2011 at the Site to evaluate the Site-specific leaching potential of nitrate. Twenty shallow soil boreholes were advanced, and 88 sample pair results demonstrated that a soil CUL of 220 milligrams per kilogram (mg/kg) will be protective of a nitrate concentration in groundwater of 10 milligrams per liter (mg/L) at the soil point of compliance.

2.3.9 Storm Drain Assessment

A storm drain assessment was conducted in 2012 to determine if the groundwater impacts at the Site are affecting the storm drain network in the vicinity. Water from the storm drains in the vicinity of the Site was sampled at 20 manhole locations. Nitrate concentrations in manholes down-gradient of the Site were found to be similar to the nitrate concentrations in manholes up-gradient of the Site. Nitrate and ammonia concentrations in the manholes were generally at least one to two orders of magnitude less than the concentrations observed in the Site wells (MW-4, MW-9, MW-12, and MW-13). In addition, there were no exceedances of CULs or water quality standards for surface waters (WQSS) in manhole M-21, which is the furthest down-gradient manhole.

2.4 CLEANUP ACTION PLAN

A CAP has been prepared for the Site by Ecology to address contamination that could pose a risk to human health and the environment. The objectives of the cleanup action at the Site are to:

- Prevent leaching of nitrate from soil to groundwater by reducing soil concentrations at the Site to the CUL of 220 mg/kg thereby preventing leaching to groundwater in excess of the Federal MCL of 10 mg/L.
- Prevent ingestion of groundwater with nitrate in excess of 10 mg/L by on-site and off-site receptors by reducing nitrate concentrations in groundwater to less than 10 mg/L.
- Prevent vaporization of ammonia from soil by reducing soil concentrations at the Site to 385 mg/kg.

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- Design the groundwater treatment system, to the extent practicable, to reduce the potential for impacted groundwater to infiltrate storm/irrigation drains that may eventually discharge to a surface water.

The proposed cleanup action includes a combination of shallow soil excavation, *in situ* bioremediation injection wells/boreholes (for delivery of a sodium acetate solution or calcium acetate), institutional controls, natural attenuation, and construction of vertical barrier wall treatment system(s) or other Ecology-approved treatment method following public comment for the off-property groundwater plume attributable to the Bee-Jay Scales Site. The purpose of these systems is to remove the source material that is continuing to contribute to groundwater contamination; treat the existing nitrate groundwater plume attributable to the Bee-Jay Scales Site to prevent its continued expansion and to reduce the potential for a discharge to storm/irrigation drains that may eventually discharge to surface waters; and provide for an estimated 30 to 40 year groundwater restoration timeframe.

2.5 ADDITIONAL SOIL DELINEATION INVESTIGATION

From March 18 through 26, 2013 and June 12 through 14, 2013, Stantec conducted an on-site soil assessment to further delineate the horizontal and vertical extents of the shallow soils to be excavated as part of the CAP. During 11 days of field work, 104 borehole locations were advanced with samples collected from two to four separate depths above the historic high groundwater table. Boreholes were advanced in each of the delineation areas where previous soil sampling indicated the presence of nitrate and/or ammonia concentrations above the Site CULs. Details of this investigation are provided in the *Additional Soil Delineation Documentation Report*, which is included in **Appendix B**.

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3.0 Cleanup Action Objectives

This section summarizes the cleanup action objectives and CULs applicable to this EDR as addressed in the CAP. These objectives and Site-specific cleanup criteria were developed to address the MTCA and other applicable state and federal regulatory requirements. Because this report only addresses the cleanup action objectives for soil, the groundwater cleanup standards are not included.

3.1 CLEANUP STANDARDS

Cleanup standards include CULs and points of compliance (POCs) as explained in WAC 173-340-700 through WAC 173-340-760 and are explained in the following sections.

CULs for the Site consist of applicable MTCA and other protective regulatory criteria. The CULs indicate the lowest applicable MTCA or applicable or relevant and appropriate requirements (ARARs) established for the complete exposure pathways at the Site. The proposed POCs were identified in accordance with standard MTCA protocols for soil.

CULs have been established for two constituents for soil at the Site. A nitrate CUL of 220 mg/kg has been established by the MTCA modified Method B for the protection of groundwater using Site-specific leaching tests pursuant to WAC 173-340-747(3)(d). Site-specific testing has established that Site soils with nitrate concentrations below the CUL should not leach to groundwater above the groundwater nitrate CUL. The ammonia CUL of 385 mg/kg has been established based on the MTCA Method B for protection against acute vapor health effects for a construction worker.

The Site CAP has established the POC for soil pursuant to WAC 173-340-740(6). The POC is defined as the soil overlying groundwater at the Site. For the purposes of the shallow soil excavation cleanup action, excavation areas will be extended to the first indication of the saturated zone, where necessary, based on the excavation design in **Section 4**. Based on groundwater gauging conducted at the Site since 2005, the groundwater table can fluctuate up to 2.5 feet within each well depending on the season and recent precipitation. During Site preparation and just prior to initiating excavation activities, the monitoring wells on-site will be gauged and the data will be used to generate a map estimating the depth of the current groundwater table. This map will then be used as a guide during the excavation of soil to anticipate where the saturated zone will first be encountered.

The *Additional Soil Delineation Work Plan*, dated February 20, 2013 (Stantec, 2013), established exceedances of Site-specific soil criteria for nitrate and ammonia are defined as follows:

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- Exceedances of Site-specific soil criteria for nitrate (where more than one depth has been sampled at a single borehole location) are defined as either: 1) the average of the samples at all depths within a single borehole location is above the CUL of 220 mg/kg; or 2) the deepest sample depth above the historical high groundwater table (as estimated based on measurements collected from Site groundwater monitoring wells since Third Quarter 2005) exceeds the CUL of 220 mg/kg. Borehole locations that have at least one sample exceeding the nitrate CUL, but have an average nitrate concentration below 220 mg/kg and where the deepest sample depth above the historical high groundwater table is below the nitrate CUL will not be defined as nitrate exceedances.
- Exceedances of Site-specific soil criteria for ammonia are defined as ammonia concentrations in soil above the CUL of 385 mg/kg.

3.2 SHALLOW SOIL EXCAVATION OBJECTIVES

The objectives for the planned shallow soil excavation cleanup action described in this EDR are to substantially reduce or eliminate Site soils to the extent practicable that either:

- 1) Are capable of leaching nitrate to groundwater in excess of the Federal MCL of 10 mg/L; or
- 2) Contain ammonia concentrations that would have the potential for acute vapor health effects to a construction worker.

By substantially reducing or eliminating the source soils within the Site, the contribution of nitrate from Site soils to the groundwater plume will be significantly reduced or eliminated. This will allow for a more effective and efficient implementation of the remaining portions of the CAP.

3.3 APPLICABLE REGULATORY REQUIREMENTS FOR SHALLOW SOIL EXCAVATION ACTIVITIES

A wide range of federal, state, and local compliance requirements are applicable to the shallow soil excavation work that is planned for the Site. These compliance requirements are included on the list of ARARs shown in **Table 1**, and select requirements are discussed below.

3.3.1 Water Pollution Regulatory Permitting

The total area that will be cleared, graded, excavated, or otherwise disturbed will be less than 1 acre. Therefore, this project will not require coverage under the Washington Construction Stormwater General Permit (CSWGP) or under the City Storm Water Construction Regulation (Sunnyside Municipal Code [SMC] 15.54A). However, Stantec has prepared a Storm Water Pollution Prevention Plan (SWPPP) to address the requirements for an Erosion and Sediment Control Plan with the City pursuant to SMC 15.54. Stantec has discussed the estimated

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schedule of the project with the City during the preparation of the SWPPP. Stantec will notify the City at least 15 days before the start of the shallow soil excavation activities.

The SWPPP was approved by the City on August 14, 2013. A copy of the approved SWPPP is included as part of the CPS in **Appendix A**.

3.3.2 Air Pollution Regulatory Permitting

A project dust control plan has been submitted to the Yakima Regional Clean Air Agency (YRCAA) for the shallow soil excavation activities described in this EDR. Stantec will notify the YRCAA at least 15 days before the start of the shallow soil excavation activities.

The YRCAA approved the plan in a letter dated August 23, 2013. A copy of the approved dust control plan is provided as part of the CPS in **Appendix A**.

3.3.3 Worker Safety Regulatory Requirements

The provisions of both the Occupational Safety and Health Act (OSHA) and the Washington Industrial Safety and Health Act (WISHA) will apply during any activities undertaken at the Site during the planned shallow soil excavation. To address these provisions, a Site-specific health and safety plan (HASP) will be developed and maintained at the Site for the duration of the remedial construction activities.

3.3.4 State Environmental Policy Act (SEPA)

Ecology submitted a SEPA checklist for the planned remedial activities within the CAP on December 28, 2012. Ecology ruled that the cleanup actions will not have a significant negative environmental impact, and a decision of non-significance (DNS) was issued on January 23, 2013. Therefore, an Environmental Impact Statement (EIS) will not be required for the shallow soil excavation activities.

3.3.5 General Construction Permitting

Stantec has discussed the Excavation/Grading Permit Application process with the City for the scope of work described within this EDR. Because the City wants to review the construction plans as part of the permit application, Stantec will submit this permit application after any Ecology comments have been incorporated into those plans. Stantec has discussed the estimated schedule of the project with the City and excavation/grading permits are valid for 6 months. Stantec will request a renewal of the excavation/grading permit at least 15 days prior to the end of this 6-month period, and will notify the City at least 15 days prior to the start of the shallow soil excavation activities.

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4.0 Shallow Soil Excavation Design

4.1 SHALLOW SOIL EXCAVATION AREAS

This section describes the areas where Site soils exceed the Site-specific nitrate and ammonia criteria. These areas include soils which will be excavated and disposed off-site as part of the shallow soil excavation phase of the CAP. The following sections explain the criteria used to establish the excavation areas, the soil that will require off-site disposal, and provide a detailed overview of each excavation area.

4.1.1 Criteria for Defining Soil Excavation Areas

Upon completion of the CAP by Ecology, Stantec began an analysis of the previous soil investigation data for exceedances of the Site CULs for nitrate and ammonia. These previous data were used to establish soil investigation areas where historic data indicated soils exceeding the nitrate and ammonia CULs were present. Based on those data, additional soil sampling was proposed to either resample locations where older data had not been verified by more recent sample analyses or to fill in gaps in the horizontal and vertical profile of the soils in those areas. This soil sampling was conducted as part of the additional soil delineation investigation and the results are summarized in the documentation report in **Appendix B**.

Excavation limits have been set where analytical soil data indicate nitrate and/or ammonia soil concentrations do not exceed the Site-specific criteria as defined in **Section 3.1**, where practicable (i.e., excavations will not extend off-property or under buildings). Because nitrate and ammonia exceedances cannot necessarily be visually identified, soil samples have been used to determine prescribed excavations with defined horizontal and vertical limits before initiating excavation activities. With this approach, confirmation sidewall and floor sampling will not be conducted in each excavation; instead, the soil data collected during previous investigations and the pre-excavation delineation proposed in this report will serve as the verification samples. This approach has been selected because this is an operating facility. Utilizing pre-excavation verification sampling will eliminate the time spent waiting for confirmation sample results, thereby limiting the time the excavations are open, limiting the downtime of the construction activities, and limiting the disruption to the commercial activities at the Site.

4.1.2 Description of Excavations

The excavation areas are shown on **Figure 3** through **Figure 6**. The descriptions provided in this EDR reflect only the area and target depths of soil exceeding the Site-specific criteria as determined by the analytical results of soil sampling at the Site. The total combined footprint of soil exceeding the Site-specific criteria is approximately 27,000 square feet (sf). The total

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combined volume of soil exceeding the Site-specific criteria above the saturated zone is estimated at 6,250 cubic yards (cy). For those areas where excavations will be extended to the first indication of the saturated zone, an average groundwater table depth was calculated from monitoring well data and used to estimate the volume of excavated soil. Actual excavation depths and volumes may vary based on the depth to the first indication of the saturated zone during the cleanup action.

It is possible that soil that does not exceed the Site-specific criteria will be loaded for off-site disposal, because separating it is not feasible, would create an unsafe condition, or would cost more in construction expenses than the disposal expenses. These determinations may be made in final project planning once a contractor is selected or in the field during the implementation of the shallow soil excavation corrective action.

Descriptions of each excavation area, including the estimated overall area affected, estimated volumes excavated, and estimated volumes requiring off-site disposal, is provided below.

Area 1 West Excavation

The proposed Area 1 West excavation is shown on **Figure 3**. The excavation and disposal of soil from Area 1 West is planned to remediate exceedances of Site-specific nitrate and ammonia criteria at 11 sample locations with depths ranging from 0.5 to 6.5 feet bgs. The horizontal delineation of the planned excavation is defined by A1-DB-01a, A1-DB-01b, A1-DB-05c, A1-DB-03d, A1-DB-04b, and B-16 in addition to the former fertilizer building and the southern property boundary.

The footprint of soil exceeding the Site-specific criteria in this area is approximately 5,150 sf. Over 80% of the Area 1 West excavation will require excavation to the first indication of the saturated zone, which is estimated at approximately 6 to 7 feet bgs in this area. The remaining area will be excavated to either 4.5 or 6 feet bgs. The total estimated volume of soil that will be excavated from this area excluding sloping is approximately 1,300 cy. However, sample results show several areas where exceedances are constrained to specific soil layers, and not all the excavated soil would need to be hauled off-site for disposal. Where sample results indicate soils that meet the Site-specific criteria overlay soil exceeding the Site-specific criteria, the overlaying soil may be excavated for use as backfill material. The estimated volume of soil that will require off-site disposal from the Area 1 West excavation is 1,225 cy.

This excavation area can be divided into four distinct sections based on the soil depths that will require excavation for off-site disposal, as detailed below.

- An area of approximately 210 sf located in the northwest portion of the proposed excavation has a vertical delineation defined by A1-DB-01 where samples at 4.5 and 6.5 feet bgs did not exceed the ammonia CUL. Therefore, the soil requiring off-site disposal

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can be limited from ground surface to 4.5 feet bgs for an estimated volume of 35 cy requiring disposal.

- An area of approximately 870 sf located in the southwest portion of the proposed excavation has a vertical delineation defined by A1-DB-02 and A1-DB-04a where samples at a depth of 1.5 feet bgs did not exceed the nitrate or ammonia CUL. Therefore, the soil requiring off-site disposal in this area can be limited from 1.5 feet bgs to the saturated zone for an estimated volume of 180 cy.
- An area of approximately 520 sf location in the northeast portion of the proposed excavation has a vertical delineation defined by A1-DB-03c where samples at 1.5 and 6 feet bgs did not exceed the nitrate or ammonia CUL. Therefore, the soil requiring off-site disposal in this section can be limited from 1.5 to 6 feet bgs for an estimated volume of 90 cy.
- An area of approximately 3,550 sf located in the central portion of the proposed excavation will require excavation and off-site disposal from the ground surface to the saturated zone for an estimated volume of 920 cy.

Excavation shoring, as described in **Section 5.6.1**, is anticipated to be used at the southern extent of this excavation (at the southern property boundary) and along the western extent of this excavation adjacent to the former fertilizer building as shown on **Figure 3**. Where excavation shoring is not utilized, additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation. The soil excavated to slope the excavation outside of the footprint defined above may be reused as backfill.

Area 1 East Excavation

The proposed Area 1 East excavation is shown on **Figure 3**. The excavation and disposal of soil from Area 1 East is planned to remediate exceedances of Site-specific nitrate and ammonia criteria at 24 sample locations with depths ranging from 0.5 to 9 feet bgs. The horizontal delineation of the excavation is defined by A1-DB-04, A1-DB-05, A1-DB-05d, A1-DB-06, A1-DB-07b, A1-DB-11b, A1-DB-12b, A6-DB-01, and A1-SB-001 in addition to the southern property boundary.

The footprint of soil exceeding the Site-specific criteria in this area is approximately 13,100 sf. About 70% of the Area 1 East excavation will require excavation to the first indication of the saturated zone, which is estimated at approximately 6 to 7.5 feet bgs in this area. The remaining area will be excavated to a depth between 4 to 7 feet bgs. The total estimated volume of soil that will be excavated from this area excluding sloping is approximately 3,175 cy. However, sample results show several areas where exceedances are constrained to specific soil layers, and not all the excavated soil would need to be hauled off-site for disposal. Where sample results indicate soils that meet the Site-specific criteria overlay soil exceeding the Site-

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specific criteria, the overlaying soil may be excavated for use as backfill material. The estimated volume of soil that will require off-site disposal from the Area 1 East excavation is 3,075 cy.

This excavation area can be divided into seven distinct sections based on the soil depths that will require excavation for off-site disposal, as detailed below.

- An area of approximately 1,300 sf located in the western portion of the proposed excavation has a vertical delineation defined by A1-DB-05b and B-9 where samples at a depth of 6 feet bgs did not exceed the nitrate or ammonia CUL. Therefore, the soil requiring off-site disposal can be limited from ground surface to 6 feet bgs for an estimated volume of 290 cy.
- An area of approximately 730 sf located in the northwest portion of the proposed excavation has a vertical delineation defined by A1-DB-07 and A1-DB-07a where samples did not exceed the nitrate or ammonia CUL at 1 foot bgs. Therefore, the soil requiring off-site disposal in this area can be limited from 1 foot bgs to the saturated zone for an estimated volume of 150 cy.
- An area of approximately 790 sf located in the northwest portion of the proposed excavation has a vertical delineation defined by A1-DB-07a where samples at 1 and 5.5 feet bgs did not exceed the nitrate CUL. Therefore, the soil requiring excavation and off-site disposal can be limited from 1 to 5.5 feet bgs for an estimated volume of 135 cy.
- An area of approximately 460 sf located in the southeast portion of the proposed excavation has a vertical delineation defined by A1-DB-11 where the sample at 7 feet bgs did not exceed the nitrate CUL. Therefore, the soil requiring off-site disposal can be limited from ground surface to 7 feet bgs for an estimated volume of 120 cy. However, the portion of this excavation that includes the material used to backfill the former lagoon may be excluded from disposal and used for backfill.
- An area of approximately 350 sf located in the southeast portion of the proposed excavation has a vertical delineation defined by A1-DB-11a where the samples at 5 and 7 feet bgs did not exceed the nitrate CUL. Therefore, the soil requiring off-site disposal can be limited from ground surface to 5 feet bgs for an estimated volume of 65 cy. However, the portion of this excavation that includes the material used to backfill the former lagoon may be excluded from disposal and used for backfill.
- An area of approximately 1,020 sf located in the northeast portion of the proposed excavation has a vertical delineation defined by A1-DB-08a, A1-DB-12, and A1-DB-12a where only the samples at 2.5 feet bgs exceeded the ammonia CUL. Therefore, the soil requiring excavation and disposal can be limited from 1 to 4 feet bgs for an estimated volume of 115 cy.

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- The remaining area of approximately 8,400 sf located in the east-central portion of the proposed excavation will be excavated from the ground surface to the saturated zone with all excavated soils requiring off-site disposal for an estimated volume of 2,200 cy. However, the portion of this excavation that includes the material used to backfill the former lagoon may be excluded from disposal and used for backfill.

Excavation shoring, as described in **Section 5.6.1**, is anticipated to be used at the southern extent of this excavation area (at the southern property boundary) as shown on **Figure 3**. Where excavation shoring is not utilized, additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation. Soil excavated to slope the excavation outside of the footprint defined above may be reused as backfill.

Area 2 Excavation

The proposed Area 2 excavation is shown on **Figure 4**. The excavation and disposal of soil from Area 2 is planned to remediate exceedances of the Site-specific nitrate criteria, indicated by three samples collected at B-13 (concentrations ranging from 256 mg/kg to 417 mg/kg). The horizontal delineation of the proposed excavation is a rectangular area defined by A2-DB-01, A2-DB-02, A4-SB-005, and A4-SB-006. The vertical delineation of the proposed excavation is defined by the sample result from B-13 below the nitrate CUL at a depth of 6 feet bgs.

The footprint of soil exceeding the Site-specific nitrate criteria in this area is approximately 235 sf, and the excavation will be extended to a depth of 6 feet bgs. Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation with the exception of the west sidewall. The western limit, defined by A4-SB-005, will mark both the sloped and delineation limit of the excavation. The sidewall is planned to slope at 1:1 from that extent to the target depth of 6 feet bgs. All soil excavated from this defined excavation area, approximately 45 cy excluding sloping, will require off-site disposal. Soil excavated outside of this area to safely slope the excavation to the north, east, and south may be reused as backfill.

Area 4 Excavation

The proposed Area 4 excavation is shown on **Figure 4**. The excavation and disposal of soil from Area 4 is planned to remediate exceedances of the Site-specific ammonia criteria, indicated by samples collected at A4-SB-002, A4-DB-01b, and A4-DB-02 (concentrations ranging from 680 mg/kg to 1,030 mg/kg). The horizontal delineation of the proposed excavation is a rectangular area defined by A4-DB-01, A4-DB-01c, and A4-DB-01e. The vertical delineation of the proposed excavation is defined by the sample results from A4-SB-002 at 4.5 feet bgs and A4-DB-01b at 2.5 feet bgs which did not exceed the ammonia CUL.

The footprint of soil exceeding the Site-specific ammonia criteria in this area is approximately 320 sf. In the northeast portion of this area, approximately 110 sf will be excavated to a depth

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of 4.5 feet bgs. The remaining 210 sf of the area will be excavated to 2.5 feet bgs. All excavated soils within these limits will be hauled off-site for disposal. The total volume of soil that will require excavation and disposal is estimated at 40 cy excluding sloping. Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation and may be reused as backfill.

Area 5 West Excavation

The proposed Area 5 West excavation is shown on **Figure 5**. The excavation and disposal of soil from Area 5 West is planned to remediate exceedances of Site-specific nitrate criteria, indicated by samples collected at A5-SS-003 (566 mg/kg at 0.5 feet bgs) and A5W-DB-02a (340 mg/kg at 2.5 feet bgs). The horizontal delineation of the proposed excavation is a rectangular area defined by A5W-DB-02, A5W-DB-02b, A5W-DB-02c, and B-1. The vertical delineation of the proposed excavation is defined by the sample result from B-1 at 4.5 feet bgs.

The footprint of soil exceeding the Site-specific nitrate criteria is approximately 300 sf, and the excavation will be extended to a depth of 4.5 feet bgs. Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation with the exception of the west sidewall. The west delineation, defined by B-1, will mark both the sloped and delineation limit of the excavation. The sidewall is planned to slope at 1:1 from that extent to the target depth of 4.5 feet bgs. All soil excavated from this defined excavation area, approximately 45 cy excluding sloping, will require off-site disposal. Soil will be excavated outside of this area to slope the excavation to the north, east, and south and may be reused as backfill.

Underground water and electric utility lines were identified within the proposed Area 5 West excavation area during the private utility locate for the additional soil delineation investigation in March 2013. If those utility lines are determined to be in use, then the excavation footprint or depth detailed above may be altered near the utilities to maintain safe clearance.

Area 5 East Excavation

The proposed Area 5 East excavation is shown on **Figure 5**. The excavation and disposal of soil from Area 5 East is planned to remediate exceedances of Site-specific nitrate and ammonia criteria, indicated by samples collected at nine borehole locations: A5-SB-001 (nitrate concentration of 304 mg/kg at 9 feet bgs), A5-SB-010 (nitrate concentration of 450 mg/kg at 4.5 feet bgs), A5-SS-001 (nitrate and ammonia concentrations of 271 mg/kg and 417 mg/kg, respectively, at 0.5 feet bgs), A5E-DB-01 (nitrate concentration of 1,490 mg/kg at 4.5 feet bgs), A5E-DB-02 (nitrate concentrations of 392 mg/kg and 262 mg/kg at 4 and 6 feet bgs, respectively), A5E-DB-03a (nitrate concentration of 297 mg/kg at 10 feet bgs), A5E-DB-04 (nitrate concentration of 451 mg/kg at 9.5 feet bgs), A5E-DB-05a (nitrate concentrations of 345 mg/kg, 682 mg/kg, and 365 mg/kg at 2, 4, and 6 feet bgs, respectively), and A5E-DB-07 (nitrate concentration of 244 mg/kg at 8.5 feet bgs). The horizontal delineation of the planned excavation is defined by A5-SB-002, A5-SS-002, A5E-DB-01a, A5E-DB-03, and A5E-DB-05.

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The footprint of soil exceeding the Site-specific criteria in this area is approximately 3,200 sf. About 55% of the Area 5 East excavation will require excavation to the first indication of the saturated zone, which is estimated at approximately 9 to 10 feet bgs in this area. The remaining excavation area will be excavated to a depth between 7 and 8.5 feet bgs. The total estimated volume of soil that will be excavated within this area excluding sloping is approximately 1,070 cy. However, sample results show several areas where exceedances are constrained to specific soil layers, and not all of the soil requiring excavation within this area would need to be hauled off-site for disposal. Where sample results indicate soils that meet the Site-specific criteria overlay soil exceeding the Site-specific criteria, the overlaying soil may be excavated for use as backfill material. The estimated volume of soil that will require off-site disposal from the Area 5 East excavation is 645 cy.

This excavation area can be divided into six distinct sections based on the soil depths that will require excavation for off-site disposal, as detailed below.

- An area of approximately 95 sf located in the northwest portion of the proposed excavation has a vertical delineation established by A5E-DB-01 where only the sample at 4.5 feet bgs exceeded the nitrate CUL. As a result, the soil requiring off-site disposal can be limited from 2 to 7 feet bgs for an estimated volume of 20 cy.
- An area of approximately 290 sf located in the north central portion of the proposed excavation has a vertical delineation defined by A5E-DB-01 and A5E-DB-04. The sample from A5E-DB-01 only exceeded the nitrate CUL at 4.5 feet bgs and the sample from A5E-DB-04 only exceeded the nitrate CUL at 9.5 feet bgs. As a result, the area between these locations from 2 feet bgs to the saturated zone will require off-site disposal for an estimated volume of 90 cy.
- An area of approximately 1,100 sf located in the southwest portion of the proposed excavation has a vertical delineation established by A5E-DB-02 where only samples at 4 and 6 feet bgs exceed the nitrate CUL. As a result, the soil requiring off-site disposal can be limited from 2 to 8.5 feet bgs in this section for an estimated volume of 265 cy.
- An area of approximately 980 sf located in the northeast portion of the proposed excavation has a vertical delineation established by A5E-DB-03a, A5E-DB-04, and A5E-DB-07 where only the deepest sample depths exceeded the nitrate CUL. As a result, the soil requiring off-site disposal can be limited from 7 feet bgs to the saturated zone for an estimated volume of 110 cy.
- An area of approximately 190 sf located in the southern portion of the proposed excavation has a vertical delineation defined by A5E-DB-05a where the sample at 8 feet bgs did not exceed the nitrate CUL. As a result, the soil requiring off-site disposal can be limited from ground surface to 8 feet bgs for an estimated volume of 60 cy.

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- An area of approximately 520 sf located in the east-central portion of the proposed excavation has a vertical delineation defined by A5-SS-001 and A5E-DB-07. The sample from A5-SS-001 exceeded the ammonia CUL at a depth of 0.5 feet bgs and the sample from A5E-DB-07 exceeded the nitrate CUL at a depth of 8.5 feet bgs. Samples from A5E-DB-07 at depths of 2, 4, and 6 feet bgs did not exceed the nitrate or ammonia CUL. As a result, the soil requiring off-site disposal can be limited from ground surface to 2 feet bgs and from 6 feet bgs to the saturated zone for an estimated volume of 100 cy.

Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation and may be reused as backfill.

Based on the evaluation of sampling results in the *Additional Soil Delineation Documentation Report (Appendix B)*, pre-excavation delineation soil sampling is being proposed for the Area 5 East excavation. This sampling is detailed in **Section 5.3**. The proposed sampling would include the advancement of three (3) boreholes within the proposed Area 5 East excavation limits. The samples would be collected during the Site preparation activities before excavation activities start and sample results would need to be reviewed prior to starting the Area 5 East excavation. Results from this pre-excavation delineation sampling may change the excavation area, change the target depths, or change the volume of soil excavated.

Area 5 South Excavation

The proposed Area 5 South excavation is shown on **Figure 5**. The excavation and disposal of soil from Area 5 South is planned to remediate exceedances of the Site-specific nitrate criteria, indicated by samples collected at B-6 (279 mg/kg at 5 feet bgs) and A5S-DB-03 (284 mg/kg and 291 mg/kg at 1.5 and 3 feet bgs, respectively). The horizontal delineation of the proposed excavation is defined by A5S-DB-01, A5S-DB-02, and A5S-DB-03a.

The footprint of soil exceeding the Site-specific criteria in this area is approximately 440 sf. Approximately 235 sf of that area will be excavated to the first indication of the saturated zone (estimated at approximately 7 feet bgs in this area), and the remaining 205 sf will only be excavated to 4.5 feet bgs. The total estimated volume of soil that will be excavated within this area excluding sloping is approximately 100 cy. However, sample results show two areas within this excavation area where exceedances are constrained to specific soil layers, and not all of the soil requiring excavation would need to be sent off-site for disposal. Where sample results indicate soils that meet the Site-specific criteria overlay soil exceeding the Site-specific criteria, the overlaying soil may be excavated for use as backfill material. The total estimated volume that will require off-site disposal from the Area 5 South excavation is approximately 90 cy.

This excavation area can be divided into three distinct sections based on the soil depths that will require excavation for off-site disposal, as detailed below.

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- An area of approximately 90 sf at the west extent of the proposed excavation has a vertical delineation defined by B-6. The sample at 2.5 feet bgs from this location did not exceed the nitrate CUL. Therefore, the soil requiring off-site disposal can be limited from 2.5 feet bgs to the saturated zone for an estimated volume of 15 cy.
- An area of approximately 150 sf at the center of the excavation area has a vertical delineation defined by B-6 and A5S-DB-03. The area between these two locations will require excavation and off-site disposal from the ground surface to the saturated zone for an estimated volume of 40 cy.
- An area of approximately 200 sf at the east extent of the proposed excavation has a vertical delineation defined by A5S-DB-03, where samples at 4.5 and 6.5 feet bgs did not exceed the nitrate CUL. Therefore, the soil requiring off-site disposal can be limited from ground surface to 4.5 feet bgs for an estimated volume of 35 cy requiring disposal.

Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation and may be reused as backfill.

Area 6 Excavation

The proposed Area 6 excavation is shown on **Figure 6**. The excavation and disposal of soil from Area 6 is planned to remediate exceedances of Site-specific nitrate and ammonia criteria at 12 sample locations with depths ranging from 0.5 to 9 feet bgs. The horizontal delineation of the excavation is defined by A6-DB-05a, A6-DB-05b, A6-DB-06, A6-DB-07a, A6-DB-08b, and A6-DB-09 in addition to the eastern and southern property boundaries.

The footprint of soil exceeding the Site-specific criteria in this area is approximately 4,200 sf. About 60% of the Area 6 excavation will require excavation to the first indication of the saturated zone, which is estimated at approximately 6.5 to 8 feet bgs in this area. The remaining excavation area will be excavated to a depth between 5.5 to 7 feet bgs. The total estimated volume of soil that will be excavated from this area excluding sloping is approximately 1,200 cy. However, sample results show several areas where exceedances are constrained to specific soil layers, and not all of the soil requiring excavation would need to be hauled off-site for disposal. Where sample results indicate soils that meet the Site-specific criteria overlay soil exceeding the Site-specific criteria, the overlaying soil may be excavated for use as backfill material. The total estimated volume that will require off-site disposal from the Area 6 excavation is 1,085 cy.

This excavation area can be divided into six distinct areas based on the soil depths that will require excavation for off-site disposal, as detailed below.

- An area of approximately 320 sf located at the northwest portion of the excavation has a vertical delineation defined by location A6-DB-05. Samples at this location did not

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exceed the nitrate or ammonia CUL at 5.5 feet bgs. Therefore, the excavation and soil requiring disposal will be limited from ground surface to 5.5 feet bgs for an estimated volume of 65 cy.

- An area of approximately 470 sf located at the north extent of the proposed excavation has a vertical delineation defined by A6-DB-05 and A6-DB-09a. Samples from both locations did not exceed the nitrate or ammonia CUL at the deepest sample depth. The sample from A6-DB-09a at 7 feet bgs was the deeper of the two samples and will be used to establish the bottom of the excavation in this section. The estimated volume of excavated soil requiring off-site disposal from this section is 125 cy.
- An area of approximately 180 sf located at the southwest portion of the excavation has a vertical delineation defined by location A6-DB-07. Samples at this location did not exceed the nitrate or ammonia CUL at 1.5 or 3 feet bgs. Therefore, the soil requiring off-site disposal will be limited from 3 feet bgs to the saturated zone for an estimated volume of 35 cy requiring disposal.
- An area of approximately 540 sf located at the southeast corner of the proposed excavation has a vertical delineation defined by locations A6-DB-08 and A6-DB-08a. Neither location exceeded the nitrate or ammonia CUL at 7 feet bgs. Therefore, the excavation will extend from ground surface to 7 feet bgs for an estimated volume of 140 cy requiring disposal.
- An area of approximately 170 sf located at the northeast corner of the proposed excavation has a vertical delineation defined by locations A6-DB-09c. Samples at this location only exceeded the Site-specific ammonia criteria at a depth of 7 feet bgs. Therefore, the soil requiring off-site disposal will be limited from 5 feet bgs to the saturated zone for an estimated volume of 20 cy requiring disposal.
- The remaining area of approximately 2,500 sf located in the central portion of the excavation will be excavated from the ground surface to the saturated zone with all excavated soils requiring off-site disposal for an estimated volume of 700 cy.

Excavation shoring, as described in **Section 5.6.1**, is anticipated to be used at the eastern extent of this excavation area (at the eastern property boundary) as shown on **Figure 6**. Where excavation shoring is not utilized, additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation. Soil excavated to slope the excavation outside of the footprint defined above may be reused as backfill.

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5.0 Shallow Soil Excavation Description

The following sections provide a general description of the activities that will occur as part of the shallow soil excavation phase of the CAP. A more detailed description is provided in the CPS (**Appendix A**).

5.1 PRE-FIELD ACTIVITIES

5.1.1 Access Agreements

Stantec will ensure that access agreements are established between CEMC, ARC, and the current property owners prior to commencing any on-site work. After the EDR is approved by Ecology, a rough schedule of field activities and the locations of excavation areas, staging areas, and access requirements will be communicated to the property owners, so these areas can be cleared of obstacles. A final schedule of field activities will be communicated to the property owners a minimum of 20 days prior to field activities in order to minimize potential disruptions to normal Site activities.

5.1.2 Utility Status

Overhead utility lines and underground electrical and water lines will affect excavation activities at several locations within the Bee-Jay Scales property. The Contractor will work with the property owners and utility companies to determine the status of the utilities located during the additional soil delineation investigation. Once the status of each utility line is determined, the Contractor will work with local utilities to prepare plans to disconnect, excavate, remove, abandon, and/or work around the utilities, as necessary, as part of the shallow soil excavation activities.

5.1.3 Permitting

All work conducted during the field activities will be performed in accordance with all applicable federal, state, and local regulations, which include, but are not limited to, OSHA standards, storm water pollution regulations, and air pollution regulations.

Several local compliance and permitting requirements are applicable for the shallow soil excavation phase of the CAP including:

- City excavation/grading permit;
- City erosion and sediment control plan; and
- YRCAA-approved fugitive dust control plan.

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Additional details regarding these permits are included in the CPS in **Appendix A**.

5.1.4 Storm Water Pollution Prevention Plan

Stantec has prepared a Site storm water pollution prevention plan (SWPPP) detailing best management practices (BMPs) for storm water management for inclusion in the CPS. The SWPPP outlines the requirements for managing materials and surface water runoff derived from or incorporated with the excavation activities. It addresses potential impacts to storm water during excavation and soil handling activities. It also describes procedures for ensuring that storm water runoff is controlled and identifies provisions for erosion control. The SWPPP has been submitted to fulfill the requirements for an erosion and sediment control plan pursuant to SMC 15.54.

5.1.5 Spill Prevention, Control, and Countermeasure Plan

Stantec has reviewed the requirements for developing a Spill Prevention Control and Countermeasure (SPCC) plan for the Site per 40 CFR 112. Based on the currently planned activities, a SPCC plan is not necessary.

All efforts will be made to not spill fuel, oil, or other fluids while fueling or performing maintenance on equipment. Safety measures to be enacted include but are not limited to: performing daily inspections of equipment, having absorbent pads available and placing absorbent pads at the most probable locations that fluid will spill or pool during fueling and maintenance; and ensuring that two persons are included in fueling or maintenance operations.

5.1.6 Health and Safety Plan

All of the entities involved in this project consider health and safety to be the most important aspect of this work. Stantec will update the existing Site-specific HASP to address the shallow soil excavation activities detailed in this report. The Site-specific HASP will outline potential hazards to Stantec field personnel during the field activities described herein and the steps that will be taken to mitigate risk. Job safety analyses (JSAs) for tasks to be performed by Stantec personnel will be included. The Site-specific HASP will also include required personal protective equipment to be worn by all Stantec field personnel for each task. In addition, Stantec will produce a Journey Management Plan (JMP) in an attempt to prevent losses associated with motor vehicle incidents. A copy of Stantec's Site-specific HASP and JMP will be available on-site during all field activities.

The Contractor will also develop a Site-specific HASP and JSAs for tasks applicable to their work. The Contractor's HASP and JSAs will also be available on-site.

Health and safety guidance and policies for CEMC and ARC must be considered in the development of the HASPs and JSAs.

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5.2 MOBILIZATION AND SITE PREPARATION

Mobilization and Site preparation include the transport of project support and construction equipment to the Site and ensuring safe access to excavation areas and staging areas.

A typical list of equipment that may be used for this scope of work includes: track-mounted excavator with bucket and hammer attachment, track-mounted bobcat with bucket and forks, bulldozer, vibratory compactor, and front-end loader. The Contractor will ultimately be responsible for the selection of the appropriate construction equipment based on their preferred means and methods.

Site preparation activities will be conducted concurrently with the mobilization of construction equipment. Additional details regarding the Site preparation activities are included in the CPS in **Appendix A**.

5.3 PRE-EXCAVATION DELINEATION SOIL SAMPLING

Pre-excavation delineation soil sampling is being proposed for those locations within the proposed excavation limits that: 1) have identified areas where data gaps may exist; and 2) may affect the excavation areas, depths, and volumes. Within this framework, three pre-excavation delineation sample locations are proposed within the Area 5 East excavation limits as detailed in **Section 4.1.2**. The proposed borehole locations would be designated A5E-DB-02a, A5E-DB-07b, and A5E-DB-07c. The proposed pre-excavation borehole locations are shown on **Figure 5** and the details for the sampling are shown on **Table 2**.

The proposed samples would be collected by Stantec using the sampling and analysis procedures detailed in the *Additional Soil Delineation Work Plan* (Stantec, 2013). The boreholes would be advanced and sampled during the Site preparation activities, so that results can be reviewed prior to starting the Area 5 East excavation.

Each of the proposed borehole locations is described below:

- Borehole A5E-DB-02a is proposed as a 10-foot step-out location to the west of A5E-DB-02. The borehole would be sampled for nitrate at depths of 2, 4, 6 and 8.5 feet bgs.
- Borehole A5E-DB-07b is proposed as a 10-foot step-out location to the north of A5E-DB-07. The borehole would be sampled for nitrate at a depth of 9 feet bgs.
- Borehole A5E-DB-07c is proposed as a resample of the A5-SS-001 location. The borehole would be sampled for nitrate and ammonia at depths of 1 and 3 feet bgs, and for nitrate only at depths of 5 and 7.5 feet bgs.

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5.4 WELL DECOMMISSIONING

Two monitoring wells (MW-4 and MW-5) and four temporary injection wells (IW-1 through IW-4) near MW-4 will need to be decommissioned because they are in the planned excavation areas. The monitoring and injection wells will be decommissioned pursuant to WAC 173-160. Wells will be decommissioned by a licensed well drilling contractor prior to excavation activities by withdrawing the well casing and filling the borehole with neat cement grout, neat cement, bentonite, or bentonite slurry as the casing is being withdrawn.

5.5 CONCRETE, ASPHALT, AND PIPING REMOVAL

Concrete pads, footers, asphalt surfaces, piping, fencing, and possibly other debris that is in the excavation areas will require removal by the Contractor before or during the excavation of soil. Other above-ground debris that is not related to former agricultural fertilizer activities will be cleared or disposed of by the current property owner prior to mobilizing to the Site unless other arrangements are agreed upon by all parties.

Whenever possible, this debris will be removed before beginning any excavations in an area. Construction debris such as concrete and asphalt will be disposed of at a recycling facility, if possible. Scrap metal (piping, fencing, etc.) will be disposed of through a scrap metal recycler, if a sufficient quantity is generated. If recycling options are not available or where debris cannot be separated from contaminated soil, debris will be loaded for off-site disposal at an approved landfill.

5.6 EXCAVATION, BACKFILL, AND SOIL MANAGEMENT

Each excavation area will be advanced to the lateral and vertical extents described in **Section 4.1.2**, or, where additional sampling is to be conducted, to the extent that those sample locations indicate no exceedances of Site-specific soil criteria. Excavated soil that exceeds the Site-specific criteria will be hauled for disposal to an approved Subtitle D landfill facility. Where soil not exceeding the Site-specific criteria overlay those soils exceeding the Site-specific criteria, this overburden soil may be segregated and reused as backfill; however, if segregation of soils is shown to take too much time or effort, the amount of soil that is segregated for reuse may be limited.

Excavations will require sloping or shoring. In most cases, sloping will be utilized to maintain sidewall integrity. Where Site personnel will not be entering excavations, excavation sidewalls will be sloped to prevent sloughing. If personnel must enter an open excavation greater than 4 feet in depth, the sidewalls will be sloped to 1.5:1 in compliance with OSHA regulations. In those areas where the excavation must be extended to buildings, property boundaries, or other obstacles, shoring may be used to maintain a secure sidewall while maximizing the removal of soil exceeding the Site-specific soil criteria. Soil excavated to safely slope the excavations

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outside the lateral limits of the defined remedial excavation areas may be segregated and reused as backfill.

The excavation areas will be backfilled to match the existing grade using clean imported fill or excavated soil that meets the Site-specific criteria (overburden or soil removed to slope the excavations). In areas where gravel or asphalt surfaces will be replaced, the backfill will be finished below grade to allow for the placement of those materials. Backfill will be placed into excavations in 1-foot loose lifts and compacted to meet or exceed 90% of maximum compaction based on a Modified Proctor unless otherwise specified. Compaction will be applied to each lift by a vibratory drum compactor, where accessible, or by a vibratory plate compactor attachment for a hydraulic excavator.

Backfill compaction will be confirmed by in-place field testing where personnel can safely and effectively access excavation backfill. Where access limitations or saturated conditions prevent the effective testing of compacted soil conditions, construction oversight personnel will observe placement and compaction efforts to ensure that proper effort has been applied and the lifts will provide adequate stability for additional overlying lifts to meet the compaction requirements. When backfilling excavations near the saturated zone, it may be determined by the Contractor and Stantec that one or more lifts of pea gravel will be used to stabilize the backfill.

An estimated soil volume of 6,250 cy will be excavated for off-site disposal. Excavated soil requiring disposal will either be directly loaded to haul trucks or excavated and stockpiled if no trucks are present or if water drainage is required. Because excavations will only extend to the first indication of the saturated zone, limited water drainage is expected for excavated soils. Where stockpiles of excavated soils for disposal are implemented, the stockpiles will be maintained within the footprint of the excavation from which they were excavated and separated from any excavated soils to be used as backfill. Any stockpiles of soil requiring disposal will also be managed so that any contact water will drain into the excavation and not over the adjacent ground surface.

The sequence of the excavations will be determined by Stantec and the Contractor during the Site preparation. Excavation sequencing will consider: prevention of cross-contamination of cleaned backfilled areas; limiting the time that excavations are open; maintaining production rates; and maintaining Site access.

5.6.1 Excavation Shoring

Excavation shoring is anticipated to be used in excavations along the property boundaries and adjacent to buildings as shown on **Figure 2**, **Figure 3**, and **Figure 6**. The process by which the excavation shoring will be completed is to be determined by the Contractor with approval from Stantec, adhering to any shoring guidelines provided by CEMC and/or ARC. It is anticipated that shield shoring, also referred to as trench box shoring, will be utilized where excavation boundaries are adjacent to the property boundaries. The shield shoring system will be installed

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and maintained to minimize lateral soil creeping adjacent to active rail tracks and at the property boundary.

In excavation areas along building foundations, it is anticipated that trench box shoring or slot trenching may be utilized to prevent lateral soil creeping in the vicinity of foundations. During slot trenching, a series of small excavations are performed along the building foundation and immediately backfilled with flowable fill. Each trench segment would be approximately 3 feet wide by 6 feet long perpendicular to the building orientation. Additional adjacent slot trenches would only be advanced after the previous backfill has been allowed to cure. Therefore, every third segment would be excavated, backfilled, and allowed to cure for a day before additional slot trenching will be advanced in the area.

If Site soils do not allow for vertical excavation or if foundation orientations are found that allow it, trench box or other shoring methods may also be utilized adjacent to existing buildings. In the event that physical shielding is used to shore excavations adjacent to buildings, specific methods to prevent soil creep or foundation strain will be developed and implemented. Stantec and the Contractor will discuss these options prior to advancing excavations in these areas.

5.6.2 Haul Truck Management

Haul trucks will be contracted for the transport of excavated soil requiring off-site landfill disposal and for the delivery of clean import fill material. Site contaminants are limited to inorganic compounds (nitrate and ammonia) and Site soils are granular. As a result, limited contamination of the truck beds is expected following the disposal of excavated soil. Therefore, following disposal, haul trucks will be directed to the import fill source facility to back-haul clean fill material for delivery to the Site whenever practicable. This will reduce transportation costs, reduce greenhouse gas emissions, and reduce traffic to the Site.

5.7 CONSTRUCTION WATER MANAGEMENT AND TREATMENT

Excavations will not be advanced beyond the first indication of the saturated zone. Therefore, excavation dewatering is not expected to be necessary. In addition, the Sunnyside area climate is generally dry with the average annual rainfall of less than 8 inches. Granular Site soils will allow typical rain events to infiltrate the soil quickly and limit possible downtime due to storm water without any dewatering efforts. However, heavier precipitation events could require dewatering of storm water from open excavations (24-hour rainfall record of 1.6 inches).

Work activities will be conducted to limit the amount of water generated in excavations by implementing BMPs such as scheduling and sequencing work to limit the size of open excavations, backfilling excavations as soon as practicable, and preventing surface runoff from entering excavations using grading and/or berms. Particular care will be taken with these BMPs when the weather forecast includes significant rainfall.

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Water will also be generated during decontamination activities on-site and will require collection and disposal. It is anticipated that wet equipment decontamination will be limited to construction equipment demobilization from the Site. In addition, water may be generated during the removal of underground pipelines found within the excavation areas. Underground pipelines will be drained and the fluid collected and containerized prior to removal.

Water that is collected during shallow soil excavation activities will not be discharged to any storm sewers, ditches, ground surface, or open excavations on or adjacent to the Site. Collected water will be containerized and sampled for characterization prior to disposal at an approved off-site facility.

5.8 DUST MANAGEMENT

A project dust control plan has been submitted to and approved by the YRCAA for the shallow soil excavation activities described in this EDR. The dust control plan focuses on prevention, rather than mitigation. The dust control BMPs and contingency measures to be implemented as part of this plan are detailed in the CPS in **Appendix A**.

5.9 MONITORING WELL REPLACEMENT

The monitoring wells that must be decommissioned and removed as part of the excavation activities (MW-4 and MW-5, plus any additional monitoring wells as necessary) will be reinstalled by a licensed well drilling contractor following the backfill of the excavation areas. The installation of the replacement monitoring wells will be conducted pursuant to the WAC 173-160. The location of the replacement monitoring wells will be established by survey to match the previous location. The well screen interval will be constructed to match the well it is replacing. The well screen casing will be flush threaded to the necessary length of schedule 40 PVC blank casing to complete the well casing to ground surface. Wells will be completed with flush-mounted well monuments. Well completion details may be modified based on conditions encountered in the field at the discretion of qualified field personnel.

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6.0 Compliance Monitoring

Compliance monitoring will be implemented pursuant to the provisions of WAC 173-340-410. The objectives of compliance monitoring are to: 1) ensure the protection of human health and the environment during cleanup actions; 2) ensure that the Site-specific criteria have been achieved during the cleanup actions; and 3) confirm the long-term effectiveness of the cleanup actions.

6.1 PROTECTION MONITORING

Protection monitoring refers to monitoring enacted during the construction activities of the cleanup action in order to adequately protect human health and the environment. The protection monitoring enacted at the Site will provide air monitoring of fugitive vapors and particulate matter up to 10 micrometers in size (PM10) for the protection of workers and off-site receptors. Protection monitoring has been further described as part of the CPS in **Appendix A**, and will be detailed in the Compliance Monitoring Plan submitted prior to excavation activities. Protection monitoring requirements will also be included within the HASPs prepared for the work and reviewed by all personnel working at or visiting the Site during the construction activities.

6.2 PERFORMANCE MONITORING

Performance monitoring refers to sampling conducted to confirm that the cleanup action has attained the Site-specific cleanup criteria at the POCs identified in the CAP and to ensure performance standards such as construction quality control measurements, permit conditions, or requirements of other laws.

Performance monitoring for the shallow soil excavation activities can be divided into two main categories: 1) excavation performance monitoring, involving verifying the horizontal and vertical limits of the impacted soil excavation; and 2) backfill performance monitoring, involving verification of soil standards and compaction. Performance monitoring has been further described as part of the CPS in **Appendix A**, and will be detailed in the Compliance Monitoring Plan submitted prior to excavation activities.

6.3 CONFIRMATIONAL MONITORING

Confirmational monitoring is intended to demonstrate the long-term effectiveness of the Site cleanup actions once CULs and other performance standards have been achieved. The shallow soil cleanup actions detailed in this report are only the first phase of cleanup actions to be performed to meet the CULs of the CAP. Additional cleanup actions to be completed as part of the CAP include: the installation of bioremediation injection wells or boreholes; institutional controls; natural attenuation; and the construction of a vertical wall treatment system or other

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Ecology-approved treatment method for the off-property groundwater plume attributable to the Site.

The excavation of shallow soils exceeding the Site-specific criteria will remove the Site source material contributing to the groundwater plume. Groundwater monitoring will continue at the Site to assess the Site groundwater constituent concentrations. A more detailed monitoring plan will be prepared during the design phase of the groundwater cleanup action(s) to address any additional operations, maintenance, and monitoring that may be required to assess those cleanup actions after implementation.

Confirmational monitoring of the construction activities will be limited to annual inspections of the replaced asphalt and gravel road areas by Stantec for 5 years.

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7.0 Project Schedule

An implementation schedule was developed as required in the CAP, and submitted to Ecology on August 5, 2013. The schedule is included as **Figure 7**, and key activities pertaining to the shallow soil corrective action are summarized below:

- Ecology Review and Approval of *Shallow Soil Excavation Engineering Design Report* and *Shallow Soil Excavation Construction Plans and Specifications* – estimated by September 23, 2013.
- Submit Shallow Soil Excavation Operations & Maintenance Plan – November 13, 2013.
- Submit Shallow Soil Excavation Compliance Monitoring Plan – November 13, 2013.
- Submit Shallow Soil Excavation Health and Safety Plan – February 4, 2014.
- Estimated Window for Shallow Soil Excavation Activities – estimated between February 20 and June 12, 2014 (Final Schedule To Be Determined).
- Submit Shallow Soil Excavation As-built Report – estimated on October 6, 2014 (Dependent upon Final Schedule for Shallow Soil Excavation Activities).

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8.0 References

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SECOR, 2005. *Phase II Remedial Investigation Report for the Bee-Jay Scales Site*, Chevron Environmental Management Company and BP America, Inc., May 10.

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WAC, 2007. MTCA Cleanup Regulation, WAC 173-340-400, October 12.

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9.0 Limitations and Certification

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of CEMC and ARC for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

Prepared by:



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Reviewed by:



Marisa Kaffenberger
Project Manager



Thomas Cole
Senior Engineer

All information, conclusions, and recommendations provided by Stantec in this document regarding the Subject Property have been prepared under the supervision of and reviewed by the Certified Professional whose signature appears below:

Licensed Approver:

Name: Marisa Kaffenberger, P.E.
Senior Engineer

Date: 8/26/13

Signature: 

Stamp:



Tables

Table 1
Applicable or Relevant and Appropriate Requirements
 Bee-Jay Scales Site
 Sunnyside, Washington

REGULATION	CODE	TYPE	SUMMARY	ADMINISTERING AGENCY	ANALYSIS
WATER POLLUTION STATUTES AND REGULATIONS					
Washington Construction Stormwater General Permit	RCW 90.48	Action Specific	Requires the development of a stormwater pollution prevention plan, the implementation of sediment, erosion, and pollution control measures, and coverage under the general permit for any regulated construction site.	Washington Department of Ecology	Applicable if Shallow Soil Excavation Activities disturb one or more acres through clearing, grading, excavating or stockpiling of material or if stormwater from the Site will be discharged to surface waters of the state of Washington.
Construction Stormwater Pollution Prevention Plan Regulation	SMC 15.54A	Action Specific	Projects meeting the regulatory threshold are required to prepare, submit, and implement a storm water pollution prevention plan (SWPPP) for construction activity. The SWPPP shall be implemented beginning with initial soil disturbance and continue until final stabilization.	City of Sunnyside	Applicable if Shallow Soil Excavation Activities disturb one or more acres through clearing, grading, excavating or stockpiling of material.
PUBLIC WATER SUPPLY STATUTES AND REGULATIONS					
Washington MTCA Deriving Soil Concentrations for Groundwater Protection	WAC 173-340-747	Chemical Specific	Establishes soil concentrations that will not cause contamination of groundwater at levels that exceed the groundwater cleanup levels established under WAC 173-340-720.	Washington Department of Ecology	Applicable. Soil nitrate cleanup level of 220 mg/kg is based on this ARAR.
WELL CONSTRUCTION STATUTES AND REGULATIONS					
Washington Minimum Standards for the Construction and Maintenance of Wells	WAC 173-160	Action Specific	Establishes the requirements for decommissioning and construction monitoring wells in the State of Washington.	Washington Department of Ecology	Applicable. The decommissioning and reinstallation of monitoring wells within the shallow soil excavation areas will be required.
COMPLIANCE MONITORING STATUTES AND REGULATIONS					
Washington MTCA Compliance Monitoring Requirements	WAC 173-340-410	Action Specific	Compliance monitoring includes protection monitoring (to confirm protection of human health and the environment during cleanup), performance monitoring (to confirm cleanup has attained cleanup standards), and confirmational monitoring (to confirm long-term effectiveness of the cleanup).	Washington Department of Ecology	Applicable. Cleanup actions must be able to incorporate these types of compliance monitoring.
AIR POLLUTION STATUTES AND REGULATIONS					
Washington MTCA Soil Cleanup Standards for Unrestricted Land Use	WAC 173-340-740	Chemical Specific	Establishes standards for soil covered under MTCA. MTCA standards are applicable at sites where hazardous substances have been found.	Washington Department of Ecology	Applicable
Washington Clean Air Act (Ambient Air Quality Standards for Particulate Matter)	WAC 173-470	Action Specific	Establishes maximum acceptable levels for particulate matter in the ambient air.	Washington Department of Ecology	Applicable for Shallow Soil Excavation Cleanup Action
Construction Dust Control Policy of the Yakima Regional Clean Air Agency	Incorporates Regulation I of Yakima County Regional Clean Air Agency Chapter 70.94 RCW and Chapter 173-400 of WAC	Action Specific	Requires any owner, developer, or operator engaged in construction, repair, remodeling, or demolition of any building; engaged in any road construction or repair; or construction site preparation or landscaping within the exterior boundaries of Yakima County to prepare a site-specific fugitive dust control plan to be reviewed by the Yakima Regional Clean Air Agency.	Yakima Regional Clean Air Agency	Applicable for Shallow Soil Excavation Cleanup Action
EROSION AND SEDIMENT CONTROL STATUTES AND REGULATIONS					
Erosion and Sediment Control Regulation	SMC 15.54	Action Specific	Prohibits grubbing, clearing, grading, filling, excavating, quarrying, mining and/or stockpiling of soil on any property within the City of Sunnyside or improving or developing any such property without an approved erosion and sedimentation control plan.	City of Sunnyside	Applicable for Shallow Soil Excavation Cleanup Action

Table 1
Applicable or Relevant and Appropriate Requirements
 Bee-Jay Scales Site
 Sunnyside, Washington

REGULATION	CODE	TYPE	SUMMARY	ADMINISTERING AGENCY	ANALYSIS
WORKER SAFETY STATUTES AND REGULATIONS					
Occupational Safety and Health Act	29 CFR 1910	Action Specific	Establishes general safety procedures and general construction safety standards applicable to workers during cleanup actions.	OSHA	Applicable
Washington Industrial Safety and Health Act	WAC 296, Chapters 06-17A, 24, 62-63, 155, 200A, 800-809, 817, 839-843, 863, 874, 876 and WAC 173-340-810	Action Specific	Establishes safety and health rules that apply to most workplaces and workers in the State of Washington.	Washington Department of Labor and Industries	Applicable
OVERALL ENVIRONMENT STATUTES AND REGULATIONS					
State Environmental Policy Act	43.21C RCW	Action Specific	Enacted in 1971, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. A SEPA checklist must be prepared with any new proposal to provide information to help the agency identify environmental impacts from the proposal, and to help the agency decide whether and EIS is required.	Washington Department of Ecology	Applicable
CONSTRUCTION STATUTES AND REGULATIONS					
Excavation and Grading Permit	SMC 15.12	Action Specific	Establishes requirements for the handling of excavated impacted soil. Requires a permit from the City Public Works Department.	City of Sunnyside	Applicable

Notes:

ARAR = Applicable or relevant and appropriate requirement
 CFR = Code of Federal Regulations
 EIS = Environmental Impact Statement
 MCLs = Maximum Contaminant Levels
 MCLGs = Maximum Contaminant Level Goals
 mg/L = milligrams per liter
 MTCA = Model Toxics Control Act
 OSHA = Occupational Safety and Health Administration
 RCW = Revised Code of Washington
 SEPA = State Environmental Policy Act
 SMC = Sunnyside Municipal Code
 USEPA = United States Environmental Protection Agency
 WAC = Washington Administrative Code

Table 2
Summary of Proposed Pre-Excavation Delineation Soil Boreholes
 Bee-Jay Scales Site
 Sunnyside, Washington

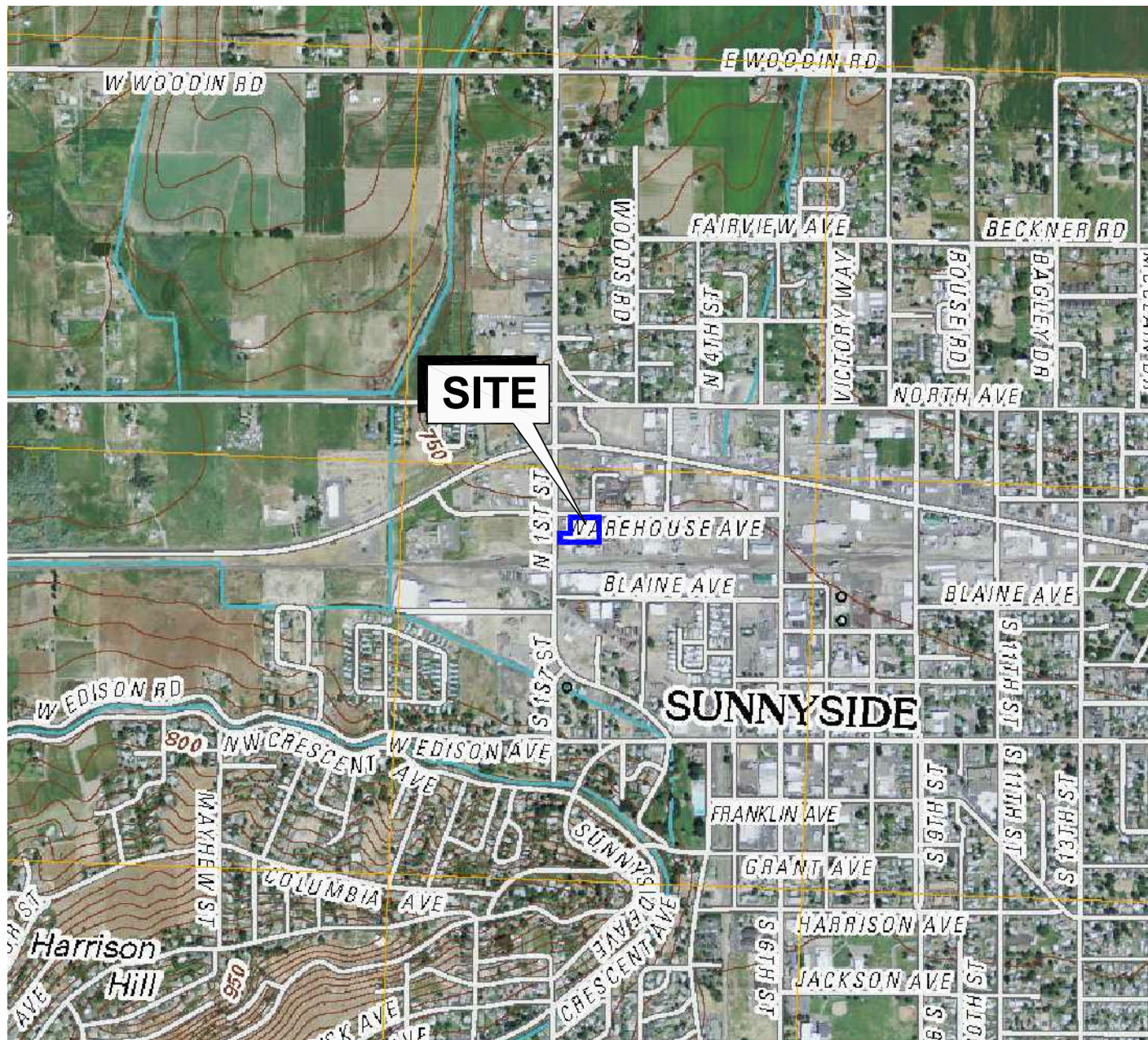
Delineation Area	Borehole ID	Constituent(s)	Planned Sample Depths ¹	Analysis TAT	Northing	Easting	Notes
Area 5 East	A5E-DB-02a	NO ₃	2.0, 4.0, 6.0, 8.5	Standard	363233.9	1762025.5	10' step-out W from A5E-DB-02
	A5E-DB-07b	NO ₃	9.0	Standard	363270.9	1762067.0	10' step-out N from A5E-DB-07
	A5E-DB-07c	NO ₃ , NH ₃ ²	1.0, 3.0, 5.0, 7.5	Standard	363246.0	1762068.0	Resample of A5-SS-001, 15' S from A5E-DB-07a

Notes:

¹ Sample depths were determined based on the historical high groundwater table and data from previous soil investigations.

² Samples from this borehole will be analyzed for nitrate at all sample depths, and analyzed for ammonia at 1.0 and 3.0 feet bgs. Sample locations, depths, and analyses are subject to change based on field conditions.

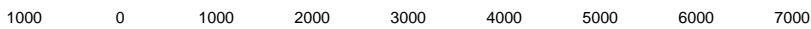
Figures



WASHINGTON



SCALE IN MILES



SCALE IN FEET

REFERENCE: USGS 7.5 MINUTE QUADRANGLE;
SUNNYSIDE, WASHINGTON; 2011



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FOR:

BEE-JAY SCALES SITE
SUNNYSIDE, WASHINGTON

SITE LOCATION MAP

FIGURE:

1

JOB NUMBER:

213202156/213202157

DRAWN BY:

JRO

CHECKED BY:

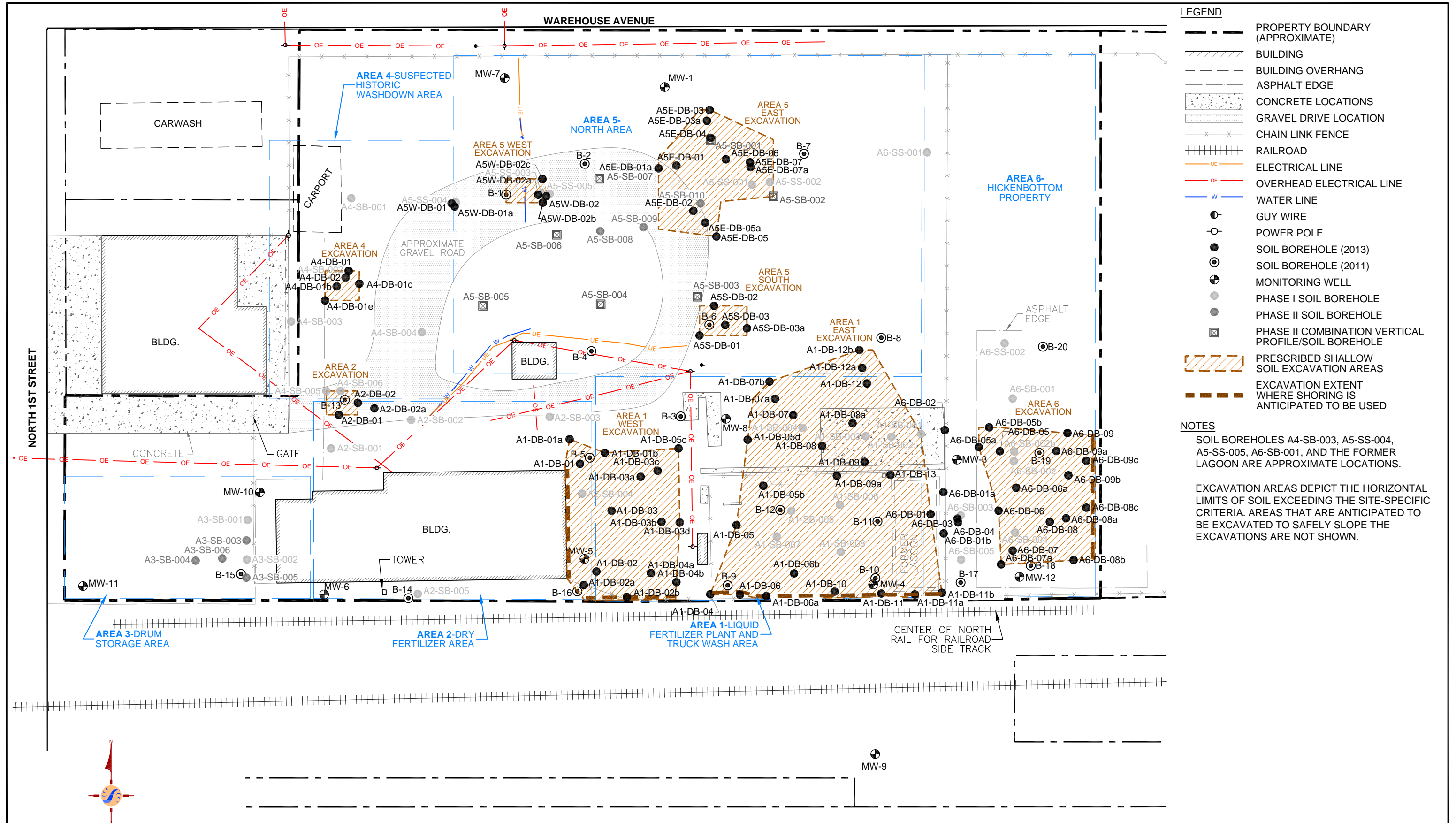
EJB

APPROVED BY:

MRK

DATE:

08/12/13

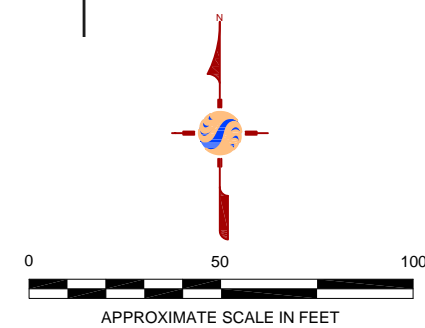


- LEGEND**
- PROPERTY BOUNDARY (APPROXIMATE)
 - ▨ BUILDING
 - - - BUILDING OVERHANG
 - ASPHALT EDGE
 - ▨ CONCRETE LOCATIONS
 - ▨ GRAVEL DRIVE LOCATION
 - x - CHAIN LINK FENCE
 - ||||| RAILROAD
 - OE ELECTRICAL LINE
 - W WATER LINE
 - GUY WIRE
 - POWER POLE
 - SOIL BOREHOLE (2013)
 - SOIL BOREHOLE (2011)
 - ⊕ MONITORING WELL
 - PHASE I SOIL BOREHOLE
 - PHASE II SOIL BOREHOLE
 - ⊗ PHASE II COMBINATION VERTICAL PROFILE/SOIL BOREHOLE
 - ▨ PRESCRIBED SHALLOW SOIL EXCAVATION AREAS
 - - - EXCAVATION EXTENT WHERE SHORING IS ANTICIPATED TO BE USED


NOTES

SOIL BOREHOLES A4-SB-003, A5-SS-004, A5-SS-005, A6-SB-001, AND THE FORMER LAGOON ARE APPROXIMATE LOCATIONS.

EXCAVATION AREAS DEPICT THE HORIZONTAL LIMITS OF SOIL EXCEEDING THE SITE-SPECIFIC CRITERIA. AREAS THAT ARE ANTICIPATED TO BE EXCAVATED TO SAFELY SLOPE THE EXCAVATIONS ARE NOT SHOWN.



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 Stantec 2321 Club Meridian Drive, Suite E Okemos, Michigan PHONE: (517) 349-9499 FAX: (517) 349-6863	FOR: BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON		SITE PLAN SHOWING PRESCRIBED SHALLOW SOIL EXCAVATION AREAS		FIGURE: 2
	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO			CHECKED BY: EJB

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- ▨ BUILDING
- - - BUILDING OVERHANG
- ▬ ASPHALT EDGE
- ▨ CONCRETE LOCATIONS
- ▨ GRAVEL DRIVE LOCATION
- × × × CHAIN LINK FENCE
- ||||| RAILROAD
- UE — ELECTRICAL LINE
- OE — OVERHEAD ELECTRICAL LINE
- W — WATER LINE
- ⊙ GUY WIRE
- ⊙ POWER POLE
- ⊙ SOIL BOREHOLE
- ⊙ SOIL BOREHOLE (2011)
- ⊕ MONITORING WELL
- ⊠ PHASE II COMBINATION VERTICAL PROFILE/SOIL BOREHOLE
- ▨ EXCAVATION EXTENT WHERE SHORING IS ANTICIPATED TO BE USED
- ▨ AREAS REQUIRING OFF-SITE DISPOSAL FROM GROUND SURFACE (GS) TO FIRST INDICATION OF SATURATED ZONE (SZ)
- ▨ AREAS REQUIRING OFF-SITE DISPOSAL FROM A SPECIFIC DEPTH (FEET) TO FIRST INDICATION OF SATURATED ZONE (SZ)
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- ▨ AREAS REQUIRING OFF-SITE DISPOSAL FROM A SPECIFIC DEPTH (FEET) TO A SPECIFIC DEPTH (FEET)

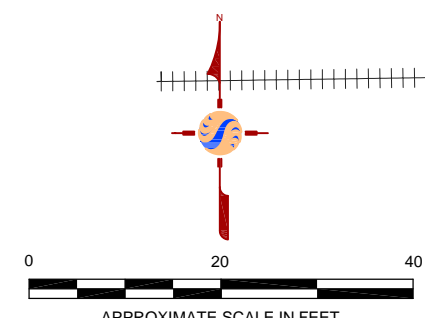
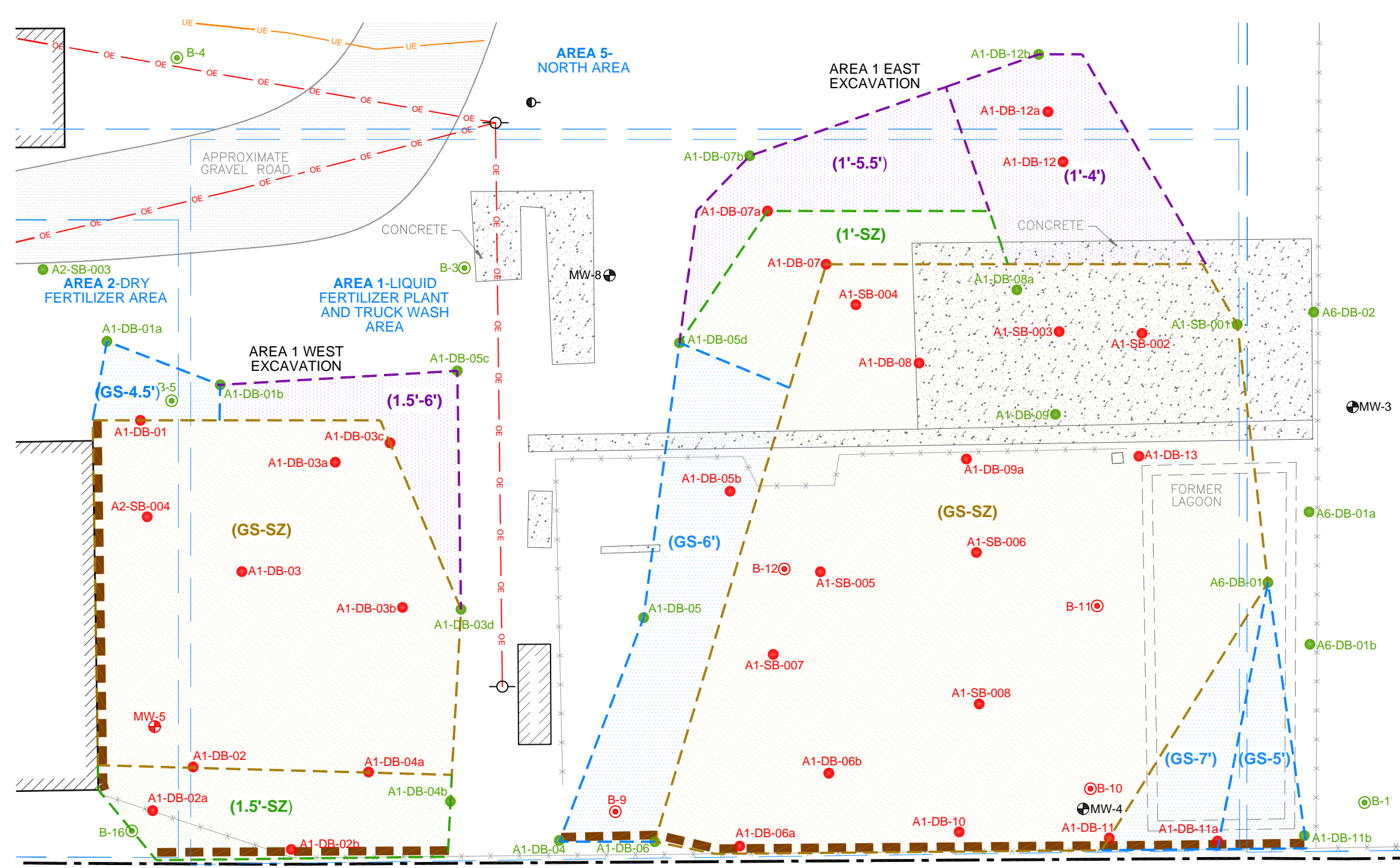
NOTES

BOREHOLE LOCATIONS THAT EXCEED SITE-SPECIFIC SOIL CRITERIA ARE SHOWN IN RED.

BOREHOLE LOCATIONS THAT DO NOT EXCEED SITE-SPECIFIC SOIL CRITERIA ARE SHOWN IN GREEN.

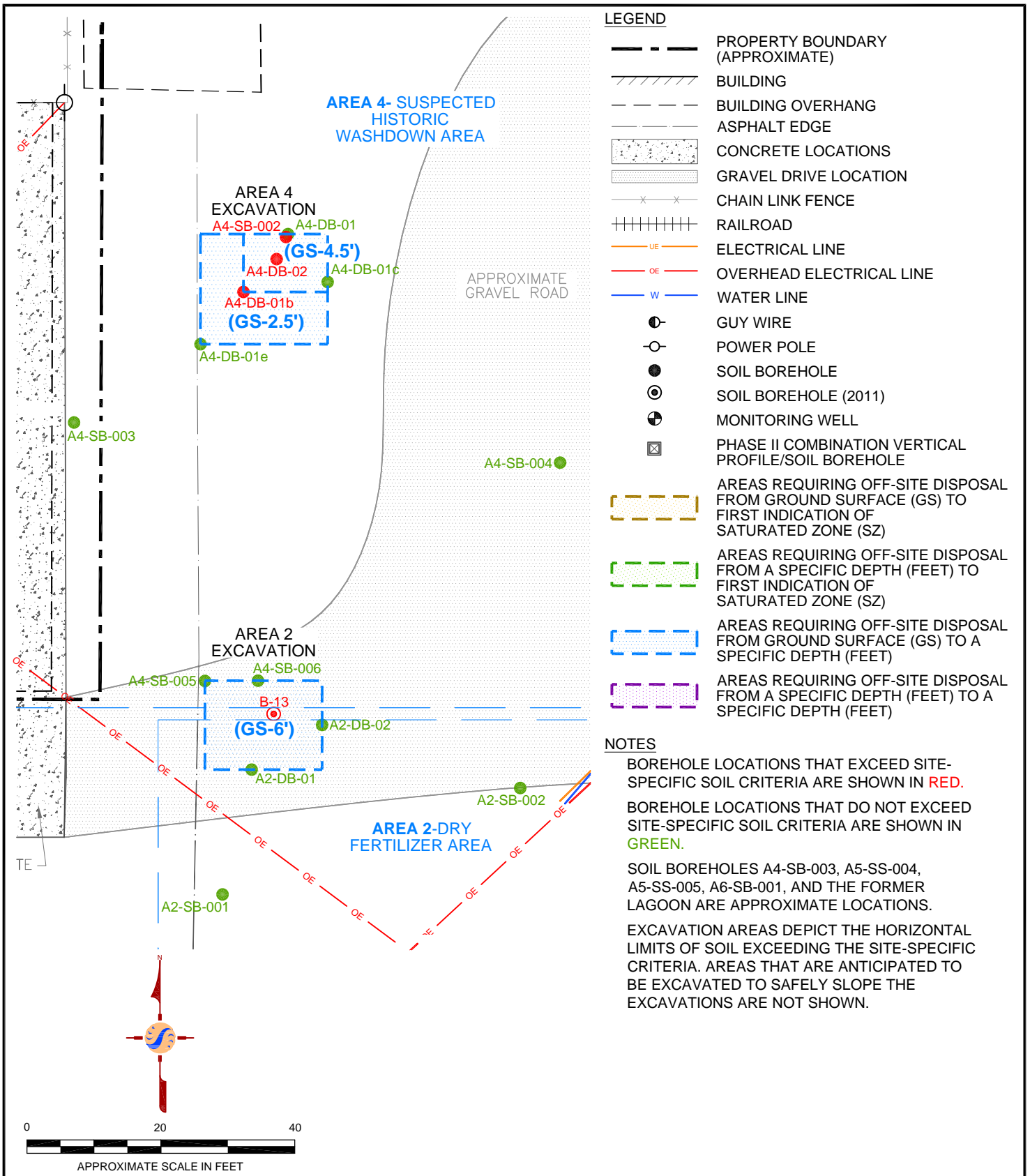
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	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13



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 Okemos, Michigan
 PHONE: (517) 349-9499 FAX: (517) 349-6863

FOR:
**BEE-JAY SCALES SITE
 SUNNYSIDE, WASHINGTON**

JOB NUMBER:
 213202156/213202157

DRAWN BY:
 JRO

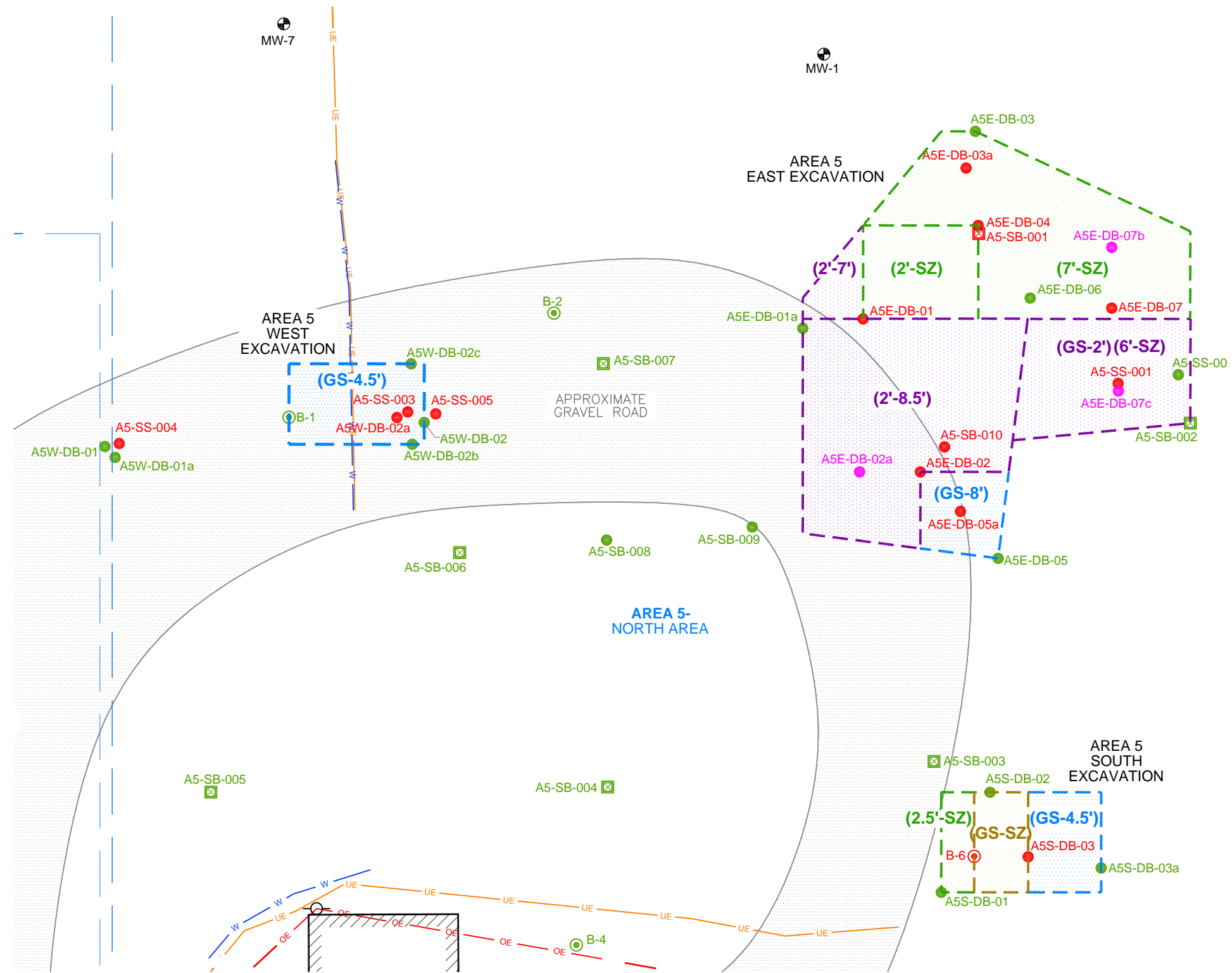
**ENLARGED SITE PLAN SHOWING
 PRESCRIBED SHALLOW SOIL
 EXCAVATIONS - AREAS 2 AND 4**

CHECKED BY:
 EJB

APPROVED BY:
 MRK

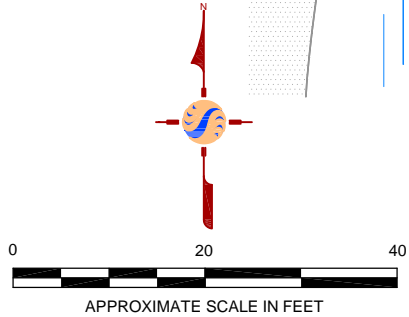
FIGURE:
4

DATE:
 08/12/13



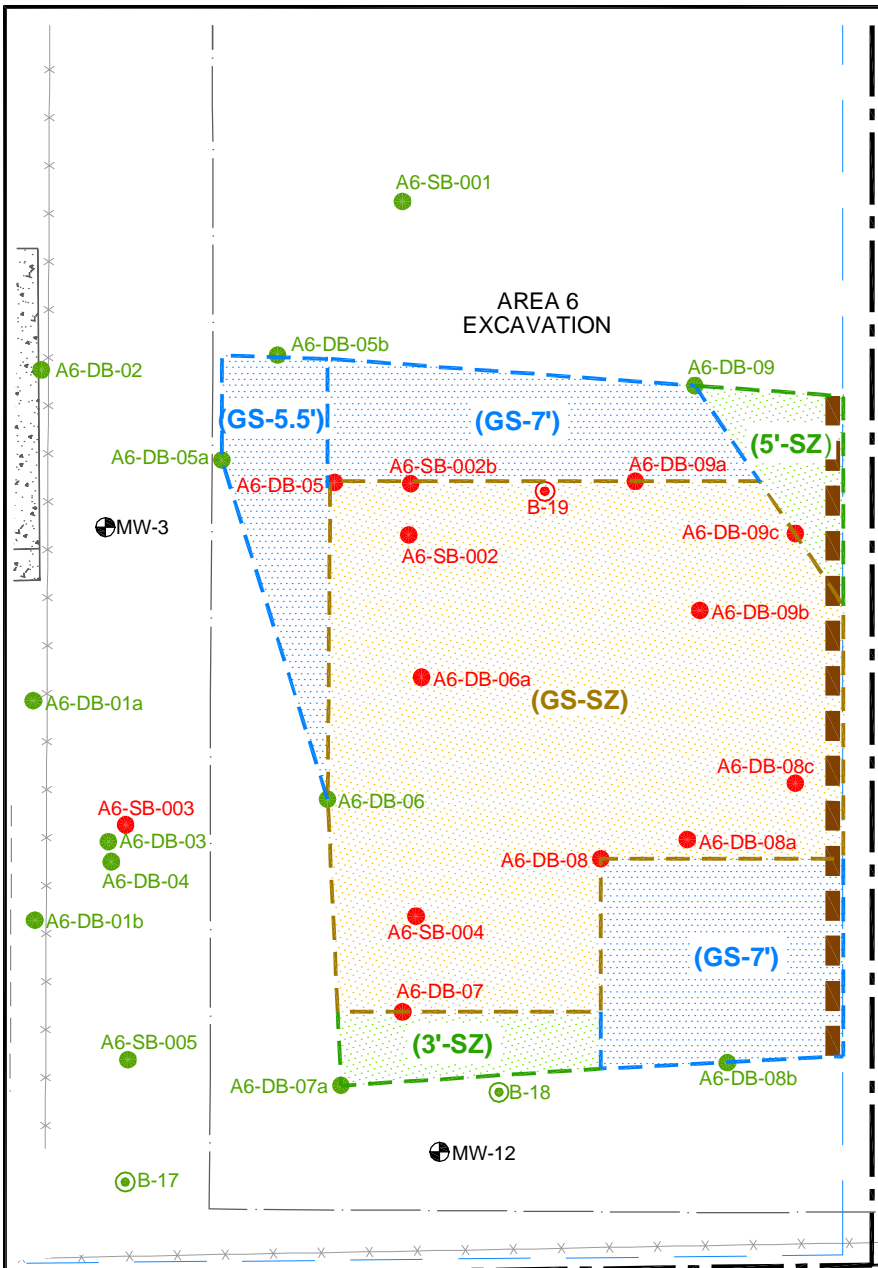
- LEGEND**
- PROPERTY BOUNDARY (APPROXIMATE)
 - /// BUILDING
 - - - BUILDING OVERHANG
 - ASPHALT EDGE
 - [Pattern] CONCRETE LOCATIONS
 - [Pattern] GRAVEL DRIVE LOCATION
 - x-x- CHAIN LINK FENCE
 - ||||| RAILROAD
 - UE ELECTRICAL LINE
 - OE OVERHEAD ELECTRICAL LINE
 - W WATER LINE
 - ⊙ GUY WIRE
 - ⊙ POWER POLE
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 - ⊙ SOIL BOREHOLE (2011)
 - ⊙ MONITORING WELL
 - [Box] PHASE II COMBINATION VERTICAL PROFILE/SOIL BOREHOLE
 - PROPOSED PRE-EXCAVATION DELINEATION BOREHOLE
 - [Dashed Box] AREAS REQUIRING OFF-SITE DISPOSAL FROM GROUND SURFACE (GS) TO FIRST INDICATION OF SATURATED ZONE (SZ)
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- NOTES**
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	BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON				5
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	
213202156/213202157	JRO	EJB	MRK	08/12/13	



LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- BUILDING
- BUILDING OVERHANG
- ASPHALT EDGE
- CONCRETE LOCATIONS
- GRAVEL DRIVE LOCATION
- CHAIN LINK FENCE
- RAILROAD
- ELECTRICAL LINE (UE)
- OVERHEAD ELECTRICAL LINE (OE)
- WATER LINE (W)
- GUY WIRE
- POWER POLE
- SOIL BOREHOLE
- SOIL BOREHOLE (2011)
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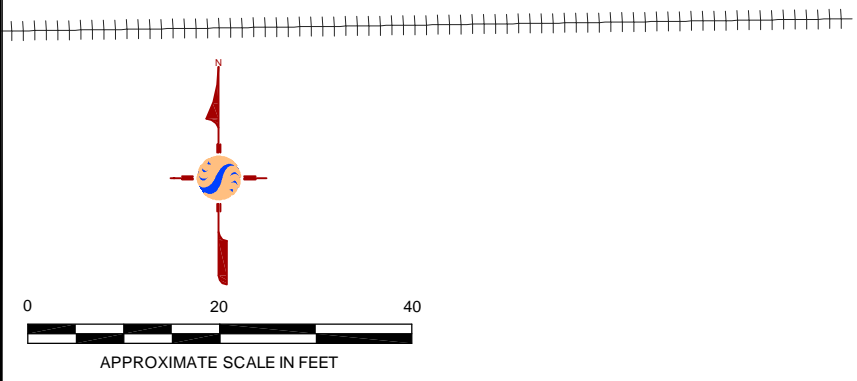
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	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13

**Figure 7: Implementation Schedule
Bee-Jay Scales Site**

ID	Task Name	Duration	Start	Finish	2013				2014				2015				2016																				
					A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	Shallow Soil Excavation Implementation Schedule	343 days?	Tue 5/28/13	Mon 10/6/14																																	
2	Consent Decree Signed	0 days	Tue 5/28/13	Tue 5/28/13	◆ 5/28																																
3	Submit Implementation Schedule	0 days	Mon 8/5/13	Mon 8/5/13	◆ 8/5																																
4	Submit Draft Shallow Soil Excavation Engineering Design Report	0 days	Mon 8/26/13	Mon 8/26/13	◆ 8/26																																
5	Submit Draft Shallow Soil Excavation Construction Plans and Specifications	0 days	Mon 8/26/13	Mon 8/26/13	◆ 8/26																																
6	<i>Ecology Review and Approval of Shallow Soil Excavation Engineering Design Report</i>	<i>1 mon?</i>	<i>Mon 8/26/13</i>	<i>Mon 9/23/13</i>	8/26 9/23																																
7	<i>Ecology Review and Approval of Shallow Soil Excavation Construction Plans and Specifications</i>	<i>1 mon?</i>	<i>Mon 8/26/13</i>	<i>Mon 9/23/13</i>	8/26 9/23																																
8	Submit Shallow Soil Excavation Operations & Maintenance Plan	0 days	Wed 11/13/13	Wed 11/13/13	◆ 11/13																																
9	Submit Shallow Soil Excavation Compliance Monitoring Plan	0 days	Wed 11/13/13	Wed 11/13/13	◆ 11/13																																
10	Submit Shallow Soil Excavation Health and Safety Plan	0 days	Tue 2/4/14	Tue 2/4/14	◆ 2/4																																
11	<i>Estimated Window for Shallow Soil Excavation Activities - Final Timeframe TBD</i>	<i>4 mons?</i>	<i>Thu 2/20/14</i>	<i>Thu 6/12/14</i>	2/20 6/12																																
12	Submit Shallow Soil Excavation As-built Report	0 days	Mon 10/6/14	Mon 10/6/14	◆ 10/6																																
13	Groundwater Remedy Implementation Schedule	923 days?	Tue 5/28/13	Tue 1/31/17																																	
14	Consent Decree Signed	0 days	Tue 5/28/13	Tue 5/28/13	◆ 5/28																																
15	Submit Implementation Schedule	0 days	Mon 8/5/13	Mon 8/5/13	◆ 8/5																																
16	Obtain Access Agreements for Off-Property Groundwater Investigation	25 days	Mon 7/15/13	Fri 8/16/13	7/15 8/16																																
17	Perform Off-Property Groundwater Investigation	10 days	Mon 8/19/13	Fri 8/30/13	8/19 8/30																																
18	<i>Estimated Timeframe for Groundwater Monitoring to Define Nitrate Plume</i>	<i>12 mons?</i>	<i>Mon 8/26/13</i>	<i>Fri 8/8/14</i>	8/26 8/8																																
19	Submit Draft Groundwater Remedy Engineering Design Report	0 days	Wed 12/17/14	Wed 12/17/14	◆ 12/17																																
20	<i>Ecology Review and Approval of Groundwater Remedy Engineering Design Report</i>	<i>1 mon?</i>	<i>Thu 12/18/14</i>	<i>Tue 1/20/15</i>	12/18 1/20																																
21	Submit Draft Groundwater Remedy Construction Plans and Specifications	0 days	Wed 3/18/15	Wed 3/18/15	◆ 3/18																																
22	<i>Ecology Review and Approval of Groundwater Remedy Construction Plans and Specifications</i>	<i>1 mon?</i>	<i>Thu 3/19/15</i>	<i>Wed 4/15/15</i>	3/19 4/15																																
23	<i>Obtain Off-Property Access Agreements for Groundwater Remedy</i>	<i>6 mons?</i>	<i>Wed 1/21/15</i>	<i>Fri 7/10/15</i>	1/21 7/10																																
24	Submit Groundwater Remedy Operations & Maintenance Plan	0 days	Thu 6/11/15	Thu 6/11/15	◆ 6/11																																
25	Submit Groundwater Remedy Compliance Monitoring Plan	0 days	Thu 6/11/15	Thu 6/11/15	◆ 6/11																																
26	Submit Groundwater Remedy Health and Safety Plan	0 days	Fri 7/10/15	Fri 7/10/15	◆ 7/10																																
27	<i>Estimated Window for Groundwater Remedy Implementation - Final Timeframe TBD</i>	<i>9 mons?</i>	<i>Mon 8/24/15</i>	<i>Wed 5/11/16</i>	8/24 5/11																																
28	Perform Compliance Monitoring of Groundwater Remedy	6 mons	Thu 5/12/16	Mon 10/31/16	5/12 10/31																																
29	Submit Groundwater Remedy As-built Report	0 days	Tue 1/31/17	Tue 1/31/17	◆ 1/31																																

Project: Implementation Schedule Date: August 5, 2013	Task		Summary		Rolled Up Progress		Project Summary	
	Progress		Rolled Up Task		Split		Group By Summary	
	Milestone	◆	Rolled Up Milestone	◇	External Tasks			

Appendix A

Shallow Soil Excavation Construction Plans and Specifications



Stantec

**Shallow Soil Excavation
Construction Plans and
Specifications**

**Bee-Jay Scales Site
116 N 1st Street
Sunnyside, WA 98944**

Submitted to:

Mr. Norm Hepner
Department of Ecology
Central Regional Office
15 W Yakima Avenue, Suite 200
Yakima, WA 98902-3452

Prepared for:

Chevron Environmental Management
Company
6101 Bollinger Canyon Road
San Ramon, CA 94583

Atlantic Richfield Company
4 Centerpointe Drive, LPR 4-221
La Palma, CA 90623-1006

Submitted by:

Stantec Consulting Services Inc.
2321 Club Meridian Dr., Suite E
Okemos, MI 48864

August 26, 2013

SHALLOW SOIL EXCAVATION CONSTRUCTION PLANS AND SPECIFICATIONS

Bee-Jay Scales Site, Sunnyside, Washington

August 26, 2013

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SHALLOW SOIL EXCAVATION CONSTRUCTION PLANS AND SPECIFICATIONS

Bee-Jay Scales Site, Sunnyside, Washington

August 26, 2013

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APPENDICES

Appendix A	Shallow Soil Excavation Construction Specifications
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Appendix C	Dust Control Plan Application

SHALLOW SOIL EXCAVATION CONSTRUCTION PLANS AND SPECIFICATIONS

Bee-Jay Scales Site, Sunnyside, Washington

August 26, 2013

1.0 Introduction

Stantec Consulting Services Inc. (Stantec) is submitting this *Shallow Soil Excavation Construction Plans and Specifications* (CPS) to the Washington Department of Ecology (Ecology) for the Bee-Jay Scales Site (the Site), on behalf of Chevron Environmental Management Company (CEMC) and Atlantic Richfield Company (ARC). The CPS has been prepared under the provisions of the Washington State Model Toxics Control Act (MTCA) Washington Administrative Code (WAC) 173-340 to address Consent Decree No. 132017660 between Ecology, CEMC, and ARC (Ecology, 2013).

Elements of the CPS address requirements of WAC 173-340-400 (WAC, 2007), including but not limited to:

- A general description of the work to be performed in relation to the engineering design criteria described in the *Shallow Soil Excavation Engineering Design Report* (EDR);
- Detailed plans, procedures, and material specifications necessary for the construction activities;
- A description of permit requirements and copies of permits and approvals; and
- A description of the compliance monitoring and quality control testing to be conducted during construction activities.

This document may be refined prior to the start of excavation as additional planning for the construction work is completed and conditions change.

1.1 SITE DESCRIPTION

The Site is located in the City of Sunnyside (City), within Yakima County, and consists of the following two parcels: Parcel No. 22102522014 and Parcel No. 22102522015 as recorded by the Yakima County Department of Assessment. Parcel No. 22102522014 is located at 116 North 1st Street and is owned by Bee-Jay Scales, Inc. Parcel No. 22102522015 is located at 301 Warehouse Avenue and is currently owned by Western General Land, LLC (formerly owned by Hickenbottom & Sons, Inc.).

The Bee-Jay Scales parcel at 116 North 1st Street is approximately 2.8 acres in size. Three businesses currently operate at the parcel: Sandy Farms, a local trucking company; Sanleco, Inc., an interstate trucking company with an on-site tractor-trailer repair garage; and Bee-Jay Scales, a commercial scale operation. This parcel is accessed off North 1st Street at the west extent of the Site which is paved with concrete or asphalt for approximately 150 feet into the Site. A gravel road is maintained through this parcel for semi-trucks to use as a turnaround

SHALLOW SOIL EXCAVATION CONSTRUCTION PLANS AND SPECIFICATIONS

Bee-Jay Scales Site, Sunnyside, Washington

August 26, 2013

when accessing the truck scale at the facility as part of the commercial activities. These commercial activities are planned to continue throughout the proposed shallow soil corrective action.

The Western General Land parcel at 301 Warehouse Avenue is approximately 0.6 acres in size. The parcel is used to park semi-trucks and trailers as well as store other equipment used by the food processing facility to the east. This parcel is accessed off Warehouse Avenue at the northeast extent of the Site. About 90 percent (%) of this parcel is paved with asphalt or concrete or covered with gravel, and approximately 200 feet of pavement or gravel will remain between Warehouse Avenue and the excavation area throughout the proposed shallow soil corrective action.

The topography of the surrounding area generally slopes gradually to the southwest. Based on survey data collected at the Site, the Site topography gently slopes to the south, but there is a low spot in the topography located in the southeast corner of the Site near MW-3. Most of the grades on-site are less than 2%; however, some localized grades of about 5% exist over short distances. Soil at the Site consists mostly of sand and silt in various proportions to a depth of 30 feet below ground surface (bgs). The Site is well drained and groundwater is typically encountered between approximately 5 to 12 feet bgs depending on the location.

The Site location is shown on **Figure 1**. The Site layout, including monitoring well locations, building locations, and additional Site features, is shown on **Figure 2**. Historically, the Site was divided into six main study areas as follows:

- Area 1 – Liquid Fertilizer Plant and Truck Wash Area;
- Area 2 – Dry Fertilizer Area;
- Area 3 – Drum Storage Area;
- Area 4 – Suspected Historic Washdown Area;
- Area 5 – North Area; and
- Area 6 – Hickenbottom Property.

The Site is bordered to the north and west by Warehouse Avenue and North 1st Street and to the south by active railroad tracks. One property to the north of the Site across Warehouse Avenue is a residence. The remaining adjacent properties to the north, east, and south of the Site are commercial/industrial facilities. The property west of the Site across North 1st Street is owned by the City and is currently vacant.

SHALLOW SOIL EXCAVATION CONSTRUCTION PLANS AND SPECIFICATIONS

Bee-Jay Scales Site, Sunnyside, Washington

August 26, 2013

1.2 SITE STRATEGY

The purpose of this CPS is to describe the scope of work and specifications for the execution of the shallow soil excavation cleanup actions for the Site. These cleanup actions are the first phase of the cleanup action plan (CAP) prepared for the Site by Ecology. The CAP includes a combination of shallow soil excavation, *in situ* bioremediation injection wells/boreholes (for delivery of a sodium acetate solution or calcium acetate), institutional controls, natural attenuation, and construction of vertical barrier wall treatment system(s) or other Ecology-approved treatment method following public comment for the off-property groundwater plume attributable to the Site.

The implementation of these shallow soil excavation cleanup actions will address soil pathways that present a risk to human health and the environment and will remove source material contributing to groundwater impacts at the Site.

1.3 STAKEHOLDERS

Remediation Parties:

Chevron Environmental Management Company
Contact Name: Caryl Weekley
Contact Number: (925) 790-3876

Atlantic Richfield Company
Contact Name: Kyle Christie
Contact Number: (714) 670-5303

Remediation Parties

Representative:

Stantec Consulting Services Inc.
Contact Name: Marisa Kaffenberger
Contact Phone Number: (517) 349-9499 ext. 275

Contractor:

To be selected by the Remediation Parties

Property Owners:

Bee-Jay Scales, Inc.
Contact Name: Arno Johnson
Contact Phone Number: (509) 840-9450

Western General Land, LLC
Contact Name: George E. Johnson
Contact Phone Number: (509) 837-4214

SHALLOW SOIL EXCAVATION CONSTRUCTION PLANS AND SPECIFICATIONS

Bee-Jay Scales Site, Sunnyside, Washington
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2.0 Project Background

2.1 SITE HISTORICAL OPERATIONS

The Site and adjacent properties have been the location of agricultural warehouses, lumber yards, coal storage, and railroad transportation activities since approximately 1906. Portions of the Site were owned by the Northern Pacific Railroad Company from 1906 until 1989 when they were purchased by the Glacier Park Company. An agricultural distribution facility operated at the Site from the 1960s through at least 1986. This facility consisted of buildings and aboveground storage tanks (ASTs), and was operated by at least two separate companies: Laneger Agricultural Services and Valley Agricultural, Inc. The ASTs have since been removed from the Site. Documentation also indicates that American Oil Company (Amoco), now part of BP, leased portions of this property from Northern Pacific Railroad between 1965 and 1972. A lagoon was constructed by Valley Agricultural, Inc. in the early 1980s to collect water from the washdown of farm chemical applicator vehicles.

The western portion of Lot 10 was purchased by Chevron Chemical Company in 1981 and sold to Bee-Jay Scales, Inc. in 1987. Bee-Jay Scales, Inc. purchased additional portions of Lots 10 and 11 in 1995 and 1996. Lots 10 and 11 are referenced in the Summary of Ownership included as Appendix B of the RI/FS Work Plan and are not shown on any available figures.

Hickenbottom & Sons, Inc. leased a portion of the Site from the Northern Pacific Railroad Company beginning in 1961 and purchased portions of Lots 10 and 11 in 1992. The Hickenbottom & Sons property was previously used as pastureland; since 1961, it has been used for food packing, storage, and a transportation business, and is currently owned by Western General Land, LLC.

2.2 SHALLOW SOIL EXCAVATION ENGINEERING DESIGN CRITERIA

2.2.1 Shallow Soil Excavation Objectives

The objectives for the planned shallow soil excavation cleanup action described in the EDR are to substantially reduce or eliminate Site soils to the extent practicable that either:

- 1) Are capable of leaching nitrate to groundwater in excess of the Federal Maximum Contaminant Level (MCL) of 10 milligrams per liter (mg/L); or
- 2) Contain ammonia concentrations that would have the potential for acute vapor health effects to a construction worker.

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By substantially reducing or eliminating the source soils within the Site, the contribution of nitrate from Site soils to the groundwater plume will be significantly reduced or eliminated. This will allow for a more effective and efficient implementation of the remaining portions of the CAP.

2.2.2 Cleanup Standards

Cleanup levels (CULs) have been established for two constituents for soil at the Site. A nitrate CUL of 220 milligrams per kilogram (mg/kg) has been established by the MTCA modified Method B for the protection of groundwater using Site-specific leaching tests pursuant to WAC 173-340-747(3)(d). Site-specific testing has established that Site soils with nitrate concentrations below the CUL should not leach to groundwater above the groundwater nitrate CUL. The ammonia CUL of 385 mg/kg has been established based on the MTCA Method B for protection against acute vapor health effects for a construction worker.

The Site CAP has established the point of compliance (POC) for soil pursuant to WAC 173-340-740(6). The POC is defined as the soil overlying groundwater at the Site. For the purposes of the shallow soil excavation cleanup action, excavation areas will be extended to the first indication of the saturated zone, where necessary, based on the excavation design in **Section 3.6.1**. Based on groundwater gauging conducted at the Site since 2005, the groundwater table can fluctuate up to 2.5 feet within each well depending on the season and recent precipitation. During Site preparation and just prior to initiating excavation activities, the monitoring wells on-site will be gauged and the data will be used to generate a map estimating the depth of the current groundwater table. This map will then be used as a guide during the excavation of soil to anticipate where the saturated zone will first be encountered.

The *Additional Soil Delineation Work Plan*, dated February 20, 2013 (Stantec, 2013), established exceedances of Site-specific soil criteria for nitrate and ammonia are defined as follows:

- Exceedances of Site-specific soil criteria for nitrate (where more than one depth has been sampled at a single borehole location) are defined as either: 1) the average of the samples at all depths within a single borehole location is above the CUL of 220 mg/kg; or 2) the deepest sample depth above the historical high groundwater table (as estimated based on measurements collected from Site groundwater monitoring wells since Third Quarter 2005) exceeds the CUL of 220 mg/kg. Borehole locations that have at least one sample exceeding the nitrate CUL, but have an average nitrate concentration below 220 mg/kg and where the deepest sample depth above the historical high groundwater table is below the nitrate CUL will not be defined as nitrate exceedances.
- Exceedances of Site-specific soil criteria for ammonia are defined as ammonia concentrations in soil above the CUL of 385 mg/kg.

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2.2.3 Summary of Soil Delineation Investigations

Upon completion of the CAP by Ecology, Stantec began an evaluation of the previous soil investigation data for exceedances of the Site CULs for nitrate and ammonia. These previous data were used to establish soil investigation areas where historic data indicated soils exceeding the nitrate and ammonia CULs were present. Based on those data, additional soil sampling was proposed to either resample locations where older data had not been verified by more recent sample analyses or to fill in gaps in the horizontal and vertical profile of the soils in those areas. This soil sampling was conducted as part of the additional soil delineation investigation and the results are summarized in the *Additional Soil Delineation Documentation Report* submitted as Appendix B of the EDR.

Excavation limits have been set where analytical soil data indicate nitrate and/or ammonia soil concentrations do not exceed the Site-specific criteria as defined in **Section 2.2.2**, where practicable (i.e., excavations will not extend off-property or under buildings). Because nitrate and ammonia exceedances cannot necessarily be visually identified, soil samples have been used to determine prescribed excavations with defined horizontal and vertical limits before initiating excavation activities. With this approach, confirmation sidewall and floor sampling will not be conducted in each excavation. Instead, the soil data collected during previous investigations and the pre-excavation delineation proposed in the EDR will serve as the verification samples. This approach has been selected because this is an operating facility. Utilizing pre-excavation verification sampling will eliminate the time spent waiting for confirmation sample results, thereby limiting the time the excavations are open, limiting the downtime of the construction activities, and limiting the disruption to the commercial activities at the Site.

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3.0 Shallow Soil Excavation Activities

The following sections describe the work activities that will be performed as part of the shallow soil corrective action. Additional details are provided in the construction specifications included as **Appendix A**.

3.1 PRE-FIELD ACTIVITIES

3.1.1 Access Agreements

Stantec will ensure that access agreements are established between CEMC, ARC, and the current property owners prior to commencing any on-site work. Once the EDR and CPS are approved by Ecology, a rough schedule of field activities and the locations of excavation areas, staging areas, and access requirements will be communicated to the property owners, so these areas can be cleared of obstacles. The property owners will be contacted by Stantec as necessary to discuss the status of the affected areas. Any Site visits (e.g., groundwater monitoring events) will also be used to reconnaissance the affected areas. Contractors will not be allowed to mobilize to the Site until the affected areas are cleared, unless an agreement has been accepted by all parties for the selected construction contractor (Contractor) to clear the areas. A final schedule of field activities will be communicated to the property owners a minimum of 20 days prior to field activities in order to minimize potential disruptions to normal Site activities.

Access and work activities conducted on the affected properties will be limited by the scope of work presented in the EDR and CPS, unless otherwise determined and agreed upon by all parties.

3.1.2 Utility Status

Both a public and private utility locate were performed during the additional soil delineation investigation, and the utility markings were surveyed. Overhead utility lines were also surveyed during these field activities. Known utilities are shown on **Figure 2**.

Overhead utility lines and underground electrical and water lines will affect excavation activities at several locations within the Bee-Jay Scales property. No utilities were found on the parcel owned by Western General Land within the Area 6 excavation area. The status of the utility lines east of the Bee-Jay Scales gate is unknown. The Contractor will work with the property owners and utility companies to determine the status of the utilities located during the additional soil delineation investigation. Once the status of the utility lines is determined, the Contractor will work with local utilities as necessary to prepare plans to disconnect, excavate, remove, abandon, and/or work around the utilities, as necessary, as part of the shallow soil excavation

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activities. The Contractor will also be responsible for addressing any unknown utilities that are uncovered.

3.1.3 Permitting

All work conducted during the field activities will be performed in accordance with all applicable federal, state, and local regulations, which include, but are not limited to, OSHA standards, storm water pollution regulations, and air pollution regulations. Several local compliance and permitting requirements that are applicable for the shallow soil excavation phase of the CAP have been addressed by Stantec in preparing the CPS and are detailed below. The Contractor will be responsible for all other necessary permits to perform this scope of work.

City of Sunnyside Excavation/Grading Permit

Based on conversations with the City, the planned soil cleanup action will require an excavation/grading permit through the Building Division. The permit application requires information including, but not limited to: the Contractor and engineering company information; a description of the planned work; and the affected soil volumes. In addition to the completed permit application, a Yakima Regional Clean Air Agency (YRCAA)-approved dust control plan and a copy of the construction work plans must be submitted for the project.

Stantec has discussed the proposed shallow soil excavation activities with the City and has incorporated their suggestions into the CPS. Because the City wants to review the construction plans as part of the permit application, Stantec will submit the permit application after any Ecology comments have been incorporated into the CPS.

Once the permit application is submitted to the City it will be valid for 6 months. Stantec will request a renewal of the excavation/grading permit at least 15 days prior to the end of this 6-month period, and will notify the City at least 15 days prior to the start of the shallow soil excavation activities.

Erosion and Sediment Control Plan

Pursuant to Sunnyside Municipal Code (SMC) 15.54, an erosion and sediment control (ESC) plan must be submitted to and approved by the City Public Works Department for the shallow soil excavation activities. The ESC plan requires project information including, but not limited to: a description of the property involved; a general description of the project; and a description of the ESC measures to be implemented.

Stantec prepared the Site Storm Water Pollution Prevention Plan (SWPPP) to address the City requirements. Stantec has received approval for the SWPPP from the City Public Works Department superintendent. A copy of the SWPPP is included in **Appendix B**.

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Dust Control Plan

Pursuant to Regulation 1 of the YRCAA and as part of the requirements for the City excavation/grading permit, a project dust control plan must be submitted to and approved by the YRCAA for the shallow soil excavation cleanup action. The project control plan requires information including, but not limited to: the preventative dust control measures to be implemented; a description of the contingency measures to be enacted if the preventative measures are ineffective; and the contact information for the individual that can be contacted to mitigate any dust emissions.

Stantec has received approval from the YRCAA for the Site dust control plan. A copy of the permit application with the dust control plan and August 23, 2013 approval letter is included in **Appendix C**. Because the dust control plan was submitted more than 6 months prior to the anticipated project start, the YRCAA will be notified and any necessary project contact information updated at least 15 days prior to the project start date.

3.1.4 Storm Water Pollution Prevention Plan

Stantec has prepared a Site SWPPP detailing best management practices (BMPs) for storm water management, which is included as **Appendix B**. Because the total area that will be cleared, graded, excavated, or otherwise disturbed will be less than 1 acre, this SWPPP will not require coverage under the Washington Construction Stormwater General Permit (CSWGP) or the City Storm Water Construction Regulation (SMC 15.54A). However, the Site SWPPP has been submitted to the City to fulfill the requirements for an erosion and sediment control plan pursuant to SMC 15.54.

The selection of BMPs for construction storm water management on-site conforms to the requirements of the *Stormwater Management Manual for Eastern Washington* (Ecology, 2004). The BMPs that may be used by the Contractor during the Site construction activities include:

- Delineation of clearing and excavation limits;
- Controlled vehicle access to the Site limited to one paved access point for each parcel;
- Sequencing construction activities to limit the duration of open excavations and soil stockpiles;
- Use of grading and berms to route storm water runoff around open excavations;
- Soils will not remain exposed and unworked for more than:
 - 15 days from October 1 through June 30; or
 - 30 days from July 1 through September 30.

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- Covering soil stockpiles with plastic before forecasted rainfalls with the potential to create runoff;
- Installation of straw wattle or silt fence around disturbed areas and/or at the down-gradient property boundary;
- Installation of drain inserts at storm water catch basins on North 1st Street and Warehouse Avenue; and
- Placement of gravel as permanent stabilization after the completion of construction activities in an area.

Any implemented BMPs for storm water management will be inspected by Stantec at least weekly and within 24 hours of any rainfall event that results in greater than 0.25 inches of rain in a 24-hour period for the duration of the excavation activities.

3.1.5 Spill Prevention, Control, and Countermeasure Plan

Stantec has reviewed the requirements for developing a Spill Prevention Control and Countermeasure (SPCC) plan for the Site per 40 CFR 112. Based on the currently planned activities, a SPCC plan is not necessary.

The Contractor must have spill cleanup measures in place as well as containment and other countermeasures that will prevent spills from being released. At a minimum, the Contractor will provide secondary containment around all temporary ASTs or containers for the duration of the project. Specific spill containment plans will be developed by the Contractor for the draining of any underground pipelines discovered during excavation activities. The Contractor will also have spill kits available on-site for use during fueling and maintenance activities or emergency spills.

All efforts will be made by the Contractor to not spill fuel or other fluids while fueling or performing maintenance on equipment. Safety measures to be enacted include but are not limited to: performing daily inspections of equipment, having absorbent pads available and placing absorbent pads at the most probable locations that fluid will spill or pool during fueling and maintenance; and ensuring that two persons are included in fueling or maintenance operations.

If fuel, oil, hydraulic fluid, or similar is released to the ground surface, immediate response is required by the Contractor. Soils affected by the release will be excavated and placed into empty drums. Excavation of soils will continue until indication of the spill is no longer visible and Stantec personnel have confirmed that the spill has been sufficiently addressed. Soil, absorbent pads, and other items impacted by fuel will be contained in drums until an approved waste profile is prepared. Drums will be hauled off-site and disposed by a licensed waste hauler. The Contractor will be responsible for all waste coordination associated with any spill.

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3.1.6 Health and Safety Plan

All of the entities involved in this project consider health and safety to be the most important aspect of this work. Stantec will update the existing Site-specific HASP to address the shallow soil excavation activities detailed in this report. The Site-specific HASP will outline potential hazards to Stantec field personnel during the field activities described herein and the steps that will be taken to mitigate risk. Job safety analyses (JSAs) for tasks to be performed by Stantec personnel will be included. The Site-specific HASP will also include required personal protective equipment to be worn by all Stantec field personnel for each task. In addition, Stantec will produce a Journey Management Plan (JMP) in an attempt to prevent losses associated with motor vehicle incidents. This HASP will be submitted to Ecology by February 4, 2014 pursuant to the CAP implementation schedule (**Figure 7**). A copy of Stantec's Site-specific HASP and JMP will be available on-site during all field activities.

The Contractor will also develop a Site-specific HASP and JSAs for tasks applicable to their work. The Contractor's HASP and JSAs will also be available on-site.

Health and safety guidance and policies for CEMC and ARC must be considered in the development of the HASPs and JSAs.

3.2 MOBILIZATION AND SITE PREPARATION

Mobilization and Site preparation include the transport of project support and construction equipment to the Site and ensuring safe access to excavation areas and staging areas.

Site preparation activities will be conducted concurrently with the mobilization of construction equipment. Site preparation activities for the shallow soil excavation will include, but are not limited to, the following:

- Identify the job trailer location and source of power;
- Install temporary fencing to secure the Site perimeter from unauthorized entry;
- Conduct a Site walk to identify, mitigate, or barricade possible hazards before starting field activities;
- Install signage on the perimeter fencing and within the Site to communicate hazards;
- Perform a public and private utility locate;
- Ensure excavation areas, staging areas, and access routes are free of obstructions associated with the current commercial activities;

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- Perform a Site topographic survey of the existing grade and extents of any materials that may need to be replaced (e.g., asphalt, gravel roads, etc.) and document on a figure for reference during backfill and Site restoration activities;
- Gauge Site monitoring wells and generate a map estimating the depth of the current groundwater table for use as a guide during soil excavation activities;
- Install erosion control measures; and
- Establish necessary traffic control and haul routes for truck traffic. Designate equipment and material staging areas as necessary.

3.2.1 Site Access and Security

The excavation areas on the Bee-Jay Scales parcel are enclosed by an existing perimeter fence with a single accessible gate located off of North 1st Street. This gate will be locked at the end of each work day to prevent entry during non-working hours. The location of existing fence is shown on **Figure 2**.

The portion of the Western General Land parcel containing Area 6 is mostly enclosed with a perimeter fence. However, there is access through an opening in the fence east of the Site boundary. As a result, the Contractor will install temporary fencing to keep unauthorized personnel and the general public out of the work area. An access gate will also be required within this temporary fencing to allow access by Site vehicles, equipment, and haul trucks. This fencing must be free standing, at least 8 feet tall, and chain link or similar. The access gate will be at least wide enough to allow two-way truck traffic and shall be lockable to prevent entry to the Site during non-working hours. A conceptual location for the temporary fencing and gate is shown on **Figure 2**.

Following the installation of the temporary fencing in the Western General Land parcel, it is anticipated that a section of fence dividing the Bee-Jay Scales and Western General Land parcels will be removed so that construction equipment will have access to both parcels.

Additionally, orange construction/snow fencing will be used to delineate exclusion zones, delineate excavations, and provide visual cues to dangerous areas.

No unauthorized personnel will be allowed entry to the Site during working or non-working hours. All workers and authorized visitors must sign-in and sign-out during each visit to the Site. Personnel associated with the on-site commercial trucking activities will be granted access to the Site without needing to sign in, but will be escorted by project personnel while on-site. Bee-Jay Scales personnel that need access to the Site during working hours will need to sign-in and sign-out and will not be permitted into exclusion zones. The Contractor shall provide personnel at each open entry location to maintain worker and visitor logs including the name, company, time entering the Site, and time exiting the Site for each worker and visitor. The Contractor shall

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provide a security guard during non-working hours to protect the temporary office trailers and equipment from vandalism and/or theft.

3.2.2 Temporary Facilities

The Contractor will provide a job trailer large enough to accommodate all of their field staff and subcontractor personnel working at the Site. This trailer will also be used for daily safety and production meetings and will be large enough to accommodate all Site workers, supervisors, oversight personnel, and visitors temporarily for those meetings. The job trailer may also be used for periodic Site update meetings with regulatory agency representatives. It is anticipated that this job trailer will have approximate dimensions of 30 feet by 10 feet. In addition to office and meeting space, the Contractor will also provide a separate job trailer for the Stantec field personnel with approximate dimensions of 20 feet by 10 feet.

The job trailers will be used to provide a place for workers to take a break from the cold and hot weather; therefore, the trailers will be heated and air conditioned. The Contractor will coordinate providing a temporary electrical drop for the trailers. The Contractor will provide adequate sanitary facilities for all workers on-site in accordance with all local codes. The proposed location of the trailers is shown on **Figure 2**. The property owner has agreed to clear this area for project trailers and parking. The exact location of the trailers will be determined during the Site preparation activities.

3.2.3 Locate Utilities / Identify Activity

At least 48 hours prior to initiating any intrusive Site work, Washington's Northwest Utility Notification Center (1-800-424-5555) will be notified by the Contractor. Per the current dig law, Revised Code of Washington (RCW) 19.122.030, the utility locate expires 45 days after the notification to the locate service. If excavation activities will continue beyond this expiration, additional notifications will be made. In addition, the Contractor will hire a private utility locate service prior to intrusive construction activities for the affected areas of the Site. Utility locations marked by the public and private locate services will be surveyed by Stantec before the marks can be obscured.

It is expected that unknown underground utilities will be encountered, including PVC lines. The Contractor will be responsible for daylighting all underground utilities and determining if they are active or inactive. All unknown underground utilities that are encountered shall be assumed to be active until they can be confirmed as inactive. The discovery of unknown utility lines or piping during excavation activities will require work to stop in that area until the status of the line can be confirmed. If possible, equipment and personnel can be directed to a different location or to a different scope of work while unknown utilities are investigated. However, if other areas or tasks are not available, a Site-wide stop work may be issued.

The locations of some utilities are indicated on the figures; however, these locations are approximate and must be verified in the field by the Contractor.

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3.3 PRE-EXCAVATION DELINEATION SOIL SAMPLING

Stantec will advance three pre-excitation delineation boreholes within the Area 5 East excavation limits as detailed in **Section 3.6.1**. The planned borehole locations are designated A5E-DB-02a, A5E-DB-07b, and A5E-DB-07c. The pre-excitation borehole locations are shown on **Figure 5** and the details for the sampling are shown on **Table 1**.

Each of the pre-excitation delineation borehole locations is described below:

- Borehole A5E-DB-02a is proposed as a 10-foot step-out location to the west of A5E-DB-02. The borehole would be sampled for nitrate at depths of 2, 4, 6 and 8.5 feet bgs.
- Borehole A5E-DB-07b is proposed as a 10-foot step-out location to the north of A5E-DB-07. The borehole would be sampled for nitrate at a depth of 9 feet bgs.
- Borehole A5E-DB-07c is proposed as a resample of the A5-SS-001 location. The borehole would be sampled for nitrate and ammonia at depths of 1 and 3 feet bgs, and for nitrate only at depths of 5 and 7.5 feet bgs.

The pre-excitation delineation samples will be collected by Stantec using the sampling and analysis procedures detailed in the *Additional Soil Delineation Work Plan* (Stantec, 2013). The boreholes will be advanced and sampled during the Site preparation activities, so that results can be reviewed prior to starting the Area 5 East excavation.

The boreholes will be advanced using a hand auger. Soil from each borehole will be visually inspected by the field personnel. Soil lithology will be logged using the Unified Soil Classification System (USCS) as a guide. Lithologic descriptions, including soil type(s), color, grain size/texture, and moisture content, and any additional observations will be recorded on boring logs.

Soil samples will be collected using a hand auger at the desired depth. Soil will then be placed in laboratory-prepared, unpreserved 125 milliliter (ml) glass jars (one per sample) using a clean disposable scoop. Soil should completely fill each jar before they are capped and labeled with their discrete borehole location and depth. The sample jars will be sealed in a plastic bag and placed in an iced cooler. The samples will be submitted to Eurofins Lancaster Laboratories (Lancaster) in Lancaster, Pennsylvania for analysis of nitrate by United States Environmental Protection Agency (EPA) Method 300.0 and/or ammonia by EPA Method 350.3. Following sampling, the boreholes will be decommissioned by sealing the borehole with hydrated bentonite chips and gravel or concrete, consistent with WAC 173-160.

The Contractor is not responsible for any activities associated with pre-excitation delineation soil sampling except disposal of the sample tailings with the other material to be disposed. This

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sampling activity is expected to produce approximately one 55-gallon drum of material to be disposed.

3.4 MONITORING WELL PROTECTION/DECOMMISSIONING

Two monitoring wells (MW-4 and MW-5) and four temporary injection wells (IW-1 through IW-4) near MW-4 will need to be decommissioned because they are in the planned excavation areas. The locations of the wells requiring decommissioning are shown on **Figure 3**. These wells will be decommissioned pursuant to WAC 173-160 by a licensed well drilling contractor subcontracted by Stantec. Wells will be decommissioned prior to excavation activities by withdrawing the well casing and filling the borehole with neat cement grout, neat cement, bentonite, or bentonite slurry as the casing is being withdrawn. Replacement of these monitoring wells is detailed in **Section 3.14**.

Additionally, a number of monitoring wells are located within the Site, but outside the limits of excavation. The Contractor must maintain the integrity of these monitoring wells throughout the project. The following activities will be conducted by Stantec prior to excavation activities to protect the monitoring wells:

- Identify monitoring wells to be protected;
- Familiarize construction crew with monitoring well locations;
- Apply high visibility marking paint to monitoring well protective cover for flush mount locations; and
- Install high visibility warning markers around each monitoring well location.

Once the above well protection activities are performed by Stantec, the Contractor is responsible for maintaining the well protections to ensure the well is not damaged. If a well is damaged, the Contractor will be responsible for repairing or replacing the well. Any well replacement must be performed in accordance with all applicable Ecology requirements.

Stantec must approve of the decommissioning of any well that is listed as protected.

3.5 CONCRETE, ASPHALT AND PIPING REMOVAL

Concrete pads, footers, asphalt surfaces, piping, fencing, and possibly other debris that is in the excavation areas will require removal by the Contractor before or during the excavation of soil. Other above-ground debris that is not related to former agricultural fertilizer activities will be cleared or disposed of by the current property owner prior to mobilizing to the Site unless other arrangements are agreed upon by all parties.

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3.5.1 Concrete Removal

The eastern portion of Area 1 within the Bee-Jay Scales parcel has several known concrete pads and footers including a large concrete pad where fertilizer applicator equipment was washed. It is estimated that there is a total volume of 100 cy of concrete requiring disposal or recycling. The concrete pad and footers will be broken up into manageable sections (less than 3 feet wide) by the Contractor and loaded to be hauled either to an approved concrete recycling facility or to an approved landfill facility. Depending on the facility taking the concrete, concrete without rebar may need to be segregated from any concrete containing rebar reinforcement. It is not anticipated that any of the removed concrete would require replacement.

3.5.2 Asphalt Removal

An asphalt surface covers most of the Area 6 excavation area within the Western General Land parcel. This asphalt will be removed by the Contractor and segregated for disposal at an approved construction debris recycling facility or approved landfill facility. It is estimated that there is a total volume of 60 cy of asphalt requiring disposal or recycling. The limits of the asphalt area to be removed will be saw-cut to provide a flush connection for the asphalt replacement once the excavation and backfill are completed.

3.5.3 Underground Piping Removal

There are indications that underground piping is present in the excavation areas, particularly in the Area 1 East excavation near the former lagoon and concrete pad. Both PVC and steel piping can be seen extending from the ground in this area. Additional unknown underground piping associated with former facility operations or utilities may be encountered in the excavation areas.

Where piping extends out of the ground in the excavation areas, the Contractor will determine the status of those pipes and mark them with high visibility paint or fencing during Site preparation activities. The Contractor will then excavate the overburden above and around those pipes during the excavation of those areas. All unknown piping discovered during excavation activities will be assumed to be active and all Remediation Parties-required procedures for excavating in the vicinity of active pipelines will be followed until the Contractor can confirm the status. If piping can be confirmed as inactive, the Contractor will remove the piping from the excavation areas. Piping will be assumed to be fully charged with unidentified liquids, and the Contractor will be required to safely capture and containerize any pipe contents prior to removal. If inactive piping extends beyond the limits of the excavation, the remaining piping will be abandoned in place and the pipe end capped with non-shrink cement slurry or grout.

Removed metal piping will be disposed of through an approved scrap metal recycler, if a sufficient quantity is generated. If not, it will be disposed of at an approved landfill as general debris along with any removed PVC piping. Any recovered liquid from Site piping will be

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collected and containerized by the Contractor and sampled by Stantec for characterization prior to off-site treatment and/or disposal.

3.6 EXCAVATION, BACKFILL, AND SOIL MANAGEMENT

Each excavation area will be advanced to the lateral and vertical extents described in the EDR and summarized in **Section 3.6.1**, or, where additional sampling is to be conducted, to the extent that those sample locations indicate no exceedances of Site-specific soil criteria. Stantec will identify the limits of the excavation areas with stakes and flagging, surface spray paint or other suitable visually identifiable markers. Based on previous soil investigation at the Site, the combined footprint of soils exceeding the Site-specific criteria is approximately 27,000 sf. An estimated soil volume of 6,250 cy will require excavation for off-site disposal as part of the CAP.

Analytical results from Site soil assessment and delineation sampling have been used to characterize the soil requiring removal as part of the Site CAP as non-hazardous waste and no additional characterization sampling will be needed. Soil that exceeds the Site-specific soil criteria will be hauled to the Waste Management Columbia Ridge Landfill in Arlington, Oregon (landfill). Soil must be free of all flowing material and capable of passing a paint filter test prior to transport off-site.

Excavated soil requiring off-site disposal will either be directly loaded to haul trucks or excavated and stockpiled if no trucks are present or if water drainage is required. The Contractor will verify that excavated soil is suitable for transportation to the landfill. Because excavations will not extend beyond the first indication of the saturated zone, limited water drainage is expected for excavated soils. Where stockpiles of excavated soil for disposal are implemented, the stockpiles will be maintained within the footprint of the excavation from which they were excavated and separated from any excavated soils to be used as backfill. Any stockpiles of soil requiring disposal will also be managed so that any contact water will drain into the excavation and not over the adjacent ground surface.

Excavations will require sloping or shoring. The Contractor will complete all excavations in accordance with OSHA Standards 29 CFR 1926.650 through 1926.652 and any other relevant federal, state, and local requirements. In most cases, sloping will be utilized to maintain sidewall integrity. Where Site personnel will not be entering excavations, excavation sidewalls will be sloped to prevent sloughing. If personnel must enter an open excavation, the sidewalls will be sloped to 1.5:1 in compliance with OSHA regulations. For the purposes of estimating excavated area and volumes associated with excavation sloping, slopes of 1:1 have been assumed, but actual excavation slopes will vary based on excavation depths and field conditions. In those areas where the excavation must be extended to buildings, property boundaries, or other obstacles, shoring may be used to maintain a secure sidewall while maximizing the removal of soil exceeding the Site-specific soil criteria. The use of excavation shoring is detailed in **Section 3.6.2**.

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The excavation areas will be backfilled to the existing grade using clean imported fill or excavated Site soil that meets the Site-specific criteria. Backfill will be placed into excavations in 1-foot loose lifts. Compaction will be applied to each lift by a vibratory drum compactor, where accessible, or a vibratory plate compactor attachment for a hydraulic excavator. Backfill requirements are described in greater detail in **Section 3.6.3**. In areas where gravel or asphalt surfaces will be replaced, the backfill will be finished below grade to allow for the placement of those materials. Gravel and asphalt placement is described further in **Section 3.13**.

Once excavations are completed to the design extents, a survey will be completed and photographs taken by Stantec to document the excavation prior to backfill. Larger excavations may be documented and approved for backfill in sections, so that portions can be backfilled while excavation continues in other portions. A grading survey will also be conducted by Stantec following the backfill of each excavation.

The sequence of the excavations will be determined by the Contractor and submitted to Stantec for approval. Excavation sequencing will consider: prevention of cross-contamination of cleaned backfilled areas; limiting the time that excavations are open; maintaining production rates; and maintaining Site access.

3.6.1 Excavation Areas

The excavation areas and soil depths exceeding the Site-specific criteria are shown on **Figure 3** through **Figure 6**. The excavation descriptions provided in the EDR, CPS, and design drawings reflect only the area and target depths of soil exceeding the Site-specific criteria as determined by the analytical results of soil sampling at the Site. For those areas where excavations will be extended to the first indication of the saturated zone, an average groundwater table depth was calculated from historical monitoring well data and used to estimate the volume of excavated soil. Actual excavation depths and volumes may vary based on the depth to the first indication of the saturated zone during the cleanup action.

Overlying soil that does not exceed the Site-specific criteria and soil that is excavated to safely slope these excavations may be segregated and reused as backfill; however, if segregation of soils is shown to take too much time or effort, the amount of soil that is segregated for reuse may be limited. In order to provide an estimate of overall excavation areas and volumes including sloped excavation areas to the Contractor and permitting authorities, all excavation sidewalls where excavation shoring is not anticipated to be used have been assumed to slope at 1:1. Excavated soil can be separated into three categories: soil exceeding the Site-specific criteria; overlying soil that does not exceed the Site-specific criteria; and soil that will be excavated to safely slope the excavations and that does not exceed the Site-specific criteria. The estimated areas and volumes associated with each of the eight excavation areas have been summarized in **Table 2**.

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It is possible that soil that does not exceed the Site-specific criteria will be loaded for off-site disposal, because separating it is not feasible, would create an unsafe condition, or would cost more in construction expenses than the disposal expenses. These determinations may be made during final project planning once the Contractor is selected or in the field during the implementation of the shallow soil excavation corrective action. The excavation and segregation of Site soil will be continuously monitored by Stantec. Final determinations regarding segregation will be made by Stantec after consulting with the Contractor.

Area 1 West Excavation

The Area 1 West Excavation will be conducted around 11 borehole locations in the south-central portion of the Site as shown on **Figure 3**. The purpose of this excavation is to remove soil exceeding the Site-specific nitrate and ammonia criteria. Based on previous soil investigations, the footprint of soil exceeding the Site-specific criteria is an irregularly shaped area of approximately 5,150 sf. Sample results show several areas where exceedances are constrained to specific soil layers, and the excavation area has been divided into four sections based on the different depths of soil that must be excavated for off-site disposal. Where sample results indicate soils that meet the Site CULs overlay soil exceeding the Site CULs, the overlying soil may be excavated for reuse as backfill. Approximately 1,225 cy of soil from this excavation area will require removal for off-site disposal.

Excavation shoring, as described in **Section 3.6.2**, is anticipated to be used at the southern extent of this excavation (at the southern property boundary) and along the western extent of this excavation adjacent to the former fertilizer building as shown on **Figure 3**. Where excavation shoring is not utilized, additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation. The soil excavated to slope the excavation outside of the footprint defined above can be reused as backfill.

Area 1 East Excavation

The Area 1 East Excavation will be conducted around 24 borehole locations in the southeastern portion of the Site as shown on **Figure 3**. The purpose of this excavation is to remove soil exceeding the Site-specific nitrate and ammonia criteria. Based on previous soil investigations, the footprint of soil exceeding the Site-specific criteria is an irregularly shaped area of approximately 13,100 sf. Sample results show several areas where exceedances are constrained to specific soil layers, and the excavation area has been divided into seven sections based on the different depths of soil that must be excavated for off-site disposal. Where sample results indicate soils that meet the Site CULs overlay soil exceeding the Site CULs, the overlying soil may be excavated for reuse as backfill. Approximately 3,075 cy of soil from this excavation area will require removal for off-site disposal.

Excavation shoring, as described in **Section 3.6.2**, is anticipated to be used at the southern extent of this excavation area (at the southern property boundary) as shown on **Figure 3**.

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Where excavation shoring is not utilized, additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation. Soil excavated to slope the excavation outside of the footprint defined above can be reused as backfill.

Area 2 Excavation

The Area 2 excavation will be conducted around borehole location B-13 as shown on **Figure 4**. The purpose of the excavation is to remove soils exceeding the Site-specific criteria for nitrate. Based on previous soil investigations, the footprint of soil exceeding the Site-specific criteria is approximately 18 feet by 13 feet, extending from the ground surface to a depth of 6 feet bgs. Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation with the exception of the west sidewall. The western limit of the excavation, defined by A4-SB-005, will mark both the sloped and delineation limit of the excavation. The sidewall is planned to slope at 1:1 from that extent to the target depth of 6 feet bgs. Approximately 45 cy of soil from this excavation area will require removal for off-site disposal. Soil excavated outside of this area to safely slope the excavation to the north, east, and south can be reused as backfill.

Area 4 Excavation

The Area 4 excavation will be conducted around borehole locations A4-SB-002, A4-DB-01b, and A4-DB-02 as shown on **Figure 4**. The purpose of the excavation is to remove soil exceeding the Site-specific criteria for ammonia. Based on previous soil investigations, the footprint of soil exceeding the Site-specific criteria is approximately 19 feet by 17 feet. The northeast portion of the excavation will extend from the ground surface to a depth of 4.5 feet bgs and the remainder of the excavation will extend from the ground surface to a depth of 2.5 feet bgs. Approximately 40 cy of soil from this excavation area will require removal for off-site disposal. Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation and can be reused as backfill.

Area 5 West Excavation

The Area 5 West excavation will be conducted around borehole locations A5-SS-003 and A5W-DB-02a as shown on **Figure 5**. The purpose of the excavation is to remove soil exceeding the Site-specific criteria for nitrate. Based on previous soil investigations, the footprint of soil exceeding the Site-specific criteria is approximately 23 feet by 13 feet, extending from the ground surface to a depth of 4.5 feet bgs.

Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation with the exception of the west sidewall. The west delineation, defined by B-1, will mark both the sloped and delineation limit of the excavation. The sidewall is planned to slope at 1:1 from that extent to the target depth of 4.5 feet bgs. All soil excavated from this defined excavation area, approximately 45 cy, will require off-site disposal. Soil will be

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excavated outside of this area to slope the excavation to the north, east, and south and can be reused as backfill.

Underground water and electric utility lines were identified within the proposed Area 5 West excavation area during the private utility locate for the additional soil delineation investigation in March 2013. If the utility status investigation described in **Section 3.1.2** determines that those lines are in use, the excavation footprint or depth detailed above may be altered near the utilities to maintain safe clearance.

Area 5 East Excavation

The Area 5 East excavation will be conducted around nine borehole locations in the north-central portion of the Site as shown on **Figure 5**. The purpose of this excavation is to remove soil exceeding the Site-specific nitrate and ammonia criteria. Based on previous soil investigations, the footprint of soil exceeding the Site-specific criteria is an irregularly shaped area of approximately 3,200 sf. Sample results show several areas where exceedances are constrained to specific soil layers, and the excavation area has been divided into six sections based on the different depths of soil that must be excavated for off-site disposal. Where sample results indicate soils that meet the Site CULs overlay soil exceeding the Site CULs, the overlaying soil may be excavated and reused as backfill. Approximately 645 cy of soil from this excavation area will require removal for off-site disposal. Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation and can be reused as backfill.

The pre-excavation delineation soil sampling detailed in **Section 3.3** may change the excavation area, change the target depths, or change the volume of soil excavated from the Area 5 East excavation prior to the start of excavation activities.

Area 5 South Excavation

The Area 5 South excavation will be conducted around borehole locations B-6 and A5S-DB-03 as shown on **Figure 5**. The purpose of this excavation is to remove soil exceeding the Site-specific nitrate criteria. Based on previous soil investigations, the footprint of soil exceeding the Site-specific criteria is approximately 26 feet by 17 feet. Sample results show several areas where exceedances are constrained to specific soil layers, and the excavation area has been divided into three sections based on the different depths of soil that must be excavated for off-site disposal. Where sample results indicate soils that meet the Site CULs overlay soil exceeding the Site CULs, the overlaying soil may be excavated and reused as backfill. Approximately 90 cy of soil from this excavation area will require removal for off-site disposal. Additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation and can be reused as backfill.

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Area 6 Excavation

The Area 6 Excavation will be conducted around 12 borehole locations in the southeastern portion of the Site as shown on **Figure 6**. The purpose of this excavation is to remove soils exceeding the Site-specific nitrate and ammonia criteria. Based on previous soil investigations, the footprint of soil exceeding the Site-specific criteria is an irregularly shaped area of approximately 4,200 sf. Sample results show several areas where exceedances are constrained to specific soil layers, and the excavation area has been divided into six sections based on the different depths of soil that must be excavated for off-site disposal. Where sample results indicate soils that meet the Site CULs overlay soil exceeding the Site CULs, the overlaying soil may be excavated and reused as backfill. Approximately 1,085 cy of soil from this excavation area will require removal for off-site disposal.

Excavation shoring, as described in **Section 3.6.2**, is anticipated to be used at the eastern extent of this excavation area (at the eastern property boundary) as shown on **Figure 6**. Where excavation shoring is not utilized, additional soil will be excavated beyond the horizontal delineation described above to safely slope the excavation. Soil excavated to slope the excavation outside of the footprint can be reused as backfill.

3.6.2 Excavation Shoring

Excavation shoring is anticipated to be used in excavations along the property boundaries and adjacent to buildings as shown on **Figure 2**, **Figure 3**, and **Figure 6**. The process by which the excavations will be completed is to be determined by the Contractor with approval from Stantec, adhering to any shoring guidelines provided by the Remediation Parties. It is anticipated that shield shoring, also referred to as trench box shoring, will be utilized where excavation boundaries are adjacent to the property boundaries. Any shoring system proposed by the Contractor must be detailed in writing in the proposal and shop drawings stamped by a professional engineer registered in the State of Washington, and must be provided to Stantec for approval prior to initiating work. The shield shoring system will be installed and maintained to minimize lateral soil creeping adjacent to active rail tracks and at the property boundary.

In excavation areas along building foundations, it is anticipated that trench box shoring or slot trenching may be utilized to prevent lateral soil creeping in the vicinity of foundations. During slot trenching, a series of small excavations are performed along the building foundation and immediately backfilled with flowable fill. Each trench segment would be approximately 3 feet wide by 6 feet long perpendicular to the building orientation. Additional adjacent slot trenches would only be advanced after the previous backfill has been allowed to cure. Therefore, every third segment would be excavated, backfilled, and allowed to cure for a day before additional slot trenching will be advanced in the area.

If Site soils do not allow for vertical excavation or if foundation orientations are found that allow it, trench box or other shoring methods may also be utilized adjacent to existing buildings. In

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the event that physical shielding is used to shore excavations adjacent to buildings, specific methods to prevent soil creep or foundation strain will be developed and implemented. Stantec and the Contractor will discuss these options prior to advancing excavations in these areas.

3.6.3 Backfill Requirements

Imported material used to backfill the excavated areas will need to meet the soil standards for unrestricted land use pursuant to WAC 173-340-740 and be capable of meeting the compaction requirements for the Site. Stantec will obtain representative samples from the proposed borrow source to:

- Generate analytical data that demonstrates that the material meets the standards for unrestricted land use and does not contain constituents of concern in excess of the Site CULs; and
- Provide geotechnical data that demonstrates the material is suitable for use as backfill at the Site.

Excavated Site soil that meets the Site-specific criteria as described in **Section 2.2.2** will be sampled by Stantec to generate geotechnical data for use during compaction performance monitoring.

Approved backfill material will be placed to excavations in 1-foot loose lifts. Compaction will be applied to each lift by a vibratory drum compactor, where accessible, or by a vibratory plate compactor attachment for a hydraulic excavator. Backfill will be compacted to meet or exceed the 90% maximum compaction specification based on a Modified Proctor unless otherwise specified. Compaction performance monitoring will be performed by Stantec on each lift by nuclear densitometer except in instances where:

- It is unsafe to have personnel access the confined space of a deep excavation (greater than 4 feet bgs and not properly sloped); or
- The compaction specification is determined to be unattainable due to the lift's proximity to the saturated zone.

In these instances, the Contractor will conduct the compaction efforts under the supervision of Stantec. Compaction will continue until Stantec deems the lift is compacted to the 90% maximum density specification, or, for lifts near the saturated zone, no further compaction is achievable. If subsequent overlying lifts which are accessible for performance monitoring do not meet the compaction specification, the backfill will be removed, reinstalled, and re-compacted to meet specifications. When backfilling excavations near the saturated zone, it may be determined by the Contractor and Stantec that one or more lifts of pea gravel will be used to stabilize the backfill. If pea gravel is used as backfill, it will be installed by the Contractor to the same requirements as other backfill materials.

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3.6.4 Haul Truck Management

Haul trucks will be contracted by Stantec through Waste Management for the transport of excavated soil requiring off-site disposal and for the delivery of clean import fill material. Stantec will ensure that each truck hauling impacted soil from the Site will have a completed waste manifest and/or bill of lading. Where additional trucking services are required (e.g., for the delivery of gravel or to remove construction demolition material for recycling) they will be arranged by the Contractor.

Site contaminants are limited to inorganic compounds (nitrate and ammonia) and Site soils are granular. As a result, very limited contamination of the truck beds is expected following the disposal of excavated soil. Therefore, following disposal, haul trucks may be directed to the import fill source facility to back-haul clean fill material for delivery to the Site whenever practicable. This will reduce transportation costs, reduce greenhouse gas emissions, and reduce traffic to the Site.

The determination of when haul trucks will back-haul clean fill material following off-site disposal of Site soil will be made by the Contractor with approval from Stantec based on factors including:

- Need for backfill soil;
- Haul trip times;
- Site work schedule; and
- Import soil facility hours.

3.7 CONSTRUCTION WATER MANAGEMENT AND TREATMENT

Excavations will not be advanced beyond the first indication of the saturated zone. Therefore, excavation dewatering is not expected to be necessary. In addition, the Sunnyside area climate is generally dry with the average annual rainfall of less than 8 inches. Granular Site soils will allow typical rain events to infiltrate the soil quickly and limit possible downtime due to storm water without any dewatering efforts. However, heavier precipitation events could require dewatering of storm water from open excavations (24-hour rainfall record of 1.6 inches).

The Contractor will perform work activities to limit the amount of water generated in excavations by implementing BMPs such as scheduling and sequencing work to limit the size of open excavations, backfilling excavations as soon as practical, and preventing surface runoff from entering excavations using grading and/or berms. Particular care will be taken with these BMPs when the weather forecast includes significant rainfall.

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The Contractor will provide at least 2,000 gallons of water storage capacity either on-site or readily available locally for the contingency collection of water from open excavations.

Water may also be generated during the removal of underground pipelines within the excavation areas. The Contractor will be required to drain, collect, and containerize the contents of any pipelines prior to removal. Unanticipated fluids discovered in underground piping (e.g., petroleum product) shall be segregated into separate containers from construction water. Fluids generated from pipelines will be collected in 55-gallon drums, a tank, or a vacuum truck depending on the volume generated. Water will also be generated during decontamination activities on-site and will require collection and disposal. Wet equipment decontamination is anticipated to be limited to equipment demobilization from the Site and will be conducted by the Contractor with pressure washers with flow rates less than or equal to 6 gallons per minute (gpm) to reduce the volume of water generated. The water will be contained within the decontamination pad liner during active decontamination and pumped either to 55-gallon drums, a tank, or a vacuum truck depending on the volume generated.

Water that is collected during shallow soil excavation activities will not be discharged to any storm sewers, ditches, ground surface, or open excavations on or adjacent to the Site. All collected water will be containerized by the Contractor and sampled by Stantec for characterization prior to disposal at a licensed off-site facility.

3.8 EQUIPMENT DECONTAMINATION

It is anticipated that construction equipment will only require dry decontamination until it is demobilized from the Site for maintenance or project/task completion. Equipment contacting impacted soil will be dry decontaminated by the Contractor within that excavation area before leaving that area. The decontamination will require the removal of any substantial soil buildup from the tracks, wheels, bucket, blade, etc. Dry decontamination will only be conducted with tools such as shovels and brushes, and not with pressurized air, to limit the generation of dust.

Before equipment is demobilized from the Site for any reason, it will go through a water-assisted decontamination procedure by the Contractor utilizing pressurized water on a decontamination pad.

A decontamination pad will be constructed by the Contractor for decontamination of Site personnel and equipment during construction activities. The decontamination pad is planned to be constructed near the existing carport on the Bee-Jay Scales parcel (roughly between the Area 4 and Area 5 West excavations), pending approval from the property owner, as shown on **Figure 2**. The decontamination pad must accommodate steam-assisted, water-assisted, and dry decontamination of equipment, as well as cleaning of rubber-tired and track-mounted equipment, as needed. The design of the decontamination pad will need to account for any sediment generated by the water-assisted decontamination process, and the Contractor will be responsible for handling the sediment. The design of the decontamination pad will be

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performed by the Contractor, and will be approved by Stantec, to meet the requirements of the Site. The Contractor will obtain approval for the proposed decontamination facilities prior to ordering any supplies for its installation.

To ensure the decontamination pad maintains the ability to contain decontamination water and residuals, the liner system will be inspected regularly and repaired as necessary by the Contractor during decontamination activities. A repair kit will be used to repair small tears or punctures; repair panels will be required to repair larger breaches.

3.9 DUST MANAGEMENT

A project dust control plan has been submitted to and approved by the YRCAA. Since the project start date is not currently known, Stantec will notify the YRCAA at least 15 days prior to the start of any construction activities. The dust control plan focuses on prevention, rather than mitigation. The BMPs expected to be implemented by the Contractor during the Site construction activities include:

- Construction access:
 - Site access will be limited to two points with paved (asphalt or concrete) or gravel approaches of approximately 150 and 200 feet, respectively.
- Controlled excavation, backfilling, and stockpiling:
 - Limiting soil handling on-site;
 - Excavated soil requiring disposal will be directly loaded to haul trucks whenever practicable;
 - Open excavations will be backfilled as soon as practicable once the predetermined horizontal and vertical limits have been achieved;
 - Clean off-site backfill soil will be unloaded directly into excavations whenever practicable;
 - Excavation areas where backfill has been completed will have permanent stabilization installed as soon as possible;
 - As is practicable, soil stockpiles will only be implemented temporarily and will be removed before the end of each work day; and
 - Soil stockpiles that will remain in place for a forecasted sustained wind speed of 30 mph or greater will be wetted to minimize airborne particulates or covered with plastic.

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- Haul truck management:
 - When possible, haul trucks that are used for the off-site disposal of excavated Site soils will backhaul the clean backfill soil from the source facility, which will reduce the truck traffic on-site;
 - Truck traffic will utilize the existing gravel road on the Bee-Jay Scales parcel whenever practicable;
 - Haul trucks will only drive on undisturbed ground, disturbed impacted soil covered with temporary or permanent stabilization of aggregate rock or equivalent, or backfill material where it will not exceed particulate action levels;
 - An on-site speed limit of 10 mph will be implemented; and
 - All trucks hauling material will utilize a tarp to cover the load.
- Regular air monitoring of particulates in work areas and at the downwind Site boundary to prevent exceedances of the action level established in the Site protection compliance monitoring and HASP.

Where these BMPs are unable to maintain airborne particulate levels below the Site action levels, the following contingency measures will be available for implementation by the Contractor:

- Use of a water truck to apply water to Site haul routes; and
- Use of a manual water applicator to apply water to excavated soil, soil stockpiles, and other areas that are inaccessible to a water truck.

3.10 STREET MAINTENANCE

As stated in City Ordinance 8.08, “No person shall drive or move any truck or other vehicle within the City unless such vehicle is so constructed or loaded as to prevent any load, contents, or litter from being blown or deposited upon any street, alley or other public place, nor shall any person drive or move any vehicle or truck within the City, the wheels or tires of which carry onto or deposit in any street, alley or other public place, litter or foreign matter of any kind [1956 Code § 8-501, § 8.]”. Therefore, no material from the Site will be permitted to remain on the sidewalks or streets adjacent to the property.

To minimize the tracking or dropping of material from haul trucks leaving the Site and to comply with City Ordinance 8.08, the following practices will be implemented by the Contractor:

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- Haul trucks will only drive on undisturbed ground, disturbed impacted soil covered with temporary or permanent stabilization of aggregate rock or equivalent, or backfill material where it will not exceed particulate action levels;
- Previously excavated and backfilled areas over which trucks must drive will be covered with at least 3 inches of aggregate;
- Loaded haul trucks leaving the Site will be inspected and swept or washed as needed to prevent loose debris, soil, or other materials from being released to roadways;
- Trucks will employ tarps to cover loaded soil, debris, or other materials;
- The asphalted areas leading out of the Site on the Bee-Jay Scales property and the Western General Land property will be regularly inspected by the Contractor for the buildup of Site materials. Where tracking of Site material is noted on these surfaces, the Contractor will wash the surfaces to prevent the continued tracking to the City sidewalks and streets and/or will increase the decontamination requirements of the trucks leaving the Site; and
- The public sidewalk and street at the active Site egress points will be inspected by the Contractor at least daily for Site materials. If Site materials are noted, the street and sidewalk will be cleaned by the Contractor using shovels and brooms or swept by a street sweeping company hired by the Contractor.

3.11 NOISE MANAGEMENT

Noise from excavation activities will typically not exceed current noise levels from street, railroad, and industrial activities in the area. General construction should not present significant concerns for the following reasons:

- If necessary, the on-site crew close to the operating equipment will have hearing protection provided in accordance with the HASP; and
- The project will use conventional equipment and vehicles that are typically used during any commercial development. Noise levels for the equipment and vehicles are typically about 100 decibels A-scale (dBA) or less at the source. The noise levels will decrease to less than 80 dBA at approximate distances greater than 20 feet from the equipment.

The only known activity that may exceed 80 dBA outside of the immediate operating vicinity is concrete breaking. Concrete breaking activities will be conducted mostly in the southeast portion of the Site, near the railroad where noise levels are elevated and public access is limited. During these activities, Stantec will conduct noise monitoring in the work zone and at Site boundaries.

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If noise levels above 80 dBA cannot be prevented or abated at the Site boundaries, signs will be placed by the Contractor along the outside of the perimeter that read, "Construction Site, Noise Levels Exceed 80 dBA".

3.12 SITE RESTORATION

Upon completion of the shallow soil excavation activities, the Contractor will restore the Site to the initial condition or better. This section details anticipated Site restoration activities, though final Site restoration will depend on discussions with the property owners. Site restoration activities will generally be conducted concurrently with the demobilization of construction equipment. Site restoration activities for the shallow soil excavation will include, but are not limited to, the following:

- Replace asphalt removed in Area 6 (detailed in **Section 3.13.1**);
- Install final stabilization in all backfilled excavation areas (detailed in **Section 3.13.2**);
- Replace or repair any fencing dividing the Bee-Jay Scales and Western General Land parcels or at any other points along the Site boundaries that was removed or damaged;
- Remove the temporary fencing installed on the Western General Land parcel;
- Remove signage on the perimeter fencing used to communicate hazards during the excavation activities;
- Remove any barricades, traffic control, or other protective devices that were installed for the excavation activities;
- Remove erosion control measures;
- Remove all trash and debris associated with the excavation activities, including any trash/debris containers mobilized to the Site; and
- Remove the office job trailers and temporary sanitary facilities.

In addition to the Site restoration activities listed above to be completed by the Contractor, Stantec will be responsible for the replacement of any monitoring wells decommissioned during the excavation activities. The requirements for monitoring well replacement activities are described in **Section 3.14**.

3.13 ASPHALT AND GRAVEL SURFACE INSTALLATION

In areas where excavations will require the removal of gravel road base or asphalt surfaces, those materials will be replaced by the Contractor following the excavation and backfill.

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3.13.1 Asphalt Installation

A third-party construction company will be hired by the Contractor to replace any asphalt surfaces removed during the excavation activities. It is estimated an area of approximately 6,000 sf will require asphalt replacement. The asphalt installation specifications will be determined to match the existing asphalt once that asphalt has been removed. Those proposed asphalt placement specifications must also meet the approval of the property owner(s).

3.13.2 Gravel Installation

Gravel aggregate is anticipated to be used for the following applications:

- As final stabilization for all excavation areas following backfill; and
- As temporary stabilization for haul truck access to areas which are impacted and partially excavated, or otherwise disturbed.

Gravel installed as temporary or final stabilization will have a thickness of 3 inches minimum, unless the area is within the Bee-Jay Scales parcel truck turnaround gravel road. Final stabilization of excavation areas within the turnaround will have a minimum gravel thickness of 6 inches. It is estimated an area of 29,500 sf will require final stabilization using gravel. Gravel aggregate will be placed by the Contractor in a single lift and graded to match the existing contours. The graded gravel will be compacted by the Contractor with a vibratory drum compactor or other approved compaction method.

The Contractor will be responsible for the determining a source of gravel aggregate that meets the Site requirements and for arranging the delivery of the gravel to the Site.

3.14 MONITORING WELL REPLACEMENT

The monitoring wells that must be decommissioned and removed as part of the excavation activities (MW-4 and MW-5, plus any additional monitoring wells as necessary) will be reinstalled by a licensed well drilling contractor subcontracted by Stantec following the backfill of the excavation areas. The installation of the replacement monitoring wells will be conducted pursuant to the WAC 173-160. The location of the replacement monitoring wells will be established by Stantec survey to match the previous location. The well screen interval will be constructed to match the well it is replacing with 2-inch flush-threaded, schedule 40 PVC casing perforated with 0.010-inch slots and fitted with a PVC end cap. The well screen casing will be flush threaded to the necessary length of schedule 40 PVC blank casing to complete the well casing to ground surface. The well installations will be completed with sand filter packs and hydrated bentonite seals. Wells will be completed with flush-mounted well monuments. Well construction details will be recorded by Stantec on borehole/well construction logs. Well completion details may be modified based on conditions encountered in the field at the discretion of qualified Stantec field personnel.

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Bee-Jay Scales Site, Sunnyside, Washington

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Once the wells are completed, each will be developed by the drilling company by surging and bailing to remove fine-grained sediment from the formation and filter packs, and increase the hydraulic efficiency of the well. The depth-to-groundwater and total length of each groundwater monitoring well will be measured to determine the quantity of groundwater within each well. A surge block will be used to agitate water and well construction materials prior to and during well development.

A submersible pump or bailer will be used to purge groundwater and sediment from well casings. Well development will be continued until water quality parameters (pH, temperature, specific conductivity, and turbidity) have all stabilized (± 10 percent) or ten well casing volumes of groundwater have been purged from the groundwater monitoring wells during development. Groundwater quality parameters will be recorded onto well development field logs.

The completed wells will be surveyed following completion by a licensed surveyor. The surveyor will measure both the horizontal coordinates, top of casing elevation, and ground surface elevation. Horizontal coordinates should be determined to the nearest 0.1-foot relative to the North American Datum of 1983 (NAD83), while the elevations should be to the nearest 0.01-foot relative to the National Geodetic Vertical Datum of 1988 (NAVD88).

3.15 WASTE MANAGEMENT

This section details the various wastes expected to be generated during the project. All disposal or recycling facilities will need to be selected from a pre-approved list provided by the Remediation Parties or approved by the Remediation Parties prior to use, and must meet all requirements for recyclers provided by the Remediation Parties. All applicable federal, state, and local laws and ordinances must be complied with at all times. Stantec will ensure that each truck hauling waste from the Site will have a completed waste manifest and/or bill of lading.

3.15.1 Impacted Soil

Analytical results from soil sampling obtained during previous assessment activities have provided the needed information for soil characterization. Therefore, additional samples will not be required for waste characterization. Excavated soil that exceeds the Site-specific criteria will be transported to:

Waste Management Columbia Ridge Landfill
18177 Cedar Springs Lane
Arlington, OR 97812
(541) 454-3312

3.15.2 Concrete and Asphalt

Concrete and asphalt will be removed prior to excavation activities in the Area 1 East and Area 6 excavations. Due to the nature of contaminants at the Site, this construction debris is

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not considered impacted. As a result, concrete and asphalt that is removed during the shallow soil cleanup action may be recycled, if practicable. The Contractor will be responsible for locating possible recycling facilities for the construction debris. If no recycling facilities can be found that fit the project requirements, the concrete and asphalt will be transported to an approved landfill facility for disposal. Both the concrete and asphalt will need to be broken into smaller pieces such that they can be safely and easily loaded and transported off-site.

3.15.3 Water

All collected water from open excavations, pipeline removal, and decontamination activities will be containerized by the Contractor and sampled by Stantec for characterization prior to disposal at an approved facility. The Contractor will be responsible for arranging transportation of water for off-site treatment and/or disposal.

3.15.4 Metal

If a sufficient quantity of metal is generated it will be segregated by the Contractor for transport to an approved scrap metal recycling facility. The Contractor will be responsible for locating and arranging transportation to the recycling facility. If metal recycling is not feasible, scrap metal will be disposed of with general waste and debris at an approved landfill facility.

3.15.5 General Waste and Debris

Miscellaneous waste material generated during the shallow soil cleanup action may include personal protective equipment (PPE), disposable sampling equipment, and other solid media. These wastes will be handled and disposed of by the Contractor in a manner consistent with local and state regulations, where applicable.

SHALLOW SOIL EXCAVATION CONSTRUCTION PLANS AND SPECIFICATIONS

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4.0 Compliance Monitoring

Compliance monitoring will be implemented pursuant to the provisions of WAC 173-340-410. The objectives of compliance monitoring are to: 1) ensure the protection of human health and the environment during cleanup actions; 2) ensure that the Site-specific CULs have been achieved during the cleanup actions; and 3) confirm the long-term effectiveness of the cleanup actions.

This section provides a framework for the planned compliance monitoring at the Site during the shallow soil corrective action. The complete Compliance Monitoring Plan (CMP) will be prepared by Stantec and submitted to Ecology on or before November 13, 2013, pursuant to the CAP implementation schedule (**Figure 7**).

4.1 PROTECTION MONITORING

Protection monitoring refers to monitoring enacted during the construction activities of the cleanup action in order to adequately protect human health and the environment. The protection monitoring enacted at the Site will provide air monitoring and sampling of fugitive vapors and particulate matter up to 10 micrometers in size (PM10) for the protection of workers and off-site receptors. The protection monitoring defined in this section will be implemented throughout the duration of earth moving activities. The protection monitoring will consist of the following:

- Real-time air monitoring and noise monitoring of work areas and exclusion zone boundaries for protection of on-site workers by the Contractor;
- Real-time Site perimeter air monitoring and noise monitoring for protection of off-site receptors by Stantec;
- Action levels for protection of on-site workers and off-site receptors based on United States Environmental Protection Agency (USEPA) exposure standards and methodologies; and
- Additional sampling may be implemented by Stantec if action levels are regularly exceeded.

4.2 PERFORMANCE MONITORING

Performance monitoring refers to sampling conducted to confirm that the cleanup action has attained the Site-specific cleanup criteria at the POCs identified in the CAP and to ensure performance standards such as construction quality control measurements.

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4.2.1 Excavation Performance Monitoring

The horizontal and vertical limits of the impacted soil excavation have been established based upon historical soil sample results and the results of the additional delineation soil samples collected in March and June 2013. Three additional pre-excavation delineation sample locations have been proposed as part of the EDR and the results will be incorporated into the excavation limits prior to the excavation of the affected area. Therefore, no confirmation samples will be required from the horizontal or vertical extents of open excavations.

A significant portion of the overall project cost results from the transportation and off-site disposal of impacted soil. Therefore, the minimization of project costs will be dependent on limiting the disposal of Site soil to those extents described in these plans.

The horizontal and vertical limits of the excavation will be established and monitored by continuous survey control by Stantec throughout the duration of the excavation work. Excavation quality control will consist of the following:

- Establishing Site horizontal and vertical survey control points;
- Staking the horizontal and vertical limits of excavation based upon surveyed control points within each area and continuously resurveying those points as necessary during excavation activities;
- Staking the horizontal and vertical limits of excavated soil that can be reused as backfill on-site and continuously resurveying those points as necessary during excavation activities; and
- Confirming the horizontal and vertical excavation extents meet those set forth in these plans.

All surveying activities will be the responsibility of Stantec.

4.2.2 Backfill Performance Monitoring

Backfill material used in the excavated areas will need to achieve the following specifications:

- Meet the soil standards for unrestricted land use per WAC 173-340-740; and
- Compacted to meet or exceed the 90% maximum density specification based on a Modified Proctor.

Stantec will obtain representative samples from the proposed borrow source(s) as detailed in the CMP to:

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- Generate analytical data that demonstrates that the material meets the standards for unrestricted land use and does not contain constituents of concern in excess of the Site CULs; and
- Provide geotechnical data that demonstrates the material is suitable for use as backfill at the Site.

Compaction performance monitoring will be performed by Stantec on each lift by nuclear densitometer as detailed in the CMP except in instances where:

- It is unsafe to have personnel access the confined space of a deep excavation (greater than 4 feet bgs and not properly sloped); or
- The compaction specification is determined to be unattainable due to the lifts proximity to the saturated zone.

Additional details on the backfill material testing methods and required frequency will be provided in the CMP.

4.2.3 Additional Performance Monitoring

Other performance monitoring requirements will be provided by Stantec to ensure that Contractor requirements are met. This monitoring will include, but is not limited to: inspections of the storm water and erosion control measures and ensuring adequate final stabilization and restoration of disturbed areas.

4.3 CONFIRMATIONAL MONITORING

Confirmational monitoring is intended to demonstrate the long-term effectiveness of the Site cleanup actions once CULs and other performance standards have been achieved. The shallow soil cleanup actions detailed in this report are only the first phase of cleanup actions to be performed to meet the objectives of the CAP. Additional cleanup actions to be completed as part of the CAP include: the installation of bioremediation injection wells or boreholes; institutional controls; natural attenuation; and the construction of a vertical wall treatment system or other Ecology-approved treatment method for the off-property groundwater plume attributable to the Site.

The excavation of shallow soils exceeding the soil CULs will remove the Site source material contributing to the groundwater plume. Groundwater monitoring will continue at the Site to assess the concentrations within the groundwater plume. A groundwater remedy CMP will be developed and submitted to Ecology prior to the implementation of the Site groundwater corrective action and will include the strategy for confirmational monitoring of the combined CAP.

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Confirmational monitoring specific to the shallow soil excavation activities will be limited to the annual inspection by Stantec of the replaced asphalt and gravel road areas for 5 years.

SHALLOW SOIL EXCAVATION CONSTRUCTION PLANS AND SPECIFICATIONS

Bee-Jay Scales Site, Sunnyside, Washington

August 26, 2013

5.0 References

Ecology, 2004. *Stormwater Management Manual for Eastern Washington*. September.

Ecology, 2013. Consent Decree No. 132017660, May 28.

Stantec, 2013. *Additional Soil Delineation Work Plan*, February 20.

WAC, 2007. MTCA Cleanup Regulation, WAC 173-340-400, October 12.

SHALLOW SOIL EXCAVATION CONSTRUCTION PLANS AND SPECIFICATIONS

Bee-Jay Scales Site, Sunnyside, Washington

August 26, 2013

6.0 Limitations and Certification

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of CEMC and ARC for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

Prepared by:



Eric J Bassett
Engineering Project Specialist

Reviewed by:



Marisa Kaffenberger
Project Manager



Thomas Cole
Senior Engineer

All information, conclusions, and recommendations provided by Stantec in this document regarding the Subject Property have been prepared under the supervision of and reviewed by the Certified Professional whose signature appears below:

Licensed Approver:

**Name: Marisa Kaffenberger, P.E.
Senior Engineer**

Signature: 

Date: 8/26/13

Stamp:



Tables

Table 1
Summary of Proposed Pre-Excavation Delineation Soil Boreholes
 Bee-Jay Scales Site
 Sunnyside, Washington

Delineation Area	Borehole ID	Constituent(s)	Planned Sample Depths ¹	Analysis TAT	Northing	Easting	Notes
Area 5 East	A5E-DB-02a	NO ₃	2.0, 4.0, 6.0, 8.5	Standard	363233.9	1762025.5	10' step-out W from A5E-DB-02
	A5E-DB-07b	NO ₃	9.0	Standard	363270.9	1762067.0	10' step-out N from A5E-DB-07
	A5E-DB-07c	NO ₃ , NH ₃ ²	1.0, 3.0, 5.0, 7.5	Standard	363246.0	1762068.0	Resample of A5-SS-001, 15' S from A5E-DB-07a

Notes:

¹ Sample depths were determined based on the historical high groundwater table and data from previous soil investigations.

² Samples from this borehole will be analyzed for nitrate at all sample depths, and analyzed for ammonia at 1.0 and 3.0 feet bgs. Sample locations, depths, and analyses are subject to change based on field conditions.

Table 2
Summary of Shallow Soil Excavation Areas and Estimated Volumes
 Bee-Jay Scales Site
 Sunnyside, Washington

Excavation ID	Estimated Area of Soil Exceeding Criteria (square feet)	Estimated Area of Excavation Including Sloped Areas ¹ (square feet)	Estimated Depth to Saturated Zone ² (feet bgs)	Estimated Total Volume of Excavated Soil (cubic yards)	Estimated Volume of Soil Exceeding Criteria (cubic yards)	Estimated Volume of Overlying Soil That Does Not Exceed Criteria (cubic yards)	Estimated Volume of Soil to be Excavated to Safely Slope the Excavation ¹ (cubic yards)
Area 1 West	5,150	6,550	6 - 7	1,500	1,225	75	200
Area 1 East	13,100	15,000	6 - 7.5	3,525	3,075	100	350
Area 2	235	565	n/a ³	85	45	0	40
Area 4	320	550	n/a ⁴	60	40	0	20
Area 5 West	300	580	n/a ⁵	70	45	0	25
Area 5 East	3,200	5,800	9 - 10	1,990	645	425	920
Area 5 South	440	1,180	7	195	90	10	95
Area 6	4,200	5,750	6.5 - 8	1,450	1,085	115	250
Total	26,945	35,975		8,875	6,250	725	1,900

Notes

¹ Estimations of sloped areas and volumes determined assuming a 1:1 excavation slope. This is only an estimate and sloping will be determined by the Contractor and Stantec based on field conditions.

² Depth to saturated zone estimated assuming the average groundwater table during monitoring well gauging from 2005 to present.

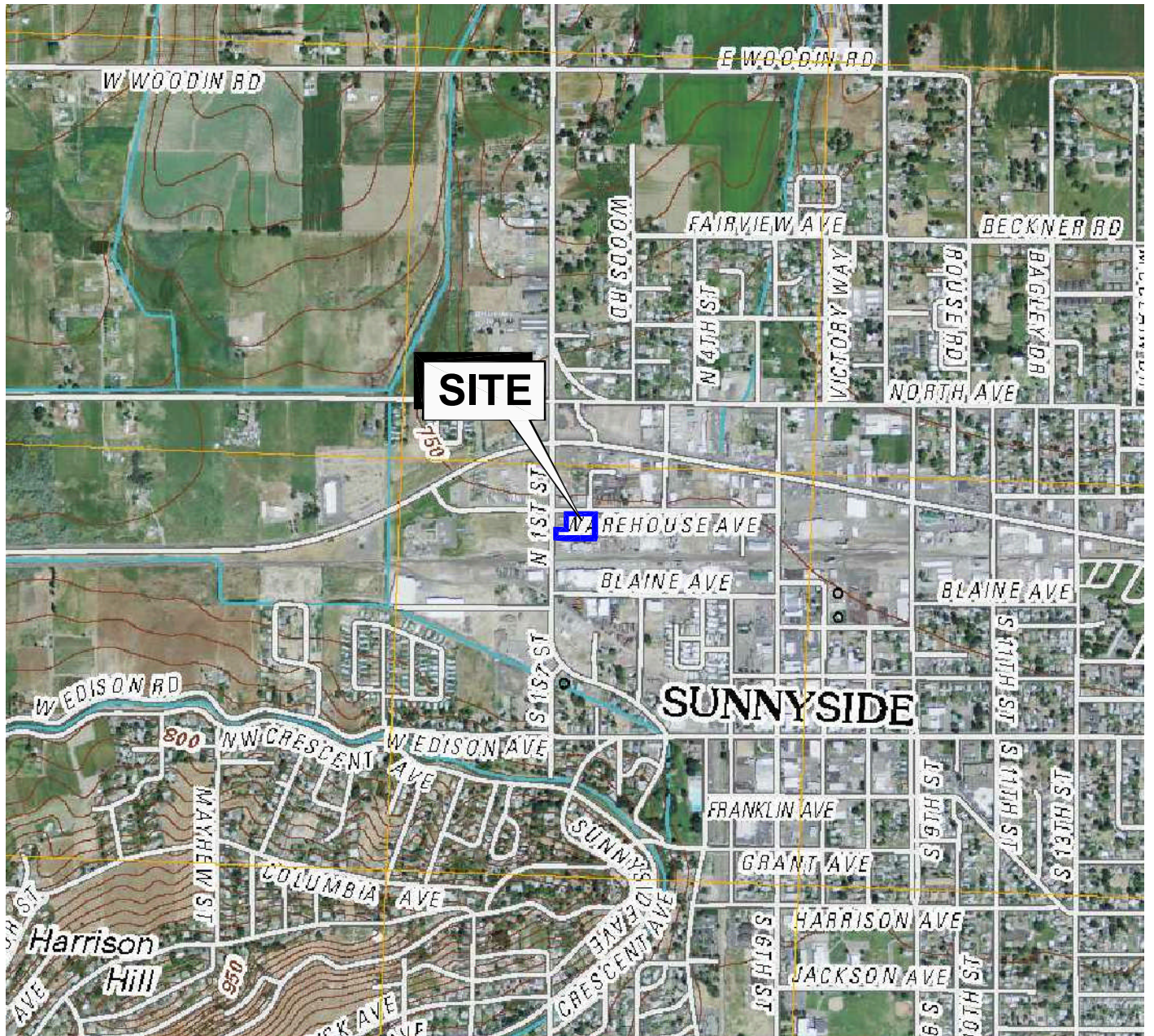
³ Excavation will extend to 6 feet bgs unless the saturated zone is found to be shallower.

⁴ Excavation will extend 2.5 to 4.5 feet bgs.

⁵ Excavation will extend to 4.5 feet bgs.

bgs = below ground surface

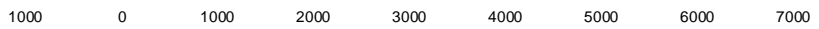
Figures



WASHINGTON



SCALE IN MILES



SCALE IN FEET

REFERENCE: USGS 7.5 MINUTE QUADRANGLE;
SUNNYSIDE, WASHINGTON; 2011



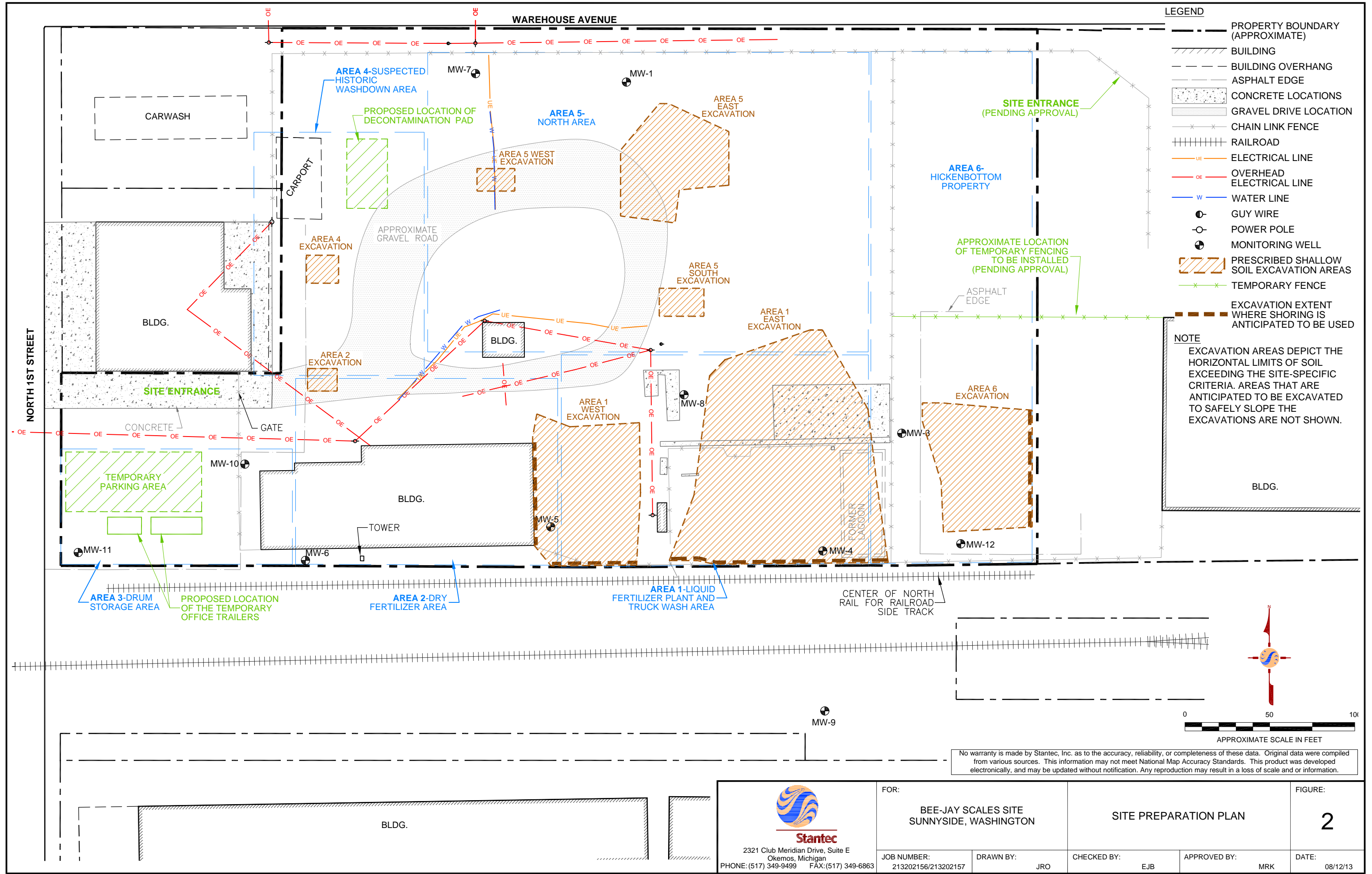
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FOR:
**BEE-JAY SCALES SITE
SUNNYSIDE, WASHINGTON**

SITE LOCATION MAP

FIGURE:
1

JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13
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- LEGEND**
- PROPERTY BOUNDARY (APPROXIMATE)
 - ▨ BUILDING
 - - - BUILDING OVERHANG
 - ASPHALT EDGE
 - ▨ CONCRETE LOCATIONS
 - ▨ GRAVEL DRIVE LOCATION
 - CHAIN LINK FENCE
 - ||||| RAILROAD
 - UE — ELECTRICAL LINE
 - OE — OVERHEAD ELECTRICAL LINE
 - W — WATER LINE
 - GUY WIRE
 - POWER POLE
 - ⊕ MONITORING WELL
 - ▨ PRESCRIBED SHALLOW SOIL EXCAVATION AREAS
 - TEMPORARY FENCE
 - EXCAVATION EXTENT WHERE SHORING IS ANTICIPATED TO BE USED

NOTE
 EXCAVATION AREAS DEPICT THE HORIZONTAL LIMITS OF SOIL EXCEEDING THE SITE-SPECIFIC CRITERIA. AREAS THAT ARE ANTICIPATED TO BE EXCAVATED TO SAFELY SLOPE THE EXCAVATIONS ARE NOT SHOWN.

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	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13

- LEGEND**
- PROPERTY BOUNDARY (APPROXIMATE)
 - ▨ BUILDING
 - - - BUILDING OVERHANG
 - ▬ ASPHALT EDGE
 - ▨ CONCRETE LOCATIONS
 - ▨ GRAVEL DRIVE LOCATION
 - × × × CHAIN LINK FENCE
 - ||||| RAILROAD
 - UE — ELECTRICAL LINE
 - OE — OVERHEAD ELECTRICAL LINE
 - W — WATER LINE
 - ⊙ GUY WIRE
 - ⊙ POWER POLE
 - ⊙ SOIL BOREHOLE
 - ⊙ SOIL BOREHOLE (2011)
 - ⊕ MONITORING WELL
 - ⊠ PHASE II COMBINATION VERTICAL PROFILE/SOIL BOREHOLE
 - ▨ EXCAVATION EXTENT WHERE SHORING IS ANTICIPATED TO BE USED
 - ▨ AREAS REQUIRING OFF-SITE DISPOSAL FROM GROUND SURFACE (GS) TO FIRST INDICATION OF SATURATED ZONE (SZ)
 - ▨ AREAS REQUIRING OFF-SITE DISPOSAL FROM A SPECIFIC DEPTH (FEET) TO FIRST INDICATION OF SATURATED ZONE (SZ)
 - ▨ AREAS REQUIRING OFF-SITE DISPOSAL FROM GROUND SURFACE (GS) TO A SPECIFIC DEPTH (FEET)
 - ▨ AREAS REQUIRING OFF-SITE DISPOSAL FROM A SPECIFIC DEPTH (FEET) TO A SPECIFIC DEPTH (FEET)

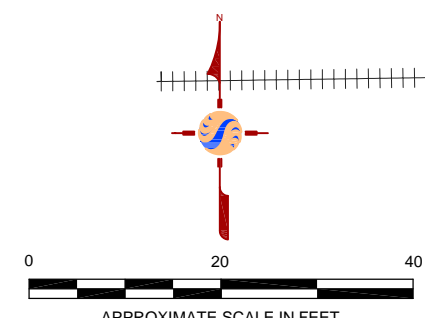
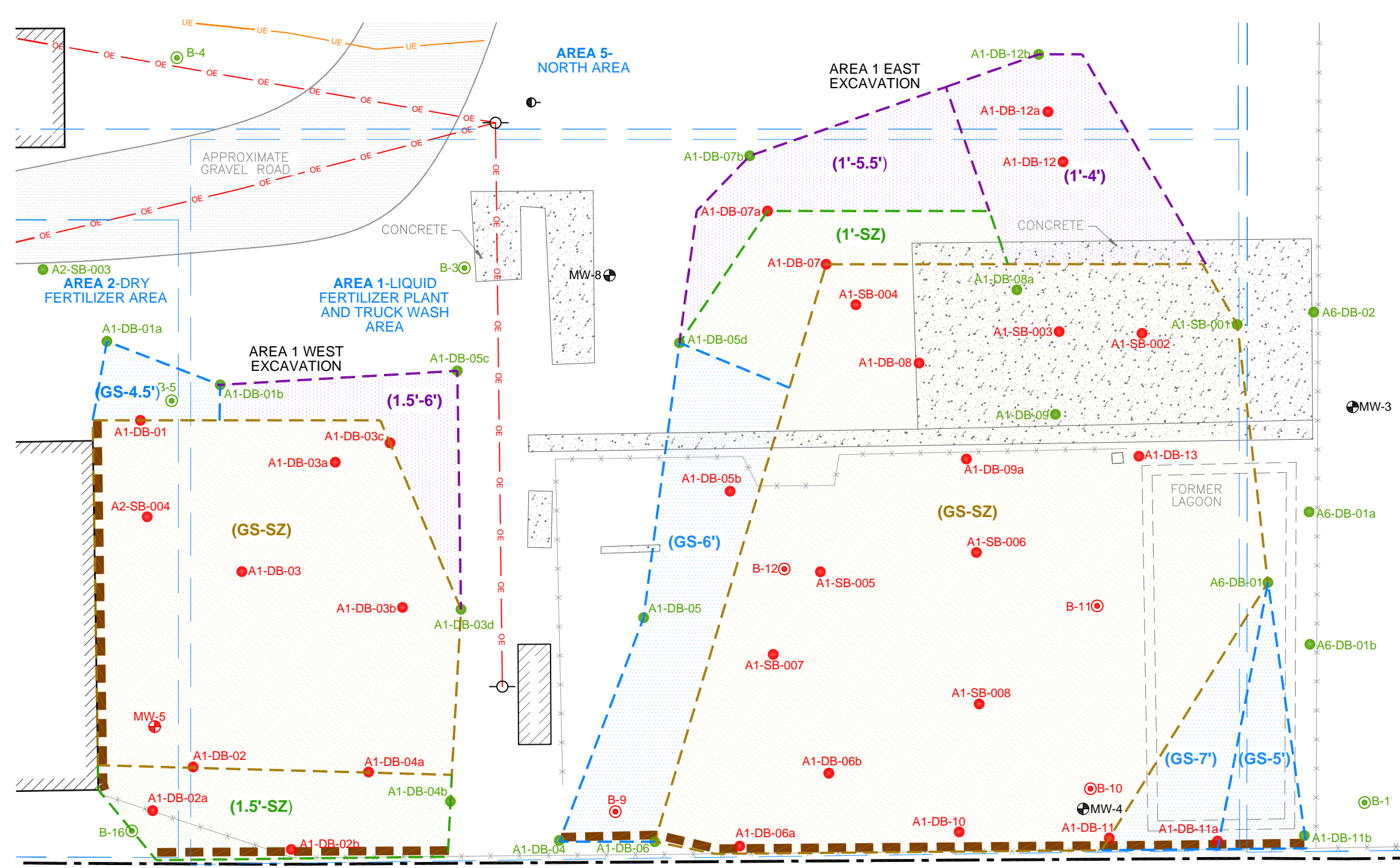
NOTES

BOREHOLE LOCATIONS THAT EXCEED SITE-SPECIFIC SOIL CRITERIA ARE SHOWN IN RED.

BOREHOLE LOCATIONS THAT DO NOT EXCEED SITE-SPECIFIC SOIL CRITERIA ARE SHOWN IN GREEN.

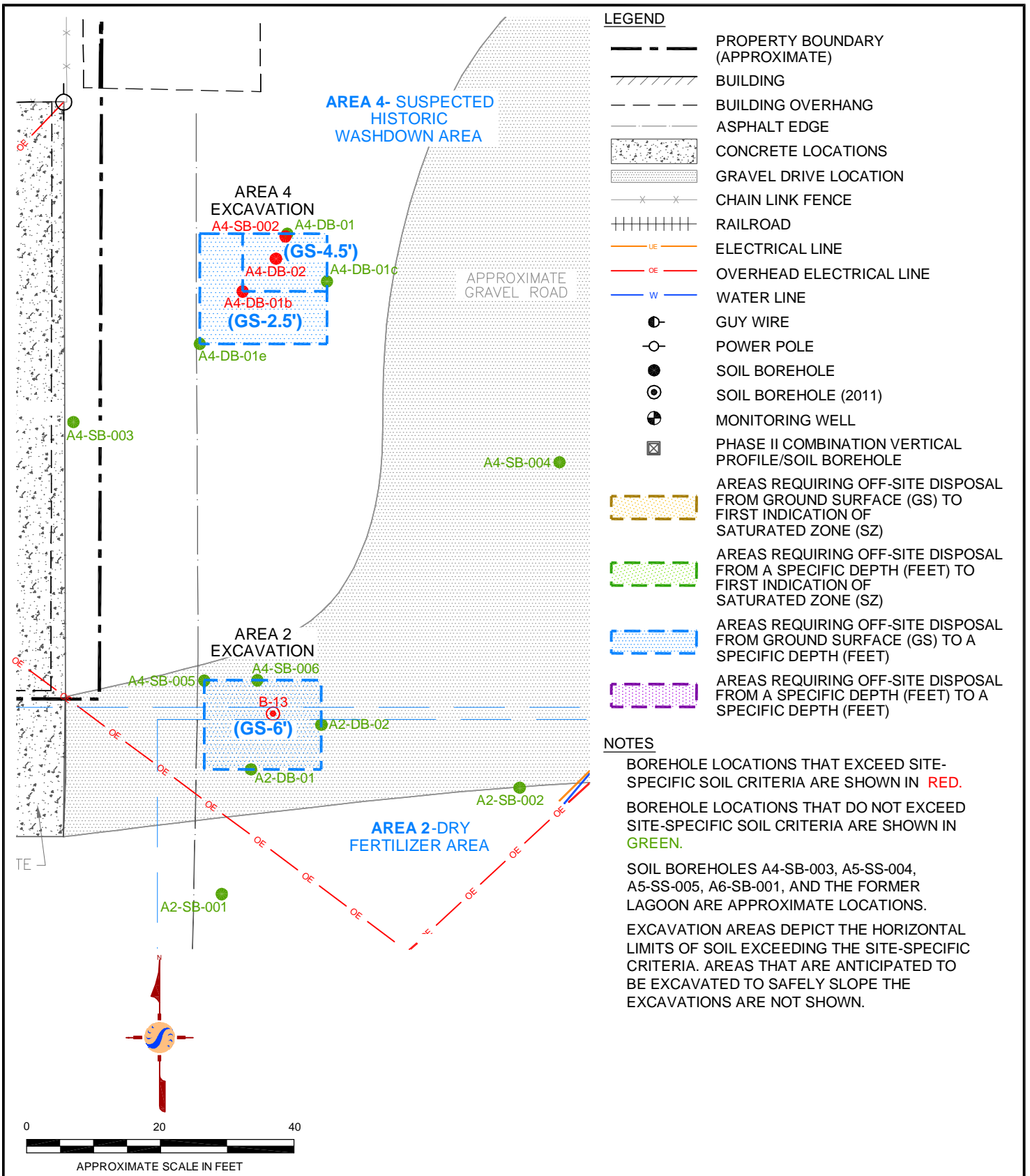
SOIL BOREHOLES A4-SB-003, A5-SS-004, A5-SS-005, A6-SB-001, AND THE FORMER LAGOON ARE APPROXIMATE LOCATIONS.

EXCAVATION AREAS DEPICT THE HORIZONTAL LIMITS OF SOIL EXCEEDING THE SITE-SPECIFIC CRITERIA. AREAS THAT ARE ANTICIPATED TO BE EXCAVATED TO SAFELY SLOPE THE EXCAVATIONS ARE NOT SHOWN.



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	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13



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FOR:
**BEE-JAY SCALES SITE
 SUNNYSIDE, WASHINGTON**

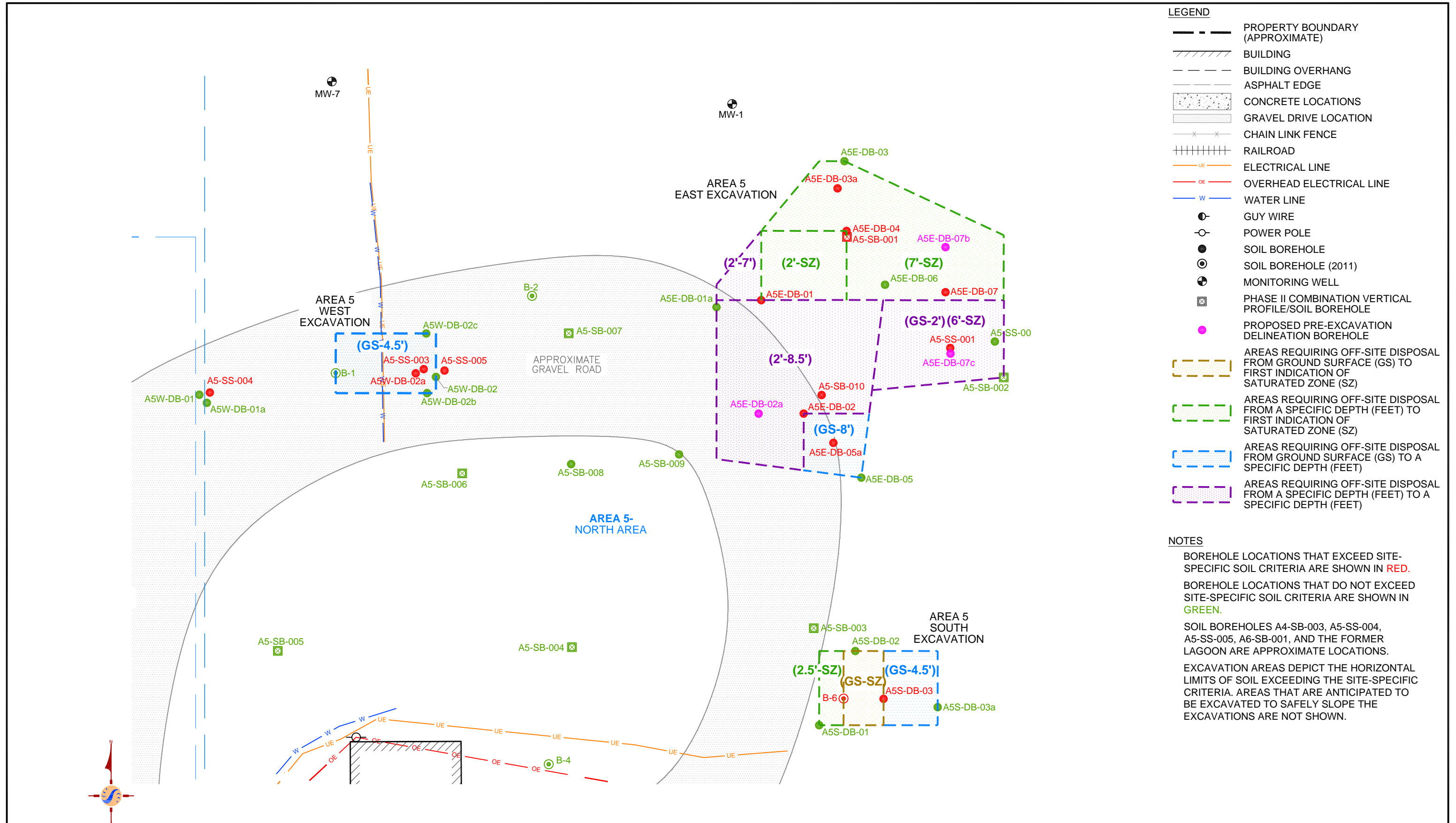
JOB NUMBER: 213202156/213202157
 DRAWN BY: JRO

**ENLARGED SITE PLAN SHOWING
 PRESCRIBED SHALLOW SOIL
 EXCAVATIONS - AREAS 2 AND 4**

CHECKED BY: EJB
 APPROVED BY: MRK

FIGURE:
4

DATE: 08/12/13



- LEGEND**
- PROPERTY BOUNDARY (APPROXIMATE)
 - //// BUILDING
 - - - BUILDING OVERHANG
 - ==== ASPHALT EDGE
 - ▨ CONCRETE LOCATIONS
 - ▨ GRAVEL DRIVE LOCATION
 - x-x- CHAIN LINK FENCE
 - |||| RAILROAD
 - UE — ELECTRICAL LINE
 - OE — OVERHEAD ELECTRICAL LINE
 - W — WATER LINE
 - ⊙ GUY WIRE
 - ⊙ POWER POLE
 - ⊙ SOIL BOREHOLE
 - ⊙ SOIL BOREHOLE (2011)
 - ⊙ MONITORING WELL
 - ⊠ PHASE II COMBINATION VERTICAL PROFILE/SOIL BOREHOLE
 - PROPOSED PRE-EXCAVATION DELINEATION BOREHOLE
 - ▭ AREAS REQUIRING OFF-SITE DISPOSAL FROM GROUND SURFACE (GS) TO FIRST INDICATION OF SATURATED ZONE (SZ)
 - ▭ AREAS REQUIRING OFF-SITE DISPOSAL FROM A SPECIFIC DEPTH (FEET) TO FIRST INDICATION OF SATURATED ZONE (SZ)
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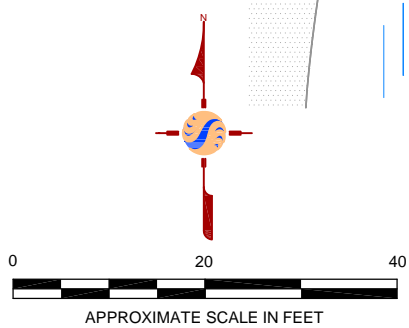
NOTES

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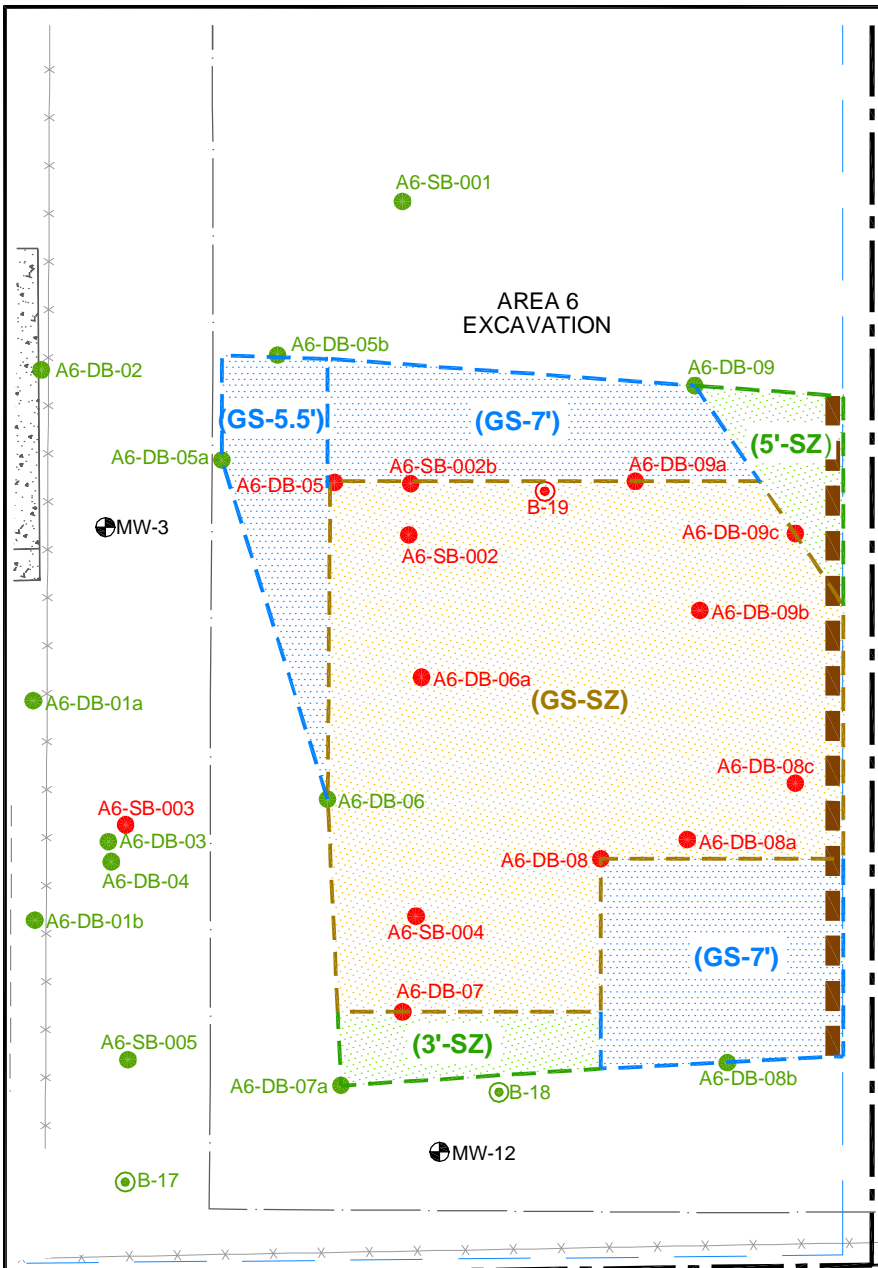
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	BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON		JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB
				DATE: 08/12/13	



LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- BUILDING
- BUILDING OVERHANG
- ASPHALT EDGE
- CONCRETE LOCATIONS
- GRAVEL DRIVE LOCATION
- CHAIN LINK FENCE
- RAILROAD
- ELECTRICAL LINE (UE)
- OVERHEAD ELECTRICAL LINE (OE)
- WATER LINE (W)
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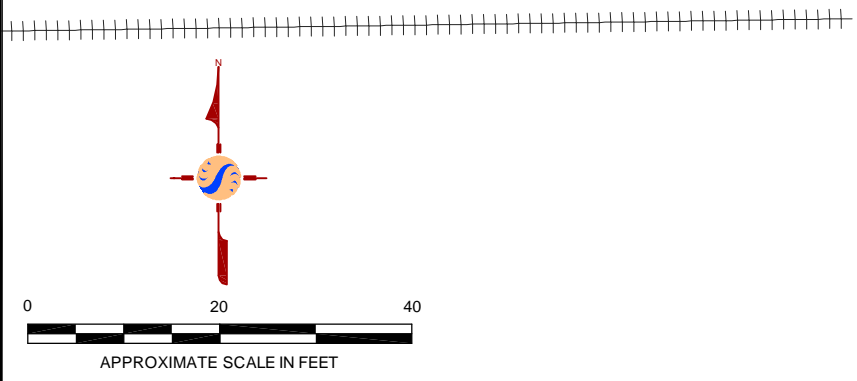
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	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13

**Figure 7: Implementation Schedule
Bee-Jay Scales Site**

ID	Task Name	Duration	Start	Finish	2013				2014				2015				2016																				
					A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	Shallow Soil Excavation Implementation Schedule	343 days?	Tue 5/28/13	Mon 10/6/14																																	
2	Consent Decree Signed	0 days	Tue 5/28/13	Tue 5/28/13	◆ 5/28																																
3	Submit Implementation Schedule	0 days	Mon 8/5/13	Mon 8/5/13	◆ 8/5																																
4	Submit Draft Shallow Soil Excavation Engineering Design Report	0 days	Mon 8/26/13	Mon 8/26/13	◆ 8/26																																
5	Submit Draft Shallow Soil Excavation Construction Plans and Specifications	0 days	Mon 8/26/13	Mon 8/26/13	◆ 8/26																																
6	<i>Ecology Review and Approval of Shallow Soil Excavation Engineering Design Report</i>	<i>1 mon?</i>	<i>Mon 8/26/13</i>	<i>Mon 9/23/13</i>	8/26 9/23																																
7	<i>Ecology Review and Approval of Shallow Soil Excavation Construction Plans and Specifications</i>	<i>1 mon?</i>	<i>Mon 8/26/13</i>	<i>Mon 9/23/13</i>	8/26 9/23																																
8	Submit Shallow Soil Excavation Operations & Maintenance Plan	0 days	Wed 11/13/13	Wed 11/13/13	◆ 11/13																																
9	Submit Shallow Soil Excavation Compliance Monitoring Plan	0 days	Wed 11/13/13	Wed 11/13/13	◆ 11/13																																
10	Submit Shallow Soil Excavation Health and Safety Plan	0 days	Tue 2/4/14	Tue 2/4/14	◆ 2/4																																
11	<i>Estimated Window for Shallow Soil Excavation Activities - Final Timeframe TBD</i>	<i>4 mons?</i>	<i>Thu 2/20/14</i>	<i>Thu 6/12/14</i>	2/20 6/12																																
12	Submit Shallow Soil Excavation As-built Report	0 days	Mon 10/6/14	Mon 10/6/14	◆ 10/6																																
13	Groundwater Remedy Implementation Schedule	923 days?	Tue 5/28/13	Tue 1/31/17																																	
14	Consent Decree Signed	0 days	Tue 5/28/13	Tue 5/28/13	◆ 5/28																																
15	Submit Implementation Schedule	0 days	Mon 8/5/13	Mon 8/5/13	◆ 8/5																																
16	Obtain Access Agreements for Off-Property Groundwater Investigation	25 days	Mon 7/15/13	Fri 8/16/13	7/15 8/16																																
17	Perform Off-Property Groundwater Investigation	10 days	Mon 8/19/13	Fri 8/30/13	8/19 8/30																																
18	<i>Estimated Timeframe for Groundwater Monitoring to Define Nitrate Plume</i>	<i>12 mons?</i>	<i>Mon 8/26/13</i>	<i>Fri 8/8/14</i>	8/26 8/8																																
19	Submit Draft Groundwater Remedy Engineering Design Report	0 days	Wed 12/17/14	Wed 12/17/14	◆ 12/17																																
20	<i>Ecology Review and Approval of Groundwater Remedy Engineering Design Report</i>	<i>1 mon?</i>	<i>Thu 12/18/14</i>	<i>Tue 1/20/15</i>	12/18 1/20																																
21	Submit Draft Groundwater Remedy Construction Plans and Specifications	0 days	Wed 3/18/15	Wed 3/18/15	◆ 3/18																																
22	<i>Ecology Review and Approval of Groundwater Remedy Construction Plans and Specifications</i>	<i>1 mon?</i>	<i>Thu 3/19/15</i>	<i>Wed 4/15/15</i>	3/19 4/15																																
23	<i>Obtain Off-Property Access Agreements for Groundwater Remedy</i>	<i>6 mons?</i>	<i>Wed 1/21/15</i>	<i>Fri 7/10/15</i>	1/21 7/10																																
24	Submit Groundwater Remedy Operations & Maintenance Plan	0 days	Thu 6/11/15	Thu 6/11/15	◆ 6/11																																
25	Submit Groundwater Remedy Compliance Monitoring Plan	0 days	Thu 6/11/15	Thu 6/11/15	◆ 6/11																																
26	Submit Groundwater Remedy Health and Safety Plan	0 days	Fri 7/10/15	Fri 7/10/15	◆ 7/10																																
27	<i>Estimated Window for Groundwater Remedy Implementation - Final Timeframe TBD</i>	<i>9 mons?</i>	<i>Mon 8/24/15</i>	<i>Wed 5/11/16</i>	8/24 5/11																																
28	Perform Compliance Monitoring of Groundwater Remedy	6 mons	Thu 5/12/16	Mon 10/31/16	5/12 10/31																																
29	Submit Groundwater Remedy As-built Report	0 days	Tue 1/31/17	Tue 1/31/17	◆ 1/31																																

Project: Implementation Schedule Date: August 5, 2013	Task		Summary		Rolled Up Progress		Project Summary	
	Progress		Rolled Up Task		Split		Group By Summary	
	Milestone	◆	Rolled Up Milestone	◇	External Tasks			

Appendix A
Shallow Soil Excavation Construction
Specifications

PART 1 GENERAL

1.1 DEFINITIONS

- A. Remediation Parties: The two entities responsible for the project, Chevron Environmental Management Company (CEMC) and Atlantic Richfield Company (ARC).
- B. Project Manager: The off-site project coordinator/manager for the Remediation Parties to perform project coordination with the RP Representative and QA/QC Officer.
- C. Remediation Party (RP) Representative: Person authorized by the Remediation Parties to perform Contractor oversight. The RP representative reports to the Project Manager.
- D. Quality Assurance/Quality Control (QA/QC) Officer: The on-site representative of the Project Manager, appointed to perform on-site quality assurance and quality control. The QA/QC Officer reports to the RP Representative.
- E. Construction Manager: On-site representative of the Contractor authorized to direct and oversee implementation of the construction activities.
- F. Stantec: The firm responsible for the oversight of all construction activities on-site.
- G. Contractor: The firm hired to perform the construction activities on-site.
- H. Work: The scope of work included in the *Shallow Soil Excavation Engineering Design Report, Shallow Soil Excavation Construction Plans and Specifications, Design Drawings, and these specifications.*

1.2 SCOPE

- A. This section presents a general summary of the scope of work for implementing the *Shallow Soil Excavation Engineering Design Report (EDR) and Shallow Soil Excavation Construction Plans and Specifications (CPS)* developed for the Bee-Jay Scales Site (Site) by Stantec Consulting Services Inc. (Stantec), dated August 26, 2013. The Site is located in the city of Sunnyside, within Yakima County, and consists of the following two parcels: Parcel No. 22102522014 and Parcel No. 22102522015 as recorded by the Yakima County Department of Assessment. Parcel No. 22102522014 is located at 116 North 1st Street and is owned by Bee-Jay Scales, Inc. Parcel No. 22102522015 is located at 301 Warehouse Avenue and is currently owned by Western General Land, LLC. The Site consists of approximately 4 acres of land. The Site is bordered to the north and west by Warehouse Avenue and North 1st Street and to the south by active railroad tracks. One property to the north of the Site across Warehouse Avenue is a residence. The remaining adjacent properties to the north, east, and south of the Site are commercial/industrial facilities. Any discrepancy between this summary of work and other documents or drawings in the request for proposal should be brought to the attention of Stantec during the bidding process for resolution.

1.3 DESCRIPTION

The scope of work for the implementation of the Shallow Soil Excavation Activities at the Site includes, but is not limited to, the following:

- Mobilization and Site Preparation;

- Concrete, Asphalt, and Piping Removal; and
- Construction, including:
 - Clearing;
 - Excavation;
 - Backfilling; and
 - Site Restoration.

For specific details of the scope of work, see the CPS.

1.4 ROLES AND RESPONSIBILITIES

This section is intended to identify the roles and responsibilities for the project team at the Site, as detailed in the project documents and drawings. The identification and description of these roles will provide clear definition of responsibilities to facilitate communication between all project team members and ensure that project goals are achieved.

A. Remediation Plan Development Roles

1. Remediation Parties

The Remediation Parties are those entities identified as providing financial support for project execution and final authority for project management decisions. All contracts will be issued by the Remediation Parties to procure the service roles identified below. The entity or entities identified as providing service roles will enter into a direct contractual relationship with the Remediation Parties, unless otherwise specified.

Entities currently identified as Remediation Parties include the following stakeholders:

- Chevron Environmental Management Company (CEMC); and
- Atlantic Richfield Company (ARC).

2. Regulatory Agencies

The Regulatory Agencies are those entities identified as having regulatory authority over a portion of project execution. Site remedial objectives and project execution plans will be implemented in coordination with the Regulatory Agencies.

Entities currently identified as Regulatory Agencies include, but are not necessarily limited to the following stakeholders:

- Washington Department of Ecology (Ecology);
- City of Sunnyside;
- Yakima County; and
- Yakima Regional Clean Air Agency (YRCAA).

3. Site Owners

The Site Owners are those entities that currently own the two parcels that comprise the Site. Access agreements have been signed between the Remediation Parties and the Site Owners to complete this work. The entities currently identified as Site Owners include the following stakeholders:

- Bee Jay Scales, Inc; and

- Western General Land, LLC.

B. Construction Service Roles:

In addition to the Remediation Plan Development roles, four construction service roles have been identified to facilitate execution of the project. The scope of work encompassed by these roles is detailed within the project documents and drawings. The principal roles involved in the execution of activities at the Site are those of the Remediation Parties' Representative, QA/QC Officer, and Construction Manager.

1. Project Manager (Stantec)

The Project Manager is the individual identified as the responsible party or entity identified as the office project coordinator/manager for the Remediation Parties during all project related activities. The main responsibilities of this role include project coordination with the RP Representative and QA/QC Officer.

Specific responsibilities of the Project Manager include:

- Final Interpretation of Specifications, Design Drawings, and CPS;
- Final documentation of construction activities;
- Project Management;
- Invoicing for Oversight Services;
- Regulatory Correspondence;
- Correspondence with Remediation Parties; and
- Review of submittals and change orders.

2. Remediation Parties' Representative (Stantec)

The Remediation Parties' Representative (RP Representative) is the individual or entity identified as the field project coordinator for the Remediation Parties during construction related activities. The RP Representative will serve as the on-site project coordinator and be their "eyes and ears" to provide immediate feedback, communication and project tracking for the Remediation Parties. The main responsibilities of this role include monitoring project execution and resource allocation, issuing regular status reports, resolving issues that impact cost and schedule, and coordinating clear communication for all stakeholders.

Specific responsibilities of the RP Representative include:

- Review of Daily Construction Activities – This task includes review of daily construction logs, QA/QC testing results, air monitoring logs, manifests and weigh tickets, analytical sample results, and survey information for all Site activities;
- Verification of Construction Resources – This task includes comparison of daily construction resource logs with field observations to verify accuracy. The Construction Manager will provide logs of personnel, equipment, and materials, along with a description of the activities conducted each day. These logs will be reviewed and transmitted to the Remediation Parties;
- Preparation of Waste Manifests – This task includes preparation and tracking of manifests for all wastes transported off-site. All trucks hauling material to a disposal facility must stop at the Site office prior to exiting the Site to receive a completed waste manifest and/or bill of lading as provided by the RP

Representative or Remediation Parties. Copies of the manifests will be retained at the Site;

- Communication with Site Personnel – This task requires regular and effective communication with all project personnel to coordinate operations. Communication will be facilitated by leading daily operations meetings with all Site personnel each morning, coordinating weekly status meetings with project stakeholders (as needed), and any other contact required to remain fully apprised of Site activities;
- Communication with Remediation Parties – This task includes serving as the single direct contact with the Remediation Parties for all Site communication. All official communication from Site personnel to the Remediation Parties shall be routed through the RP Representative;
- Track Production and Earned Value – This task includes compiling, tracking and trending production data for comparison against project schedule and forecasted production levels. This information will be communicated to project stakeholders in status and production reports and any schedule or scope issues that impact project cost will be highlighted as soon as they are identified;
- Ensure Safe Operations – This task includes review of Site-specific Health and Safety Plans and periodic monitoring of Site activities to ensure safe operating conditions are maintained. This task also includes participating in the investigation and mitigation of any near losses or incidents to ensure that the Remediation Parties' expectations are met;
- Monitor and Evaluate Scope of Work – This task requires daily review of operations, observation logs and sampling activities to monitor the implementation of the approved scope of work. Any issues that constitute a change in scope will be promptly reported to the Remediation Parties; and
- Develop and Institute Corrective Actions – This task includes participating in any project reviews to determine the root cause of shortfalls in production or to discuss identified changes in scope that could impact costs and schedule. The RP Representative will work with the other project team members to identify, develop and implement appropriate corrective actions to minimize any negative impacts on project execution.

3. Quality Assurance/Quality Control Officer (Stantec)

The QA/QC Officer is the individual or entity identified as the responsible party for ensuring project specifications through implementation of the Compliance Monitoring Plan (CMP). The QA/QC Officer will coordinate the assistance of multiple field technical observers to conduct required testing, manage the accumulated data, and provide feedback to the RP Representative and Construction Manager. The main responsibilities of this role include coordinating with construction operations to provide appropriate compliance monitoring personnel; verifying that field sampling, testing and observations are completed in accordance with the CMP; managing all data collected to provide daily summary reports to the RP Representative; and acting as the Site Health and Safety Officer (SHSO) for oversight operations.

Specific responsibilities of the QA/QC Officer and his team include:

- Coordinate QA/QC Activities – This task requires consistent communication with the Construction Manager to determine what activities are planned in the short and long term. Sufficient Site personnel must be provided to capture the field data described in the CMP from concurrent activities without delaying construction activities.

- Coordinate Air Monitoring – This task requires deployment of air monitoring equipment along the down-wind site perimeter by Stantec and in the vicinity of each excavation area by the Contractor. Any recorded exceedances of air quality parameters will be logged and communicated to project stakeholders.
- Compile and Manage Site Data – This task includes daily compilation, management and reporting of Site data. Air monitoring data, soil sample information, and analytical testing results will be tracked along with CMP testing data. All original field logs, notes, data sheets, photographs, and testing results will be reviewed and retained on-site.
- Monitor and Maintain Quality of Work – This task includes continuous monitoring of Site activities, tracking of compliance monitoring data, and evaluation of air monitoring information to ensure that project objectives are achieved. Any failed test result or sampling exceedance should be evaluated on a case-by-case basis to determine the most appropriate course of action. Trending and forecasting should be employed to identify potential quality shortfalls and develop mitigation strategies.
- Summarize and Report – This task includes summarizing all of the compliance monitoring information, survey data, field observations, photographs, and analytical results into a summary report. All key data and pertinent information will be prepared and provided to the RP Representative for review and transmittal to project stakeholders.
- Site Health and Safety Officer (SHSO) – This task includes conducting daily tailgate safety meetings for all compliance monitoring personnel, periodically observing Site operations, communicating any safety share information and maintaining sufficient safety supplies on the Site. The SHSO take the lead in conducting any incident investigations for compliance monitoring related issues.

Daily observations and data generation will include, but are not necessarily limited to the following:

Open Cut Excavation and Backfill

- Observation of excavation and backfill activities with daily production record.
- Periodic lift measurement with daily production and total number of lifts placed.
- Field density testing using nuclear density gauge in all accessible areas.
- Air monitoring in the excavation area (responsibility of Contractor).
- Photographic log.

Surveying

- Daily survey record of cut and fill activities at each excavation and backfill area.
- Daily survey record of field density test locations.
- Regular survey of import stockpiles, if applicable.
- AutoCAD map generation of Site activities

Air Monitoring

- Deployment of perimeter (responsibility of Stantec) and work area (responsibility of Contractor) air monitoring.

4. Construction Manager

The Construction Manager is the individual identified by the Contractor as the responsible party for coordinating and executing the construction scope of work detailed in the project documents. The Construction Manager will provide and direct the personnel, equipment, and materials necessary to construct the remedy in accordance with project specifications, work plans, and drawings. The main responsibilities of this

role include planning and executing all construction activities, coordinating with the RP Representative and QA/QC Officer to communicate planned activities, submitting daily activity and resource reports, and ensuring the safe operations of the construction team.

Specific responsibilities of the Construction Manager and his team include:

- Project Scope and Schedule Development – This task includes understanding the anticipated scope of work and developing the resources and construction methods to optimize execution. Production rates and construction schedules for each Site task will be developed for bid evaluation and project tracking.
- Construction Execution – This task includes direction of project construction personnel to complete the identified scope of work according to the quality control criteria identified in the project documents.
- Remedial Construction Invoicing – This task includes the development of monthly invoices for submittal to the Remediation Parties. It is anticipated that a separate invoice will be generated each month for each of the Remediation Parties according to the cost share. Sufficient detail will be included in the invoice to determine appropriate task allocation, according to the project contract.
- Project Communication – This task includes coordinating with other entities at the Site to maintain clear communication. Submittal of daily activity logs with construction resource allocation and communicating short and long term project schedule will be required to maintain goal alignment and earned value evaluation. The Construction Manager will be expected to host a simultaneous operations meeting each morning to discuss Site activities and issues.
- Health and Safety Assurance – This task includes advocating safe Site procedures and protocols, periodically monitoring Site operations and facilitating the requests of the SHSO.

PART 2 PRODUCTS

(Not Used)

PART 3 EXECUTION

(Not Used)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE

This Section describes the responsibilities and requirements for assuring the Health and Safety of the Site employees, support personnel, Contractor's employees, vendors, and suppliers.

1.2 DESCRIPTION

- A. There is potential to encounter contaminated soils and water during the performance of the Work. Work performed below the ground surface, work related to handling and transporting of soils and contact water, and field management of such work shall only be performed by personnel qualified to perform work in hazardous areas in accordance with 29 CFR 1910.120.
- B. The requirements contained herein supplement, and do not supersede any federal, state, and local requirements. If a conflict arises between requirements of these Specifications and current requirements and regulations, the more stringent shall apply.
- C. No confined space entry will be permitted without prior authorization and proper permit notice from the RP Representative and Remediation Parties.

1.3 SUBMITTALS

- A. Each company performing work at the Site shall prepare and maintain a Site-specific Health and Safety Plan (HASP). Each HASP shall address the potential hazards involved in that company's scope of work and provide mitigation actions for those hazards. The plans shall be consistent with applicable health and safety regulations and good work practices with the objective of preventing injuries, accidents, or exposure.
- B. A Site-specific HASP shall be submitted by the Contractor to Stantec for review by January 17, 2014. Stantec will review this plan for completeness and conformance with applicable laws and regulations. Acceptance and review by Stantec will not constitute approval or warranty regarding the plan's completeness. However, Stantec may provide comments on the plan, based on Stantec's understanding of applicable laws, regulations, and the nature of the hazards at the Site.
- C. Certification of proper Health and Safety Training and Medical and Safety Requirements for Stantec, the Contractor, and any third party company Site personnel included in activities as specified in Part 1.2A above shall be submitted for inclusion to the appropriate HASP.
- D. The effectiveness of Stantec's and the Contractor's Site Health and Safety Officer (SHSO) in implementing their safety program shall be the sole responsibility of that company. Periodically, the Safety Officers shall review the work and conditions at the Site. If deficiencies are noted, the Safety Officers shall prepare and submit in writing to the RP Representative, Project Manager, and Remediation Parties a detailed safety inspection report that shall include a list of noted deficiencies as well as follow-up actions for all job site activities, and date deficiencies were corrected.
- E. Stantec, the Contractor, and any subcontractors shall comply with all Remediation Parties' safety requirements.

1.4 REFERENCES

The following regulations shall be adhered to during the Work:

- A. Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29 CFR, Parts 1910 and 1926, including current amendments;
- B. Washington Industrial Safety and Health Act (WISHA) Standards and Regulations contained in the Washington Administrative Code (WAC) Chapter 296-800; and
- C. NIOSH/OSHA/USCG/EPA Occupational Safety and Health Guidance Manual for Hazardous Site Activities, October, 1985, DHHS (NIOSH) Publ. No. 85-115;

1.5 CONTRACTOR'S RESPONSIBILITIES

- A. The Contractor shall be solely responsible for the health, safety, and protection of all its employees, visitors, support personnel, subcontractor's employees, vendors, and suppliers who may enter the Site. The Contractor is required to ensure that all above-noted personnel, with the exception of personnel associated with the ongoing commercial activities at the Site, comply with the health and safety provisions outlined in this specification, and the minimum standards set forth under OSHA and other recognized health and safety standards. Any specific operation, machine, or process not addressed in the specification will be governed by other applicable General Safety Orders of OSHA, WISHA, and the City of Sunnyside. These requirements apply continuously throughout the performance of this Contract by the Contractor, until final completion of the Work, and are not limited to regular working hours.
- B. The Remediation Parties and Stantec or their agents, employees, or representatives are not responsible for the means, methods, techniques, sequences, or procedures utilized by the Contractor, or for safety precautions and programs in connection with the Work. The Remediation Parties have no obligation or responsibility under this Contract to review, approve, inspect, or enforce any safety precautions and programs of the Contractor.

1.6 SITE HEALTH AND SAFETY OFFICER

Stantec and the Contractor shall each designate a SHSO to implement, monitor, and enforce the Site HASP. The SHSOs shall identify any unsafe hazards and shall take immediate action to protect Site personnel and the environment.

1.7 HEALTH AND SAFETY PROGRAM

- A. Stantec and the Contractor shall maintain a Health and Safety Program consistent with the requirements of the above-noted laws and regulations. At a minimum, the Health and Safety Program shall incorporate the following requirements:
 - 1. Applicable hazardous waste worker training.
 - 2. Medical monitoring and surveillance program.
 - 3. Written health and safety program and Site-specific health and safety plans.
 - 4. Written respiratory protection and training program.
 - 5. Written hazard communication program.

1.8 SITE SPECIFIC HEALTH AND SAFETY PLAN

Stantec and the Contractor shall each prepare and maintain a Site-specific HASP for use by its employees, visitors, support personnel, subcontractor's employees, vendors and suppliers who may enter the Site. The Health and Safety Plan shall, at a minimum, meet the requirements established in 29 CFR 1910.120(b)(4) and address the following:

- A. Description of work to be completed.
- B. Site access and controls, including sign-in procedures.
- C. Designation of responsible Site personnel to contact in the event of emergency - 24 hours per day.
- D. Locations and phone numbers of emergency services.
- E. Identification of possible chemical exposure hazards.
- F. Identification of possible explosion hazards.
- G. Health and safety monitoring equipment and procedures for use on-site.
- H. Site operating procedures and safety guidelines.
- I. Emergency procedures and information for personnel injury, fire, or equipment failure.
- J. Personnel and heavy equipment decontamination procedures prior to leaving the work zones or the Site.

1.9 HEALTH AND SAFETY SITE ACCESS REQUIREMENTS

- A. Stantec and the Contractor shall restrict access to work areas to those employees, support personnel, subcontractor's employees, vendors, and suppliers necessary for completion of the Work.
- B. Personnel associated with the on-site commercial activities shall have access to the Site, but shall not be permitted to access active work areas or exclusion zones. These personnel shall be required to sign in and sign out, so they can be accounted for in case of a Site emergency or evacuation.
 1. Truck drivers associated with on-site commercial activities shall not be required to sign in, but will be directed through the Site by Site personnel.
- C. Stantec and the Contractor shall grant access to any federal, state, or local regulatory representative. Proper Site entry procedures shall be followed, including review of identification, and Health and Safety training certification and sign in. The Remediation Party Representative shall be immediately notified of the presence of such representatives.

PART 2 PRODUCTS

(Not Used)

PART 3 EXECUTION

- A. Stantec and the Contractor shall ensure that the Site is free of all non-prescription drugs, alcohol, and firearms at all times.
- B. The RP Representative and Contractor superintendent shall take an active role in enforcing the safety requirements by participation in safety conferences, hazard analysis (see below), daily tailgate meetings, walk-through inspections, correction of violations, etc., including that of subcontractor's work.

- C. Stantec and the Contractor shall at all times keep the construction area free from accumulations of waste material and rubbish, and prior to completion of the work remove all waste material and rubbish from the premises and all tools, equipment, and materials not the property of the Remediation Parties or Site owners. On completion of the construction, Stantec and the Contractor shall leave the Site and premises in a clean, neat and workmanlike condition satisfactory to the Remediation Parties, Site owners and Ecology, as a condition for final payment.
- D. Any notification that a condition exists that violates the safety and health requirements of these specifications or of standards referenced in this section, shall be immediately corrected. In the event that the Contractor fails or refuses to promptly correct the condition, Stantec may issue a stop work order to all or any part of the Work. When satisfactory corrective action has been taken, an order to resume Work shall be issued. The Contractor shall not be entitled to any extension of time, or to any claim for damage, or to additional compensation by reason of either the directive or the stop work order. The Remediation Parties shall not be liable for failure to order the discontinuance of any or all of the Contractor's operations nor shall any such failure relieve the Contractor of his responsibility for the safety of personnel and property.
- E. All cases of death, occupational diseases, traumatic injury of employees or the public or property damage resulting from performance of Work under this Contract shall be recorded and reported to the Project Manager immediately, and in writing within 24 hours.
- F. Operation of equipment, including equipment on slopes, shall be in a manner approved by the equipment manufacturer in all operating configurations.
- G. If a conflict should occur between the requirements contained in the specifications, the approved health and safety programs, or the referenced safety and health code and standards, the more stringent requirement shall prevail.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. This specification prescribes the requirements for the installation and maintenance of a Storm Water Pollution Prevention Plan (SWPPP) and the implementation of erosion and sediment control practices as defined herein. Work includes the furnishing of all labor material, tools, and equipment and the performance of all operations and incidentals necessary to do so, and the field design of controls as may be required.
- B. Should there be any conflict between any specifications and/or data sheets, the order of precedence shall be:
 - 1. This Specification
 - 2. Referenced SWPPP
 - 3. Referenced Specifications

1.2 REFERENCES

Unless otherwise specified, all material, procedures, and work shall be in accordance with the following codes and standard specifications to the extent indicated by reference herein. Each publication shall be the latest revision and addendum in effect unless noted otherwise.

- A. Washington Department of Ecology, *Stormwater Management Manual for Eastern Washington*, September 2004.
- B. City of Sunnyside Guide to Developer Extension for Erosion and Sediment Control.
- C. American Society for Testing and Materials (ASTM) and American Association of State Highway and Transportation Officials (AASHTO):
 - ASTM D4751 Standard Test Method for Determining Apparent Opening Size of a Geotextile
 - ASTM D4491 Standard Test Method for Water Permeability of Geotextiles by Permittivity
 - ASTM D4632 Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
 - ASTM D4355 Standard Test Method for Deterioration of Geotextiles by Exposure to Light
 - ASTM D6241 Standard Test Method for the Static Puncture Strength of Geotextiles
 - ASTM D4533 Standard Test Method for Trapezoid Tearing Strength of Geotextiles
 - ASTM D4397 Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications
 - AASHTO T88 Standard Method of Test for Particle-Size Analysis of Soils
- D. SWPPP, prepared by the Stantec and approval obtained from the City of Sunnyside pursuant to Sunnyside Municipal Code (SMC) 15.54.

1.3 SUBMITTALS

Unless otherwise advised, Contractor shall submit the following items for approval to Stantec:

- A. Construction sequence schedule for land-disturbing activities within each excavation area.

- B. Manufacturer's label from silt fence fabric, and/or straw wattle, indicating product name and manufacturer.

1.4 TERMINOLOGY

- A. Construction Sequence Schedule: An orderly listing and time frame for all land-disturbing activities along with the planned erosion and sediment control measures to be constructed and maintained for the duration of those activities.
- B. "Stabilization" means the proper placement of grading and/or covering of soil or rock to insure their resistance to soil erosion, sliding, or other earth movement.
- C. "Temporary Soil Erosion Control Measures" means interim control measures which are installed or constructed for the control of soil erosion until permanent soil erosion control is in place.

PART 2 PRODUCTS

2.1 SILT FENCE

Geotextile silt fence shall be a commercially produced product which is constructed using a synthetic filter fabric (propylene, nylon, polyester, or ethylene yarn) certified by the manufacturer.

2.2 STRAW WATTLE

Straw wattle shall be a commercially produced product consisting of cylinders of biodegradable plant material (weed free straw, coir, or wood fiber or shavings) encased within biodegradable netting. Netting material shall be clean, evenly woven and free of contaminating materials.

Straw wattle shall be 8 to 10 inches in diameter with a maximum length of 25 feet for ease of manual handling. Straw wattle shall be secured with 24-inch long by 1-inch thick wooden stakes.

2.3 CATCH BASIN DRAIN INSERT

Geotextile drain inserts shall be a commercially produced product which is constructed using a synthetic filter fabric (propylene, nylon, polyester, or ethylene yarn) certified by the manufacturer. The drain insert shall be sized to fit the catch basins present on North 1st Street and Warehouse Avenue.

2.4 TEMPORARY PLASTIC COVERING

Plastic sheeting for erosion protection of soil stockpiles or sloped areas shall be constructed of polyethylene plastic with a thickness of at least 6 mil certified by the manufacturer.

2.5 STABILIZATION GRAVEL

Aggregate base material shall be from a clean, off-site source, and shall consist of Washington Specification 9-09.9(3) base course crushed surfacing, or Stantec approved equivalent.

PART 3 EXECUTION

Schedule and conduct construction operations in such a manner and sequence that erosion on the Site is minimized. Coordinate the installation of temporary erosion control features to the extent necessary to ensure effective and continuous control of erosion throughout the period of Work.

3.1 DELINEATE EXCAVATION AREAS

All excavation areas shall be marked in the field prior to any land disturbance (earthwork operations). These areas will be marked with survey stakes, paint, or safety fencing by Stantec. These areas will mark the limit of any earthwork operations including soil stockpiling.

3.2 CONSTRUCTION ACCESS

- A. Access to the Site shall be limited to the paved entrances at North 1st Street and Warehouse Avenue unless otherwise directed by Stantec.
- B. If and where sediment is inadvertently transported onto a public road surface, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the road by shoveling or sweeping and be transported to an on-site location as directed by Stantec. Where street sweeping is implemented it shall not exceed the Site perimeter particulate action level.

3.3 SILT FENCES

- A. The silt fencing should be trenched in to a depth of 6 inches and backfilled with the stakes on the down-gradient side of the fence.
- B. The fabric should be pulled tight during installation so it does not “wave” in the wind.
- C. The minimum height of the top of the silt fence shall be 2 feet and the maximum height shall be 2.5 feet above the ground surface.
- D. The stakes shall be driven a minimum of 12 inches below ground surface.
- E. If more than one course of fence must be joined end to end, the ends should be wrapped so there is no gap between courses.
- F. The silt fence shall be inspected routinely and repaired as necessary during the construction activities.
- G. After permanent stabilization has been established, silt fencing shall be removed from the Site.

3.4 STRAW WATTLE

- A. Straw wattle shall be placed on the ground surface where the topography is flat and good contact with the ground can be established. In areas where the topography promotes rapid or channelized runoff, anchor trenches 4 to 6 inches deep will be dug for the placement of the wattles.

- B. Wooden stakes 24 inches in length shall be used to secure the straw wattle every 5 feet and at the ends of each wattle.
- C. The wattles shall be installed to abut tightly end to end.
- D. The straw wattle shall be inspected routinely and repaired or replaced as necessary during the construction activities.
- E. After permanent stabilization has been established, straw wattle shall be removed from the Site.

3.5 SURFACE ROUGHENING

- A. Disturbed and/or exposed soils shall not remain exposed and unworked for more than:
 - a. Fifteen (15) days from October 1 through June 30; or
 - b. Thirty (30) days from July 1 through September 30.
- B. Disturbed areas that have not been stabilized with gravel or otherwise protected from erosion (e.g., plastic covering), shall be roughened by the Contractor at least every two weeks or following any rain event greater than 0.25 inches in a 24-hour period.
- C. Disturbed areas shall be roughened by "tracking" a bulldozer over the area or similar approved method. Tracks will be oriented parallel to the slope contours and will uniformly cover the disturbed area.

3.6 STOCKPILING OF SOIL MATERIALS

- A. Soil stockpiles will not be implemented without the approval of the RP Representative.
- B. Soil stockpiles shall be located within the excavation area limits as delineated in Section 3.1.
- C. Stockpiles of impacted soil shall not be constructed outside of the excavation from which the soil was generated and shall conform to the requirements in Section 026000, "Contaminated Soils Removal and Management".
- D. Soil stockpiles shall not exceed eight (8) feet in height.

3.7 INTERCEPTOR BERMS

Interceptor berms shall be constructed to divert storm water away from excavations or disturbed areas as appropriate.

- A. Minimum top width of 1 foot.
- B. Minimum height of 1 foot.
- C. Maximum side slope of 1:1.
- D. No erosion shall occur at the outlets. Install energy dissipation measures as necessary.

3.8 TEMPORARY PLASTIC COVERING

- A. Plastic shall be placed so the seams are parallel with the flow of water. Plastic may be placed perpendicular to the slope if the slope length is less than ten (10) feet.
- B. Minimum of eight (8) inches of overlap at the seams.
- C. Seams shall be taped.
- D. Sand filled bags shall be placed along seams, edges, and the surface of the plastic to prevent wind from exposing covered soil.
- E. Inspect plastic sheeting for rips, tears, and open seams and repair immediately.
- F. If erosion is likely at the end of the protective sheeting, suitable protection shall be installed to reduce the velocity of runoff.

3.9 CONSTRUCTION AREA STABILIZATION

Backfilled areas shall be completed to grade with a minimum 3-inch layer of aggregate gravel unless the area will be finished with asphalt. If the backfill area lies within the truck turnaround gravel road, this layer shall be 6 inches thick. Gravel shall be placed in a uniform, single, horizontal lift and compacted with a vibratory drum roller.

3.10 DUST CONTROL

Contractor shall make every effort to control dust for the duration of the Work as required in Section 015726 DUST CONTROL. This effort shall include minimizing the area of disturbed soil exposed at any one time. The measures implemented shall be implemented until all disturbed areas have been covered with permanent stabilization.

3.11 MAINTENANCE

All sediment and erosion control facilities shall be maintained by the Contractor, as required, in order for them to continue to perform effectively. Inspections to meet the City of Sunnyside municipal code and approved SWPPP will be performed by Stantec. Inspection records are to be documented as performed. Stantec shall monitor and inspect all facilities until all permanent stabilization is in place and the SWPPP is terminated. Once the plan is terminated, the Contractor will remove all remaining temporary erosion and sediment control measures such as silt fence or straw wattles.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. This specification prescribes the requirements for the implementation of the Project Dust Control Plan. Work includes the furnishing of all labor material, tools, and equipment and the performance of all operations and incidentals necessary to do so, and the field design of controls as may be required.
- B. Should there be any conflict between any specifications and/or data sheets, the order of precedence shall be:
 - 1. This Specification
 - 2. Referenced Dust Control Plan
 - 3. Referenced CPS

1.2 REFERENCES

Unless otherwise specified, all material, procedures, and work shall be in accordance with the following codes and standard specifications to the extent indicated by reference herein. Each publication shall be the latest revision and addendum in effect unless noted otherwise.

- A. American Association of State Highway and Transportation Officials (AASHTO): AASHTO T88 Standard Method of Test for Particle-Size Analysis of Soils
- B. Project Dust Control Plan, prepared by the Stantec and approval obtained from the Yakima Regional Clean Air Agency (YRCAA) pursuant to the YRCAA Regulation 1.

1.3 SUBMITTALS

Unless otherwise advised, Contractor shall submit the following items for approval to Stantec:

- A. Construction sequence schedule for land-disturbing activities within each excavation area.
- B. Equipment to be used to implement the contingency plans for dust control.

1.4 TERMINOLOGY

- A. Construction Sequence Schedule: An orderly listing and time frame for all land-disturbing activities.
- B. "Stabilization" means the proper placement of grading and/or covering of soil to insure the reduction of dust generation.

PART 2 PRODUCTS

2.1 STABILIZATION GRAVEL

Aggregate gravel material shall be from a clean, off-site source, and shall consist of Washington Specification 9-09.9(3) base course crushed surfacing, or Stantec approved equivalent.

2.2 REAL TIME AIR MONITORING

Personal data ram (pDR-1000AN), or equivalent, units shall provide real time air monitoring of respirable particulate matter less than 10 microns (PM10) in milligrams per cubic meter (mg/m³).

PART 3 EXECUTION

Schedule and conduct construction operations in such a manner and sequence that dust generation on the Site is minimized. Coordinate the implementation of the Project Dust Control Plan with work of Section 031200 EARTH MOVING and Section 024000 DEMOLITION.

3.1 CONSTRUCTION ACCESS

- A. Access to the Site shall be limited to the paved entrances at North 1st Street and Warehouse Avenue unless otherwise directed by Stantec.
- B. If and where Site soil is inadvertently transported onto a public road surface, the road shall be cleaned thoroughly at the end of each day by the Contractor. Sediment shall be removed from the road by shoveling or sweeping and be transported to an on-site location as directed by Stantec.
 - a. Where street sweeping is implemented, it shall not exceed the Site perimeter particulate action level.

3.2 CONTROLLED EXCAVATION AND BACKFILLING

- A. The Contractor shall plan all shallow soil excavation activities to limit the amount of soil handling required.
- B. The Contractor shall load all soil requiring disposal directly to haul trucks whenever practicable.
- C. If soil requiring disposal cannot be loaded directly to haul trucks, the Contractor shall stockpile the soil as described in Section 3.4 of this specification.
- D. Open excavations will be backfilled by the Contractor as soon as practicable once the horizontal and vertical design limits have been achieved.
 - a. Stantec shall be responsible for verifying and documenting that excavations have achieved the horizontal and vertical design limits.
 - b. The Contractor shall not backfill any excavation without RP Representative approval.
 - c. Stantec may allow the Contractor to backfill portions of excavations while soil excavation continues in another portion of the same excavation.
- E. Clean import backfill material shall be unloaded adjacent to excavations whenever practicable to avoid stockpiling and double handling soils on-site. If allowed by the RP Representative, the Contractor may "tailgate" import material directly into the excavation. The criteria for allowing "tailgating" will be whether the import material can be spread evenly enough to allow lift placement and compaction without additional handling.
- F. Excavation areas where backfill has been completed as determined by the RP Representative, shall have permanent stabilization installed by the Contractor as soon as possible.

- a. The Contractor shall not apply permanent stabilization without RP Representative approval.
- b. Permanent stabilization shall be installed in compliance with the requirements in the construction specifications Section 312000 EARTH MOVING.

3.3 SOIL STOCKPILING

- A. The Contractor shall only implement any soil stockpiles temporarily and will be removed before the end of each work day, whenever practicable.
- B. Any soil stockpile that will remain in place for a forecasted wind speed of 30 mph or greater will be wetted to minimize airborne particulates or covered with plastic by the Contractor.
 - a. Soil stockpiles which are to be covered with plastic shall comply with the construction specifications Section 015713 TEMPORARY EROSION AND SEDIMENT CONTROL.
- C. The Contractor shall only stockpile contaminated soil under the requirements of the construction specifications Section 026000 CONTAMINATED SOILS REMOVAL AND MANAGEMENT.

3.4 HAUL TRUCK MANAGEMENT

- A. Haul truck traffic shall be directed to utilize the existing gravel road on the Bee-Jay Scales parcel whenever practicable.
- B. Haul trucks shall only drive on undisturbed ground, disturbed impacted soil covered with temporary or permanent stabilization of gravel aggregate, or backfill material such that particulate action levels are not exceeded.
- C. Haul truck speeds on-site shall not exceed 10 mph.
- D. All trucks used to haul material shall utilize a tarp to cover the load.

3.5 PARTICULATE AIR MONITORING

- A. The Contractor shall conduct and document air monitoring of respirable particulate matter less than 10 microns (PM10) in all active work areas as required by the Compliance Monitoring Plan (CMP) and HASP.
- B. Stantec shall conduct and document air monitoring of PM10 at the downwind Site boundary as required by the CMP and HASP.

3.6 CONTINGENCY MEASURES

If the above dust control measures are unable to maintain PM10 levels below Site action levels, the following contingency measures shall be implemented:

- A. The Contractor shall use a water truck to apply water to Site haul routes or areas being backfilled.
 - a. Water applied for dust control on Site haul routes shall not result in the tracking of Site soil to the public roads or sidewalks.

- b. Water applied for dust control on Site haul routes shall not result in surface runoff.
- B. The Contractor shall use a manual water applicator to apply water to excavated soil, soil stockpiles, and other areas that are inaccessible to a water truck.
 - a. Water applied for dust control of inaccessible areas shall not result in erosion of soil or contact water that must be managed.
- C. The Contractor shall obtain all water for dust control from the City Public Works Department, unless directed to another source by the RP Representative.
- D. Other dust control contingency measures may be applied by the Contractor, as necessary, with approval from the RP Representative.

END OF SECTION

PART 1 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

- A. Shallow Soil Excavation Engineering Design Report
- B. Shallow Soil Excavation Construction Plans and Specifications
- C. Section 026000 – Contaminated Soils Removal and Management
- D. Section 026200 – Contaminated Liquids Removal and Management
- E. Section 312000 – Earth Moving

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of concrete located in the Area 1 East excavation area; and
 - 2. Demolition and removal of asphalt surface from the Area 6 excavation area
 - 3. Drain and remove or abandon underground piping and utilities.
- B. The estimated quantities of the major demolition items are:
 - 1. 100 cubic yards of concrete; and
 - 2. 60 cubic yards of asphalt.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or recycled.
- B. Remove and Recycle: Process and segregate applicable construction and demolition debris for transport off-site to approved recycling facility.
- C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, salvaged, or recycled.

1.4 SUBMITTALS

- A. Methods: The Contractor shall submit detailed methods for the draining and removal of underground piping for Stantec approval.
- B. Inventory: After demolition of items is complete, the Contractor shall submit a list of items that have been removed and salvaged.
- C. Disposal Records: The Contractor shall provide bills of lading, manifests, invoices, receipts, and other documentation for disposal and/or recycling of materials.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

1.6 PROJECT CONDITIONS

- A. The Remediation Parties assumes no responsibility for items being demolished.

- B. On-site burning of materials will not be permitted.
- C. Do not use explosives for demolition.
- D. It is assumed that no hazardous materials are present in the materials to be demolished; however, some hazardous materials may be encountered. Hazardous materials may include asbestos containing materials and lead based paint. If hazardous materials are encountered, all applicable laws and regulations shall be followed.

PART 2 PRODUCTS

(Not Used)

PART 3 EXECUTION

3.1 PREPARATION

- A. Contractor shall locate, identify, disconnect, and seal or cap off indicated utilities before areas are excavated or affected items are demolished.
- B. Contractor shall provide and maintain exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement prior to or during demolition.

3.2 TEMPORARY PROTECTION

- A. Contractor shall protect existing Site improvements and appurtenances to remain in place.
- B. Contractor shall provide temporary barricades and other protection required to prevent injury to people or adjacent structures during demolition activities.
- C. Contractor shall provide protection to ensure safe passage of people around the demolition areas.

3.3 CONCRETE AND ASPHALT DEMOLITION, GENERAL

- A. Contractor shall demolish the indicated items. Use methods required to complete the work within limitations of governing regulations.
- B. Contractor shall break the concrete and asphalt into sections with a maximum width of 3 feet or smaller. The Contractor shall determine if additional processing requirements will be required by the facility accepting the material.
- C. Conduct safety risk assessments as the demolition progresses to identify any hazards that may result.
- D. Contractor shall conduct the demolition activities and debris removal operations to ensure minimum interference with the commercial activities at the Site.
- E. Contractor shall use water or other suitable materials and/or methods to minimize dust in accordance with regulatory requirements.

3.4 UNDERGROUND PIPE REMOVAL

- A. Pipeline Excavation
1. General: The excavation of pipelines will be performed by the Contractor to remove overburden soil, expose the pipeline for inspection, and removal of sufficient soil to allow for draining and removal of the pipeline.
 2. Pipeline overburden shall only be excavated to the extent of the excavation areas shown on the design drawings, unless otherwise directed by the RP Representative.
 3. Excavated overburden soil shall be performed in accordance with the CPS, design drawings, Section 026100 CONTAMINATED SOILS REMOVAL AND MANAGEMENT, and Section 031200 EARTH MOVING.
- B. Pipeline Draining
1. General: Pipelines will be inspected and tapped or cut for gravity or vacuum-assisted drainage by the Contractor.
 2. The exposed pipeline shall be inspected for to determine its status or if it is open at any point.
 - i. Any pipeline that may be active shall not be tapped, cut, or removed until the status has been determined and without the approval of the RP Representative.
 - ii. If there are one or more points where the pipe is open, the Contractor shall test the pipe opening(s) for an explosive atmosphere using a LEL meter.
 3. When no openings are found in a pipeline, the Contractor shall tap the pipeline for further investigation.
 - i. The Contractor shall select the highest point of the exposed piping to tap.
 - ii. Spill containment measures shall be in place at the tap location, consisting of a sufficiently large, lined sump to contain any potential liquid release. Liner material shall be at least 6 mil plastic sheeting with no seams or cuts that could allow liquid to pass through the liner.
 - iii. Once tapped, the opening shall be tested with a LEL meter and inspected to determine the amount of fluid in the pipeline.
 4. After a pipeline has been inspected for contents and an explosive atmosphere, the Contractor shall drain the pipeline for removal.
 - i. The Contractor shall select the lowest point of the exposed piping to tap or cut for drainage.
 - ii. Spill containment measures shall be in place at the tap/cut location, consisting of a sufficiently large, lined sump to contain any potential liquid release. Liner material shall be at least 6 mil plastic sheeting with no seams or cuts that could allow liquid to pass through the liner.
 - iii. The Contractor shall cut or tap the pipeline and allow the contents to drain from the pipeline.
 - iv. All contents shall be collected and containerized by the Contractor in accordance with Section 026200 CONTAMINATED LIQUIDS REMOVAL AND MANAGEMENT.
- C. Pipeline Removal
1. General: Drained pipelines shall be removed by the Contractor to the extent of the excavation area(s).
 2. The Contractor shall cut pipelines to be removed into manageable segments for safe handling on-site and to the requirements of the recycling or disposal facility.

3. Removed segments shall be loaded to bins for transport, if available, or stockpiled out of the way of other work areas.
- D. Pipeline Abandonment
1. General: Removed pipelines that continue beyond the extents of the Site excavation areas will be abandoned in place by the Contractor.
 2. The end of the removed pipeline shall be flush cut by the Contractor and prepared to be grouted and sealed.
 3. The end of a pipeline being abandoned shall be filled with a minimum of 2 feet of non-shrink cement slurry or grout.
 4. The ends of abandoned in place piping shall be surveyed by Stantec.

3.5 RECYCLING DEMOLISHED MATERIALS

- A. Contractor shall separate recyclable materials from other materials to the maximum extent possible.
- B. Contractor shall arrange for the transportation of any recyclable demolition materials off-site to limit the disruption of other construction activities and to limit the handling and stockpiling of those materials on-site.
- C. Remediation Parties retain the value from the recycled materials.
- D. Contractor shall process and segregate recyclable construction and demolition debris as instructed by the selected recycling facilities.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. Except for items or materials indicated to be recycled, reused, or salvaged, the Contractor shall remove demolished materials from the Site and legally dispose of them in an approved landfill.
 1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Contractor shall not burn any demolished materials.

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

- A. Work Included:
1. Decontamination Pad: Contractor to provide and install all materials, equipment, and labor necessary for the establishment and operation of a decontamination pad area. Pad must accommodate steam-assisted, water-assisted, and dry decontamination of equipment, as well as cleaning of rubber-tired and track-mounted equipment, as needed.
 2. Construction Equipment Decontamination: Contractor to perform equipment decontamination as directed in the specifications, HASP, and CPS.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Decontamination Pad: Temporary decontamination area shall be lined with an impermeable material with no seams, rips, or tears and be constructed to capture and contain all wash water.
1. Liner used for the decontamination pad shall be 40mil polyethylene or equivalent.
 2. The liner material shall be placed over a geotextile ground pad or mat for protection from ground punctures.
 3. The liner shall be protected from damage by equipment tracks or tread with plywood or track mats, as appropriate.
- B. Steam Pressure Washers: Hotsy 1200 Series Steam-Assisted Pressure Washer or equivalent; capable of non-steam operations.
1. Maximum flow-rate shall be 6 gallons per minute or less.

PART 3 EXECUTION

3.1 DECON PAD CONSTRUCTION

- A. General: The decon pad will be constructed to accommodate sufficient width and length for the cleaning and containment of the largest piece of equipment.
- B. Installation:
1. Select a flat, accessible area sufficient to accommodate space requirements.
 2. Grade area and remove material that may damage the liner material as necessary.
 3. Install geotextile ground pad, liner and track mats.

3.2 EQUIPMENT DECON

- A. Dry Decontamination
1. Dry decontamination techniques shall be utilized to remove any substantial soil buildup from the equipment (i.e., tracks, wheels, buckets, blades, etc.).
 2. Equipment contacting impacted soil shall be dry decontaminated within that excavation area before leaving the area.
 3. Dry decontamination will only be conducted with tools such as shovels and brushes, and not pressurized air, to limit the generation of dust.

B. Wet Decontamination

1. Wet decontamination techniques shall be utilized to wash fixed material from the surface of construction equipment before leaving the Site.
2. All wet decontamination of construction equipment must be performed within the decontamination containment pad.
3. Decontamination wash water shall be collected and containerized by the Contractor for proper characterization and off-site disposal.

3.5 DECON PAD MAINTENANCE

- A. General: The liner system at the decon pad shall be inspected and repaired as required to maintain containment of decon water and residuals.
- B. Execution: A liner repair kit will be used to repair small tears or punctures, repair panels may be placed to repair larger breaches.

END OF SECTION

PART 1 GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 011000: Summary of Work
- B. Section 312000: Earth Moving

1.2 DESCRIPTION

- A. This specification covers the Contractor's requirements for management of the material, equipment, and personnel associated with the removal, handling, and disposal of debris, contaminated debris, contaminated soils, and other contaminated material. All activities conducted under this section shall be performed in strict accordance with the Contractor's approved Health and Safety Plan (HASP), as well as with other appropriate specification sections.
- B. Unforeseen Contaminated Material: If material, not otherwise identified as contaminated, is encountered which may be dangerous to human health or the environment, the Contractor shall immediately notify the RP Representative concerning the possible existence of such material. Within 3 calendar days, the RP Representative shall perform testing to characterize the material. If the material is not contaminated, the RP Representative will direct the Contractor to proceed without change. If the material is contaminated, the RP Representative will direct a change order pursuant to the Contract Agreement.

1.3 DEFINITIONS

- A. Contaminated Material: Any material that poses a potential health risk or requires special handling and disposal procedures beyond conventional debris/soil handling or disposal procedures to protect the environment.
- B. Contaminated Material Staging/Stockpile Area: A secure area within the limits of the Exclusion Zone used for storage of contaminated material prior to removal of material from the project Site.
- C. Staging/Stockpile Area: The area of the Site in which the Contractor stockpiles non-contaminated debris, soils, and material.
- D. WAC: Washington Administrative Code.
- E. TSDF: A treatment storage or disposal facility permitted to accept hazardous or non-hazardous wastes in accordance with provisions of 40 CFR 264.
- F. DOT: Department of Transportation

1.4 SUBMITTALS

The Contractor shall submit the following:

- A. Contractor shall describe the procedures to be followed in the removal, loading, and handling of contaminated debris and other contaminated material. Those procedures should be in agreement with standards in the following Federal Code of Regulations: 29 CFR 1926.65, 40 CFR 61 Subpart M, 40 CFR 261, and 49 CFR 172, and WAC 173-350.

- B. All contaminated soil from the Site shall be transported to the Waste Management Columbia Ridge Landfill at 18177 Cedar Springs Lane in Arlington, Oregon. The Contractor shall submit a list of TSDFs, solid waste disposal facilities and any other disposal or recycling facilities proposed for the disposal of all other materials associated with this Contract. The list shall contain the address, telephone number, and contact name for each facility. The Contractor shall provide written approval from each of its acceptors of material from this Contract and written notice that each is in conformance with its operating permit.
- C. The Contractor shall provide copies of written notification to all rental companies concerning the intended use of rental equipment and the possibility of contamination of the equipment.
- D. Stantec shall submit a complete waste profile sheet and sample(s) of material to be shipped to any selected disposal facility in accordance with the facility's requirements, as necessary. These items shall be submitted in advance such that sufficient time is allowed for analysis, approval, and scheduling and the overall project schedule are not affected.
- E. The Contractor shall submit weigh tickets documenting all tonnage of material removed from the Site and disposed at the approved disposal facilities within three (3) days of the material being removed from the Site.
- F. Stantec shall receive written evidence, including the name, address, and USEPA identification number, that the hazardous/non-hazardous waste transporter and waste disposal facilities are approved for hazardous/non-hazardous waste transport-disposal by the USEPA and State or local regulatory agency(s) in accordance with provision of 49 CFR 171-179, 40 CFR 262-264, and are CERCLA acceptable.

PART 2 PRODUCTS

2.1 EQUIPMENT

- A. **Storage of Contaminated Solid Material:** The Contractor shall provide 6 mil polyethylene material for covering any temporary contaminated material stockpiles, as necessary. The polyethylene shall be seamed together with duct tape. Any damage to the plastic shall be repaired or the plastic replaced immediately.
- B. **Drums/bulk containers for Transportation and/or Storage:** DOT-approved containers for small quantity containerization and DOT-approved trucks for transport and disposal of large quantities of soils.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

- A. No on-site activities shall be permitted to start until the Contractor has adequately addressed all comments provided on the Health and Safety Plan (HASP) as part of the Remediation Parties' and Stantec's reviews. Take all necessary precautions to adequately protect personnel and public and private property in the areas of the work. Personnel shall wear and utilize protective clothing and equipment as specified in the HASP. Eating, smoking, or drinking shall not be permitted in the Exclusion and

Contamination Reduction Zones as defined in 40 CFR 1910.120. Site work zones shall be clearly marked. If a hazardous/non-hazardous material spill occurs outside the Exclusion Zone, stop work immediately, notify the RP Representative immediately, and correct the condition prior to resumption of work in accordance with the CPS and HASP.

- B. Prior to commencing excavation or removal activities, the Contractor shall conduct initial Site inspections in accordance with provisions of the HASP. The Contractor shall locate, clearly delineate, and mark in the field the Exclusion Zone, the Contamination Reduction Zone, and the Support Zone, as directed by the Site Health and Safety Officer pursuant to health and safety considerations as identified in the HASP. The limit of the Exclusion Zone shall not be decreased to less than the outer limits of an excavation with known contaminated material without written approval from the Remediation Parties and Stantec.
- C. The Contractor shall obtain necessary permits and licenses in conjunction with non-hazardous waste removal, hauling, and disposal, and furnish timely notification of such actions required by federal, state, regional, and local authorities. Notify the Remediation Parties and Stantec in writing 5 days prior to the commencement of the removal work.
- D. All vehicles and equipment entering the Exclusion Zone shall be considered contaminated and shall not leave the Exclusion Zone without being properly decontaminated as specified in the Contractor's HASP. Route traffic within the Exclusion Zone away from the remediated areas to prevent recontamination of these areas.

3.2 DEBRIS AND CONTAMINATED MATERIAL REMOVAL AND HANDLING

- A. Drums and Bulk Containers
 1. The Contractor shall implement the procedures for handling drums and bulk containers, in accordance with 29 CFR 1926, Subpart H.
 2. The Contractor shall inspect each drum and bulk container to assure its integrity prior to being moved.
 3. Labeling of drums and bulk containers shall be performed in accordance with 40 CFR 61, Subpart M; 40 CFR 261, and 49 CFR 172, WAC 296-843.
- B. Contaminated Soil Stockpiling
 1. Excavated contaminated soil shall be loaded directly to haul trucks whenever possible.
 2. Contaminated soil stockpiles may be constructed temporarily within the excavation where the soil was excavated if haul trucks are not available or if water drainage is required.
 3. Contaminated soil stockpiles shall be maintained so that contact water or water draining from the soil will drain back to the open excavation and not over the adjacent ground surface.
 4. Contaminated soil stockpiles shall not be maintained overnight without the approval of the RP Representative and shall comply with all provisions of the Site Dust Control Plan and Storm Water Pollution Prevention Plan.
- C. Construction Equipment and Haul Truck Traffic
 1. Construction equipment which has contacted contaminated soil within an excavation exclusion zone may not leave that area until it has been decontaminated.
 2. Haul trucks shall not be permitted to drive in areas where they would contact any

disturbed contaminated soil that has not been covered with temporary or permanent stabilization.

3. Each haul truck shall be inspected after being loaded to ensure no materials are present on the trailer walls or tailgate.
- D. All contaminated soil or sludge collected as a result of equipment or vehicle decontamination shall be removed and containerized on a daily basis or sooner if conditions warrant. Care shall be taken not to spill or otherwise contaminate areas of the Contamination Reduction Zone outside the Exclusion Zone.
- E. Incidental Garbage and Rubbish – All incidental garbage and rubbish generated by the Contractor activities shall be placed in approved Contractor furnished containers to prevent spread and accumulation of dust and dirt, and shall be removed from the area as often as necessary, but not less than at least once at the end of each week. Incidental garbage and rubbish shall not be disposed of in contaminated material containers.

3.3 DEBRIS AND CONTAMINATED WASTE MATERIAL DISPOSAL

- A. Disposal of Solid Wastes – Handling and disposal of solid waste material that will be salvaged for recycling or reuse shall be in strict accordance with WAC 173-345.
- B. Disposal of Non-Hazardous Waste – Contaminated material not classified as hazardous shall be disposed in accordance with RCRA Subtitle D and WAC 173-350.

3.4 MANIFEST RECORDS

- A. Stantec shall originate, maintain, and provide the transporters with completed copies of waste shipment manifests and/or bills of lading records for all wastes, and verify wastes and quantities of each shipped load.
- B. The manifest forms and records shall be consistent with the State of Washington, the United States Environmental Protection Agency, and U.S. Department of Transportation Requirements.
- C. The Remediation Parties will supply the generator number for the Site.

3.5 DECONTAMINATION

All Stantec and Contractor material, equipment, and facilities shall be decontaminated as specified in the approved HASPs and Section 025100 DECONTAMINATION.

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

- A. Work Included:
1. VACUUM SYSTEM: A vacuum system will be provided for the collection of soils and liquids. Vacuum service hoses will be watertight, flexible hoses of varying lengths and diameters.
 2. TRANSFER PUMPING: Small-diameter water transfer pumps will be used to pump liquids from excavations to collection or storage vessels, if needed.
 3. CONTACT WATER MANAGEMENT: Surface water and precipitation that contacts contaminated materials, and decon water will both be considered contact water, to be presumed as contaminated, and to be collected and disposed, as necessary.
 4. STORAGE: Contaminated liquids will be stored in drums, tanks or bulk containers.
 5. DISPOSAL: Contaminated liquids will be characterized by Stantec and disposed of at an approved off-site facility by the Contractor.
- B. Related Sections:
1. 024000 – Demolition
 2. 025100 – Decontamination
 3. 026000 – Contaminated Soils Removal and Management

PART 2 PRODUCTS

(Not Used)

PART 3 EXECUTION

3.1 VACUUM SYSTEM

- A. General: A vacuum system will be used by the Contractor to enable the collection of liquids from spill containments, underground pipelines, or the decontamination pad.
- B. Ensure the vacuum system is properly grounded.
- C. Before the collection of liquids, verify the collection vessel is clear of other materials such as soils or other dissimilar fluids.
- D. Clean and inspect collection hoses and vessel in the vacuum system before each use, and repair as necessary.

3.2 TRANSFER PUMPING

- A. General: A transfer pump will be used by the Contractor to pump liquids from spill containments, underground pipelines or from other containers.
- B. Clean and inspect hoses and pumps used in the transfer of fluids before each use, and repair as necessary.
- C. Ensure connections are secure before pumping, verify all hoses and connectors are appropriate for pressure service of pump used.

- D. Ensure pump is stopped and isolated from energy source prior to disconnecting hoses and connections.

3.3 CONTAMINATED LIQUID MANAGEMENT

- A. General: Surface water or precipitation contacting contaminated soils, liquids drained from underground pipelines, and decontamination water generated in cleaning contaminated items will be considered contaminated liquid, requiring collection, storage, and off-site treatment and/or disposal by the Contractor, as necessary.
- B. Prepare all excavations and containments to minimize run-on water, including the installation of berms, erosion controls, and covers.
- C. DOT-approved drums and a liquid storage tank with a minimum volume of 2,000 gallons shall be made available by the Contractor for the storage of collected contaminated liquids.
- D. Stantec shall collect samples for the characterization of collected contaminated liquid prior to transportation for off-site treatment and/or disposal.

3.4 STORAGE

- A. General: Collected fluids and contact water will be stored on-site until characterization results have been received and analyzed by Stantec.
- B. Contaminated liquids from excavations, pipelines, and the decontamination of vehicles, equipment, and debris shall be collected and containerized. Containerized water shall be transported off-site for treatment and/or disposal at an approved facility by the Contractor. The frequency of this removal shall depend on the decontamination operation and on the decontamination pad construction. Any spillage of this water onto previously uncontaminated areas shall be cleaned up and decontaminated to the satisfaction of the RP Representative at the Contractor's expense. Costs and logistics for supplying, collection, containerization, transport, and disposal of contact water shall be the Contractor's responsibility.

3.5 TREATMENT AND DISPOSAL

- A. General: Collected contaminated liquids shall be transported to an approved off-site treatment and/or disposal facility by the Contractor.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

This specification prescribes the requirements for the excavation, backfilling, and compaction activities as described in the EDR, CPS, and design drawings. Also prescribed are the requirements for the removal, replacement, and disposal of unsuitable materials; the disposal of surplus materials; and the furnishing, placement, and compaction of backfill material.

1.2 RELATED SPECIFICATIONS

- A. Section 024000: Demolition
- B. Section 026000: Contaminated Soils Removal and Management

Coordinate work prescribed by this specification with work prescribed by the above listed specifications.

1.3 TERMINOLOGY

The following terms are defined as stated, unless otherwise indicated:

- A. Excavation shall include the satisfactory removal, stockpiling, or disposal of all materials encountered regardless of the nature of the materials.
- B. Backfill shall include the transport, placement, and compaction of satisfactory backfill material to form finished surfaces suitable for their intended use in areas excavated of unsatisfactory material.
- C. Satisfactory Backfill Material – Soil classified per AASHTO T88 as one of the following:
Gravel (GW, GP, GM),
Sand (SW, SP, SM), or

Satisfactory backfill material shall be borrow material of such type and characteristics approved by Stantec. No broken concrete, demolition material, frozen material, top soil nor any material designated as unsatisfactory shall be used for fill material.

- D. Unsatisfactory material shall include, but not be limited to, all grass, weeds, vegetation of any type, roots, trash, boulders, debris, demolition materials or any layer, strata, formation or deposit of soil determined by the RP Representative to be unsuitable for use as backfill at the Site. No material will be classified as unsatisfactory solely on the basis of excessive moisture content.
- G. Modified Proctor Density – The maximum dry density achieved per ASTM D1557 when testing a sample of material representative of that to be compacted in the field.
- H. Optimum Moisture Content – The moisture content at which the maximum dry density is achieved.
- I. Inspection and Testing Agency – The company, partnership, or corporation retained to perform the inspections and tests required to determine and verify compliance of the work with the requirements of this specification.

- J. Rock – Solid, homogenous, interlocking crystalline material with firmly cemented, laminated or foliated masses, or conglomerate deposits that cannot be removed without systematic drilling and blasting, drilling and the use of expansion jacks or feather wedges, or the use of backhoe-mounted pneumatic hole punchers or rock breakers; also large boulders, buried masonry or other concrete masses (except sidewalks and other pavements and slabs) larger than 1/2 cubic yard in volume.

1.4 REFERENCES

The publications listed below form part of this specification. Each publication shall be the latest revision and addendum in effect unless noted otherwise. Except as modified by the requirements specified herein, this specification shall conform to the applicable provisions of these publications.

- A. American Society for Testing and Materials (ASTM) and American Association of State Highway and Transportation Officials (AASHTO):
AASHTO T88 Standard Method of Test for Particle-Size Analysis of Soils
ASTM D 1557 Standard Test Method Laboratory Compaction Characteristics of Soil Using Modified Effort
ASTM D 2922 Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
- B. Occupational Safety and Health Administration (OSHA)
OSHA Construction Industry Standards, Title 29, Code of Federal Regulations, Part 1926, Safety and Health Regulations for Construction.

1.5 SUBMITTALS

- A. Product Data
1. Before delivery of materials from each borrow source, Stantec shall require for approval certified laboratory test data for the material to be used in the work:
 - a) Soil Classification and Gradation (ASTM D422); and
 - b) Modified Proctor (ASTM D1557) except for aggregate gravel material.
 2. At least one representative sample shall be analyzed from each borrow source and an additional sample analyzed for every 5,000 cubic yards of material to be used at the Site.
- B. Analytical Data
1. Before delivery of materials from each borrow source, Stantec shall require for approval certified laboratory test data for the material to be used in the work:
 - a) VOCs (EPA Method 8260);
 - b) Chlorinated Herbicides (EPA 8150);
 - c) Metals (EPA 6000 and 7000);
 - d) Nitrate (EPA 300.0); and
 - e) Ammonia (EPA 350.3).
 2. At least one representative sample shall be analyzed from each borrow source and an additional sample analyzed for every 5,000 cubic yards of material to be used at the Site.
- C. Borrow source soil materials must comply with WAC 173-340-740 criteria for unrestricted land use for the COCs identified in Section 1.5 (B).

1.6 QUALITY ASSURANCE

- A. The RP Representative shall be responsible for observing and documenting earthwork activities at the Site. The QA/QC Officer shall obtain samples and perform tests to verify that the work is being performed in accordance to the specifications. The QA/QC Officer will obtain testing samples in accordance with Part 3.4 of this specification.
- B. All materials shall be approved by the RP Representative prior to being placed, and shall conform to the requirements of Section 1.5.
- C. The RP Representative shall approve all material placement in accordance with this specification. The suitability of the material placement shall be determined by in-place compaction testing in accordance with Part 3.4 of this specification.
- D. The RP Representative may direct the Contractor to cut an inspection trench or test pit to ensure that the requirements of the specifications are being met. Any test trenches or pits shall be limited in depth and size, and shall be backfilled with the excavated material, or suitable clean fill. The material shall be compacted as required by the specifications.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

- A. **General Backfill:** This specification covers the quality and gradation for the general backfill material which will be used to backfill excavations. The soil shall contain no frozen soil, snow, ice, sod, organic materials such as roots, vegetation, manure, or other unsatisfactory materials. Rock particles of a size that would interfere with mixing and compaction shall be removed prior to placement. Backfill material shall meet the following requirements, or be approved by Stantec:
 - Soil must be a Unified Soil classification of SW, SP, or SM;
 - Soil must contain a minimum of 98% by weight which passes the 2" sieve;
 - Soil must contain a minimum of 80% by weight which passes the No. 4 sieve; and
 - Soil must contain a maximum of 20% by weight which passes the No. 200 sieve.
- B. **Aggregate Gravel Material:** This specification covers the quality and gradation for aggregate gravel material to be used for temporary and permanent stabilization of excavation backfill. Aggregate gravel material shall be from a clean, off-site source, substantially free of unsatisfactory materials, and shall consist of Washington Specification 9-03.9(3) base course crushed surfacing, or Stantec approved equivalent.
- C. **Pea Gravel:** This specification covers the quality and gradation for coarse aggregate to be used for backfill, as necessary, near the saturated zone of excavations. Pea gravel shall be from a clean, off-site source, washed to remove unsatisfactory materials and shall meet the Washington Specification 9-03.1(4) AASHTO Grading No. 8 (3/8" pea gravel), or Stantec approved equivalent.

2.2 SOURCE QUALITY CONTROL

Stantec shall conduct testing of any off-site soil sources to ensure that the soils are suitable for the intended use. At a minimum, the following tests will be performed:

- A. General Backfill: A grain-size distribution shall be conducted on off-site soils to be used for the general backfill using ASTM D 422 at a frequency of 1 test per 5,000 cubic yards of material. The material shall meet the requirements of Part 2.1 (A) of this specification
- B. Aggregate Gravel: A grain-size distribution shall be conducted on off-site soils to be used for aggregate base course at a frequency of one test per 500 cubic yards of material. The material shall meet the requirements of Part 2.1 (B) of this specification.
- C. Pea Gravel: A grain-size distribution shall be conducted on off-site soils to be used for aggregate base course at a frequency of one test per 500 cubic yards of material. The material shall meet the requirements of Part 2.1 (C) of this specification.

PART 3 EXECUTION

3.1 PREPARATION

- A. Preceding Work
Contractor shall clear and grub the work area as needed.
 - 1. Install measures for the control, prevention, and abatement of erosion and accumulation of silt for that area, including conformance with any applicable federal, state, or local codes or regulations.
- B. Contractor shall identify, stake, and/or mark all known underground, above ground, and overhead utilities.
- C. Contractor shall protect benchmarks, existing structures, fences, paving, and curbs outside the area of construction activities from equipment and vehicular traffic.

3.2 EXCAVATION

- A. General
 - 1. Contractor shall remove soil, rock, and other materials in excavation areas as indicated on the Design Drawings.
 - 2. All excavated soils exceeding the Site-specific criteria shall be transported to and disposed of at an approved landfill facility.
 - 3. All excavated soils not exceeding the Site-specific criteria shall be reused as backfill on-site, as practicable.
- B. The Contractor shall conduct excavation activities to prevent ponding of surface water within the limits of excavation and fill. Contractor shall be responsible for dewatering any ponding water in the excavated areas as directed by Stantec.
- C. Contractor shall stabilize the sides of excavations as necessary to prevent slope failure or any other earth movement which might injure personnel or damage existing structures or equipment. The stabilization method employed shall comply with the following: all pertinent requirements of the OSHA Construction Industry Standards; all applicable federal, state and local codes and regulations; the CPS; and the Site-specific Health and Safety Plans.

3.3 BACKFILL AND COMPACTION

- A. General Backfill
 - 1. The backfill shall consist of imported clean fill material which is generally free of decomposable wastes and debris.
 - 2. The backfill shall be placed in loose lifts not to exceed 12 inches prior to compaction.
 - 3. The backfill shall be compacted to at least 90 percent of the maximum dry density and within 2 percent of the optimum water content using ASTM D 1557. Compaction testing will only be conducted on each lift of the excavation, when accessible.
 - 4. Thicknesses of each lift shall be verified by surveyor, or other means, to be less than 12 inches following compaction, when accessible.

- B. Aggregate Gravel
 - 1. The gravel shall consist of imported clean fill material which is generally free of decomposable wastes and debris.
 - 2. The gravel shall meet Washington Specification 9-03.9(3) or approved equivalent.
 - 3. Gravel shall be placed in a uniformly compacted single, horizontal lift not to exceed 12 inches and compacted with a vibratory drum compactor, if accessible.

- C. Pea Gravel
 - 1. The gravel shall consist of imported clean fill material which is free of decomposable wastes and debris.
 - 2. The gravel shall meet Washington Specification 9-03.1(4) AASHTO Grading No. 8 or approved equivalent.
 - 3. Pea gravel shall be placed in a uniformly compacted single, horizontal lift not to exceed 12 inches and compacted with a vibratory drum compactor, if accessible.
 - 4. The backfill shall be compacted to at least 90 percent of the maximum dry density and within 2 percent of the optimum water content using ASTM D 1557. Compaction testing will only be conducted on each lift of the excavation, when accessible.

3.4 FIELD QUALITY CONTROL

- A. Quality control (QC) testing shall be performed by the Stantec QA/QC Officer, subcontractors or contracted laboratories, as appropriate, and shall be reviewed by the RP Representative.

- B. Compaction testing as described in Part 1, Section 1.4 will be required for each compacted lift.

- C. Compaction testing will be conducted on each lift of backfill placed at a frequency of one test per 5,000 square feet with a minimum of one test per placed lift except in instances where:
 - 1. It is unsafe to have personnel access the confined space of a deep excavation (greater than 4 feet bgs and not properly sloped); or
 - 2. The compaction specification is determined to be unattainable due to the lifts proximity to the saturated zone.

3. In these instances, the Contractor will conduct the compaction efforts under the supervision of Stantec. Compaction will continue until Stantec deems the lift is compacted to the 90% maximum density specification, or, for lifts near the saturated zone, no further compaction is achievable.
- D. Compaction testing shall be conducted by Stantec using a nuclear density gauge in accordance with ASTM D2922 or an equivalent method.
- E. If a compaction test does not meet the requirements, the area will be re-compacted and tested again. If necessary at the direction of the RP Representative, backfill that does not meet compaction requirements will be excavated, re-placed, and re-compacted by the Contractor to meet the compaction requirements.
- F. The results of all compaction tests will be logged by the QA/QC Officer.

3.5 FINISH GRADING

Trim and finish-grade the surface of the disturbed areas to match the existing grade, or as approved by the RP Representative. Finish grade disturbed areas so that no ponding occurs. Leave areas designated to be asphalted in a condition suitable for subsequent placement of required subbase and asphalt layers.

3.6 STORM WATER MANAGEMENT

The Contractor shall implement storm water control measures as necessary to prevent storm water runoff from accumulating in the construction area, to prevent erosion or damage to the subgrade and to prevent migration of sediment off-site.

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

This section describes the work necessary to install two replacement monitoring wells following the completion of the excavation and backfill in Area 1 West and Area 1 East. The estimated replacement details for the two monitoring wells are:

- MW-4; and
 - Total depth of 17 feet below ground surface (bgs).
 - Screened interval from 7 to 17 feet bgs.
- MW-5.
 - Total depth of 16 feet bgs.
 - Screened interval from 6 to 16 feet bgs.

The same well installation specifications shall apply if additional wells are identified for abandonment and subsequent replacement during the course of the Work.

1.2 RELATED SPECIFICATIONS

- A. Section 332900 – Well Decommissioning

1.3 REFERENCES

Except as modified by the requirements specified herein, Work included in this specification shall conform to the applicable provisions of these publications.

- A. American Water Works Association (AWWA)
AWWA A100 Water Wells (1984)
- B. Washington Administrative Code (WAC)
Title 173, Chapter 160 – Minimum Standards for Construction and Maintenance of Wells
Title 173, Chapter 162 – Regulation and Licensing of Well Contractors and Operators

PART 2 PRODUCTS
(Not Used)**PART 3 EXECUTION**

3.1 NOTIFICATION

- A. A notice of intent shall be filed with Ecology by the well drilling contractor at least 72 hours prior to initiating construction of any monitoring wells on-site.
- B. The appropriate fee shall accompany the notices of intent.

3.2 WELL INSTALLATION

- A. Stantec shall be responsible for contracting a licensed well drilling contractor pursuant to WAC 173-162 for the installation of any the Site monitoring wells. The construction of monitoring wells shall be performed in accordance with all Washington Department of Ecology regulations in the presence of the RP Representative. The well contractor shall take full responsibility for insuring the well is properly constructed.
- B. The location of the replacement monitoring wells shall be established by survey to match

the location of the monitoring well it is replacing.

- C. The well screen interval shall be installed to match the monitoring well it is replacing.
 - 1. The well screen interval shall be constructed with 2-inch flush threaded, schedule 40 PVC casing perforated with 0.010-inch slots and fitted with a PVC end cap.
 - 2. The well screen casing will be flush threaded to the necessary length of schedule 40 PVC blank casing to complete the casing to the ground surface.
- D. The borehole annular space shall be filled with a sand filter pack from the bottom of the borehole to no less than 1 foot or greater than 5 feet above the top of the screened interval.
 - 1. The remaining annular space shall be filled with hydrated bentonite.
- E. The monitoring well shall be completed with flush-mounted well monuments.
- F. An accurate log of the well installation details shall be maintained. At minimum, the log shall include total depth of the installed well, the installed screen interval, depth or location of any lost grout, diameter of well bore, volumes of cement grout (gallons, number of bags and type) used to fill the borehole, the depth for all stages of cement grouting operations, other pertinent data requested by Stantec. A well completion report shall be submitted to Ecology for each monitoring well within 30 days of the well installation.

3.3 WELL DEVELOPMENT

- A. Installed monitoring wells shall be developed by surging and bailing to remove fine-grained sediment from the formation and monitoring well.
- B. A surge block shall be used to agitate the well water and materials before and during well development.
- C. A submersible pump or bailer shall be used to purge groundwater and sediment from the well casing.
- D. Well development shall be continue until water quality parameters (pH, temperature, specific conductivity, and turbidity) have all stabilized or ten well casing volumes of groundwater have been purged.
- E. Groundwater quality parameters shall be recorded onto well development field logs.

3.4 SURVEYING

- A. Installed monitoring well locations shall be surveyed by a licensed surveyor.
 - 1. Horizontal coordinates shall be determined to the nearest 0.1-foot relative to the North American Datum of 1983 (NAD83).
 - 2. Elevation shall be determined to the nearest 0.01-foot relative to the National Geodetic Vertical Datum of 1988 (NAVD88).

END OF SECTION

PART 1 GENERAL

1.1 DESCRIPTION

This section describes the work necessary to abandon two existing monitoring wells and four existing temporary injection wells, as shown on the Design Drawings. The depths of the wells are as follows:

- MW-4: Depth = 17 feet below ground surface (bgs)
- MW-5: Depth = 18 feet bgs
- IW-1: Depth = 18 feet bgs
- IW-2: Depth = 18 feet bgs
- IW-3: Depth = 18 feet bgs
- IW-4: Depth = 18 feet bgs

The same specifications shall apply if additional wells are identified for abandonment during the course of the Work.

1.2 REFERENCES

Except as modified by the requirements specified herein, Work included in this specification shall conform to the applicable provisions of these publications.

- A. American Water Works Association (AWWA)
AWWA A100 Water Wells (1984)
- B. Washington Administrative Code (WAC)
Title 173, Chapter 160 – Minimum Standards for Construction and Maintenance of Wells
Title 173, Chapter 162 – Regulation and Licensing of Well Contractors and Operators

PART 2 PRODUCTS
(Not Used)**PART 3 EXECUTION**

3.1 NOTIFICATION

- A. A notice of intent shall be filled with Ecology by the well drilling contractor at least 72 hours prior to initiating the decommissioning of any monitoring or injection wells on-site.
- B. The appropriate fee shall accompany the notices of intent.

3.2 WELL DECOMMISSIONING

- A. Stantec shall be responsible for contracting a licensed well drilling contractor pursuant to WAC 173-162 for the decommissioning of any Site wells. All grouting and sealing of the wells shall be performed in accordance with all Washington Department of Ecology regulations in the presence of the RP Representative.
- B. If practical, the well casing shall be pulled from the ground while sealing with grout. If pulling the casing is not feasible, the casing shall be cut off at least 5 feet bgs and the borehole will be filled with grout.
- C. The well contractor shall take full responsibility for cementing operation, including

volumes to be used and insuring that the hole and/or well is properly abandoned.

- D. Unless otherwise specified, all materials removed from the boreholes shall be containerized on-site. These containerized materials shall be stored on-site for disposal by the Contractor.
- E. An accurate log of the well abandonment details shall be maintained. At minimum, the log shall include total depth of the abandoned well, depth or location of any lost grout, diameter of well bore, volumes of cement grout (gallons, number of bags and type) used to fill the borehole, the depth for all stages of cement grouting operations, and other pertinent data requested by Stantec. A well decommissioning report shall be submitted to Ecology for each well within 30 days of the well decommissioning.

END OF SECTION

Appendix B
Storm Water Pollution Prevention Plan



Stantec

**Storm Water Pollution Prevention
Plan For Shallow Soil Excavation
Activities**

**Bee-Jay Scales Site
116 N 1st Street
Sunnyside, WA 98944**

Prepared for:

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Submitted by:

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2321 Club Meridian Dr., Suite E
Okemos, MI 48864

August 26, 2013


Stantec

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

REVIEW AND APPROVAL

CERTIFICATION: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. A copy of this Storm Water Pollution Prevention Plan (SWPPP) shall be maintained at the remediation site during remediation activity and be available to operating personnel.

	Stantec
	<i>Marisa Kaffenberger</i>
	Marisa Kaffenberger, P.E. Senior Engineer

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

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Stantec

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

FIGURES

Figure 1 Site Location Map
Figure 2 Site Preparation Plan

ATTACHMENTS

Attachment A Site Inspection Report

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec), on behalf of Chevron Environmental Management Company (CEMC) and Atlantic Richfield Company (ARC), has prepared this Storm Water Pollution Prevention Plan (SWPPP) for the shallow soil excavation activities to be conducted at Bee-Jay Scales Site (the Site). The general scope of these excavation activities is detailed in the *Shallow Soil Excavation Engineering Design Report* (EDR), dated August 26, 2013.

The remedial excavation activities have been proposed to address the Corrective Action Plan (CAP) and Consent Decree No. 132017660 between the Washington State Department of Ecology (Ecology), CEMC, and ARC. The shallow soil excavation activities seek to remove nitrate and ammonia impacted soil at the Site.

This document outlines the requirements for managing materials and surface water runoff derived from or incorporated with the excavation activities. It addresses potential impacts to storm water during excavation and soil handling activities. It also describes procedures for ensuring that storm water runoff is controlled and identifies provisions for erosion control.

The protective measures described in this SWPPP are required from the commencement of intrusive construction activities until final stabilization. Since the planned excavation activities (including demolition, excavating, and/or filling) result in the disturbance of less than 1 acre of total land area, a National Pollutant Discharge Elimination System (NPDES) permit is not required and the project will not require coverage under the Washington Construction Stormwater General Permit (CSWGP). Although a NPDES permit is not required, this SWPPP will be submitted to fulfill the requirements for an Erosion and Sediment Control Plan pursuant to City of Sunnyside (the City) Municipal Code 15.54. This plan was prepared using the *Stormwater Management Manual for Eastern Washington, 2004*.

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

2.0 SITE INFORMATION

2.1 SITE DESCRIPTION

The Site is located at the southeast corner of North 1st Street and Warehouse Avenue in Sunnyside, Washington. The Site Location Map is shown on **Figure 1**. The Site is approximately 3.4 acres in size and consists of two parcels: Parcel No. 22102522014 and Parcel No. 22102522015 as recorded by the Yakima County Department of Assessment. Parcel No. 22102522014 is located at 116 North 1st Street and is owned by Bee-Jay Scales, Inc. Parcel No. 22102522015 is located at 301 Warehouse Avenue and is currently owned by Western General Land, LLC. The parcels are zoned light industrial and the Site is used for storage and industrial purposes. The Site is bordered to the north and west by Warehouse Avenue and North 1st Street and to the south by active railroad tracks. One property to the north of the Site across Warehouse Avenue is a residence. The remaining adjacent properties to the north, east, and south of the Site are commercial/industrial facilities. The property west of the Site across North 1st Street is owned by the City and is currently vacant.

There are a total of four structures located on the Site, totaling approximately 11,000 square feet (sf), and an additional approximately 36,000 sf of the Site is paved with asphalt or concrete. A gravel road is maintained through the Site for semi-trucks to use as a turnaround when accessing the truck scale at the facility. The Site Preparation Plan is shown on **Figure 2**.

The topography of the surrounding area generally slopes gradually to the southwest. Based on survey data collected at the Site, the Site topography gently slopes to the south, but there is a low spot in the topography located in the southeast corner of the Site near MW-3. Most of the grades on-site are less than 2 percent; however, some localized grades of about 5 percent exist over short distances. Soil at the Site consists mostly of sand and silt in various proportions to a depth of 30 feet below ground surface (bgs). The Site is well drained and groundwater is typically encountered between approximately 5 to 12 feet bgs depending on the location.

Surface runoff generally drains from north to south with most of the storm water infiltrating through the Site soils to groundwater. The groundwater flow direction is generally to the northeast in the northern portion of the Site and to the southeast in the southern portion of the Site, with a groundwater flow divide observed at the southern edge of Area 5. The groundwater gradient observed at the Site typically ranges from approximately 0.003 to 0.014 feet per foot.

The storm drain system in the surrounding area conveys collected storm water to the south where it discharges into a canal that is part of the Sunnyside Valley Irrigation System. This canal then discharges to the Sulphur Creek Wasteway, which then discharges to the Yakima River. A storm drain assessment conducted at the Site in 2012 did not find conclusive evidence that groundwater from the Site was adversely impacting the storm water in this drain system.

There are no critical areas on the Site or on adjacent properties such as high erosion risk areas, wetlands, streams, or steep slopes.

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

2.2 SHALLOW SOIL EXCAVATION ACTIVITIES

The main objective of the shallow soil excavation activities is to remove nitrate and ammonia impacted soil located above the saturated zone. These excavation activities will remove impacted soil from eight excavation areas with a combined footprint of approximately 36,000 sf. The impacted soil will be loaded to haul trucks for off-site disposal. Non-impacted soil will also be excavated to allow safe access to the impacted areas; non-impacted soil may be reused on-site as backfill material. Soil that is disposed of off-site will be replaced by clean import soil.

In addition to the excavation and backfill activities described above, associated construction activities will include: Site preparation; abandonment of monitoring and injection wells within the excavation areas; removal of concrete and asphalt structures/surfaces; installation of replacement monitoring wells; and replacement of asphalt surfaces.

No changes to the Site uses are anticipated following the completion of this project. It is not planned that any of the existing buildings at the Site will be impacted by these construction activities. The asphalt that is removed will be replaced to match the existing conditions. Approximately 2,500 sf of concrete surface will be replaced with gravel following the backfill of the excavated areas.

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

3.0 BEST MANAGEMENT PRACTICES

This SWPPP describes procedures for ensuring storm water runoff does not contain sediment and that runoff is controlled during the excavation activities referenced in this document.

As specified in the *Stormwater Management Manual for Eastern Washington*, best management practices (BMPs) are defined as schedules of activities, prohibitions of practices, structural facilities, maintenance procedures, and/or managerial practices that when used singly or in combination, prevent or reduce the release of pollutants and other adverse impacts to waters of Washington State. During project implementation, Stantec and the selected construction company (the Contractor) shall ensure that any and all soil erosion and sedimentation control BMPs are maintained, protected, and replaced if damaged.

Soil erosion and sediment control will be established prior to the commencement of excavation activities including concrete and asphalt removal.

3.1 DEFINE EXCAVATION AREAS

Prior to the implementation of any intrusive activities, Stantec will mark the limits of the excavation areas. The construction activities involving the disruption of Site soils are planned to be confined to these defined areas. Excavation limits and sensitive areas or items will be identified with stakes and flagging, surface spray paint, construction fencing, or other suitable visually identifiable markers.

3.2 CONSTRUCTION ACCESS

Access to the Site by construction equipment and haul trucks will be limited to two points where paved approaches are already in place. This will help to limit the tracking of soil from the Site by haul trucks and other vehicles. The asphalt approaches will be inspected regularly (at least twice daily) for the tracking of Site materials. The Contractor will remove material from the asphalt if Site materials are noted.

The adjacent City sidewalks and streets will be inspected at least daily for signs that Site materials are being tracked from the Site. If significant Site materials are noted, the street and sidewalk will be cleaned by the Contractor using shovels and brooms or swept by a contracted street sweeping company retained by the Contractor. In addition, prior to any street washing efforts, drain inserts will be installed at storm water catch basins on North 1st Street and Warehouse Avenue (see **Section 3.4.2**).

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

3.3 CONSTRUCTION SEQUENCING

The primary objective of construction sequencing is to limit the total amount of disturbed area at any given time and to sequence events in such a way as to facilitate the least amount of exposed soil. This approach will minimize the amount of erosion and will maximize the effectiveness of sediment controls.

Open excavations will be backfilled and final stabilization installed as soon as Stantec has confirmed that the prescribed lateral and vertical extents have been reached. Larger excavations can be advanced and backfilled in sections to avoid having large areas of disturbed soil.

3.4 EROSION AND SEDIMENT CONTROL

The goal of erosion and sediment control (ESC) is to protect surface water and groundwater that could be affected by excavation activities. BMPs should be used to protect these receptors when sediment migration is possible.

3.4.1 Straw Wattles and Silt Fencing

Straw wattles and/or silt fencing will be used down-gradient of each excavation area and around any soil stockpiles that will be in place for more than 24 hours. Straw wattles are a sediment-trapping cylinder of straw bounded by degradable synthetic netting, while silt fencing consists of non-woven geotextile fabric supported vertically by wooden stakes. Both of these applications are designed to retain runoff, trap sediment, and maximize uniform sheet flow. Depending on the layout of each excavation area, straw wattles and silt fence may be installed individually or in combination to protect against sediment migration.

The straw wattles will be 8 to 10 inches in diameter and a maximum of 25 feet in length. In areas where existing topography promotes rapid or channelized runoff, anchor trenches 4 to 6 inches deep will be dug for the placement of the wattles to prevent blow out. In areas where topography is relatively flat, wattles may be placed directly on the ground surface if good contact can be established that requires runoff to pass through the straw material. Straw wattles will be installed to abut tightly end to end. Wooden stakes will be driven through the wattles at each end and approximately every 5 feet to secure them in place.

Silt fencing will be 2 feet high and typically comes in rolls 100 feet long. The skirt end of the silt fence will be trenched into the ground surface and buried to prevent runoff from flowing beneath the geotextile. Wooden stakes will be placed on the down-gradient side and driven into the ground surface to support the fencing.

Sediment controls will be inspected weekly and after significant precipitation events as part of the inspection requirements described in **Section 6**. Inspections should ensure that all materials remain stable, entrenched, and tightly abutted. Inspections should also verify that water has not scoured the ground surface or that undue amounts of sediment are accumulating on the upstream side. If significant amounts of sediment have collected above sections of

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

sediment controls, those sediments will be removed and disposed of off-site with impacted soil. Any damaged sections of wattle or fencing will be immediately repaired or replaced.

3.4.2 Storm Water Catch Basin Drain Inserts

If sediment and other Site materials are being tracked to adjacent City sidewalks and streets by haul trucks and other vehicles, drain inserts may be installed into the affected storm water catch basins on North 1st Street and Warehouse Avenue. The drain insert can effectively capture sediment that is tracked to City roads and is not removed by cleaning actions. Periodic checking and cleaning out of the drain insert would be required for the duration of the project. Sediment and/or debris removed from the drain insert would be hauled off-site with impacted soil. If the drain insert shows signs of wear or is damaged, a replacement drain insert would be installed.

3.4.3 Grading and Interceptor Berms

Grading and interceptor berms may be used to divert storm surface water from entering open excavations or disturbed areas, as appropriate. If interceptor berms are to be constructed, they will have a minimum height of 1 foot and will include energy dissipation zones, as necessary.

If an interceptor berm is damaged by construction equipment, repairs will be made before the end of that work day. Interceptor berms will be inspected weekly and after significant precipitation events as part of the inspection requirements described in **Section 6**. Inspections should ensure sediment has not collected in the flow area or at the outlet. If sediment must be removed from these areas, it will be disposed of off-site with impacted soil. Inspections will also ensure that any erosion at the berms or outlet is quickly repaired to avoid gully formation.

3.4.4 Plastic Covering

Though the use of soil stockpiles is expected to be minimal, when soil stockpiles will be present during a forecasted heavy precipitation or high wind event, plastic covering will be used to protect the soil from erosion. The plastic will be installed so the seams are parallel with the flow of water whenever possible with 8 inches of overlap at the seams. Sand filled bags will be placed along seams and as needed on the surface of the plastic to prevent wind from exposing covered soil. If erosion is likely at the end of the protective sheeting, additional erosion protection will be installed to reduce the velocity of the runoff.

Where plastic coverings are employed, they will be inspected weekly and after significant precipitation or wind events as part of the inspection requirements described in **Section 6**. Inspections will ensure that the plastic is not torn and that the seams are intact. Torn sheets will be replaced and open seams repaired. Inspections will also ensure that no erosion is occurring at the ends of the plastic covering.

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
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3.4.5 Surface Roughening

Soils will not remain exposed and unworked for more than:

- 15 days from October 1 through June 30; or
- 30 days from July 1 through September 30.

Disturbed areas that have not been stabilized with gravel or otherwise protected from erosion (e.g., plastic covering), will be roughened by the Contractor at least every 2 weeks or following any rain event greater than 0.25 inches in a 24-hour period. Disturbed areas will be roughened by “tracking” a bulldozer over the area. Tracks will be oriented parallel to the slope contours and will uniformly cover the disturbed area.

3.4.6 Final Area Stabilization

Backfilled areas will be finished to grade with crushed rock, gravel base, or equivalent. This will serve to reduce erosion during the remainder of the construction activities and restore the Site to prior conditions for the continuation of commercial activities.

If the backfill area lies within the truck turnaround route or will be used by truck traffic during this project, this layer shall be 6 inches thick. If the backfill area is within the equipment storage area, this layer shall be 3 inches thick.

Where asphalt was removed to conduct excavations, the asphalt will be replaced following backfill to match the existing conditions. In these areas, the asphalt will be installed as quickly as possible following the completion of backfill activities.

3.5 CONSTRUCTION WATER MANAGEMENT AND TREATMENT

For the purposes of this plan, construction water will be defined as any water generated at the Site that has contacted impacted or potentially-impacted soil or construction equipment. Construction water could be generated as a result of the removal of groundwater or storm water from open excavations or from the decontamination of construction equipment.

Excavations will be advanced until the first indication of the saturated zone is encountered and will not be advanced any deeper. Therefore, excavation dewatering is not expected to be necessary. In addition, the Sunnyside area climate is generally dry with the average annual rainfall of less than 8 inches. Granular Site soils will allow typical rain events to infiltrate the soil quickly and limit possible downtime due to storm water without any dewatering efforts. However, heavier precipitation events could require dewatering of storm water from open excavations.

Work activities will be conducted to limit the amount of water generated in excavations by implementing BMPs such as scheduling and sequencing work to limit the size of open excavations, backfilling excavations as soon as practicable, and preventing surface runoff from

**STORMWATER POLLUTION PREVENTION PLAN
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Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

entering excavations using grading and/or berms. Particular care will be taken with these BMPs when the weather forecast includes significant rainfall.

Water will also be generated during decontamination activities on-site and will require collection and disposal. Wet equipment decontamination will be limited to equipment demobilization from the Site. The water will be contained within the decontamination pad liner during active decontamination and pumped either to 55-gallon drums, a poly tank, or a vacuum truck depending on the volume being generated.

Water that is collected from open excavations or decontamination activities will not be discharged to any storm sewers, ditches, ground surface, or open excavations on or adjacent to the Site. Collected water will be containerized and sampled for characterization prior to disposal at a licensed off-site facility.

3.6 FINAL GRADING AND STABILIZATION

As outlined in the *Shallow Soil Excavation Construction Plans and Specifications*, after completion of the excavation backfilling activities, each affected area will be stabilized with rock aggregate or asphalt, as applicable, and graded to match the surrounding ground surface topography, minimize ponding, and encourage natural surface water runoff consistent with Site topography. Areas graded to final grade shall have final stabilization or temporary erosion control applied within 7 days. The Contractor will be responsible for confirming these conditions have been met.

3.7 WASTE DISPOSAL

Miscellaneous material (e.g., stakes, fencing, and straw wattle) generated during excavation activities will be handled and disposed of in a manner consistent with state and federal regulations. Any sediment which has migrated and collected in erosion and sediment control structures will be managed in the same way as impacted soils generated from the excavation activities.

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

4.0 Construction Phasing and BMP Implementation

The BMP implementation schedule will be driven by the construction schedule. The preliminary construction schedule is described below and includes the corresponding BMP implementation schedule. This construction schedule is approximate and will be updated with greater detail during the final project planning.

- Earliest anticipated project start date 2/20/2014
 - Mobilization and Site Preparation (including ESC implementation) ~1 week
 - Excavation and Backfill Activities ~7 weeks
 - Site Restoration and Demobilization ~1 week
- Latest anticipated project finish date 6/12/2014

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

5.0 Pollution Prevention Team

5.1 ROLES AND RESPONSIBILITIES

The pollution prevention team consists of personnel responsible for the implementation of the SWPPP, including the following:

- Erosion and Sediment Control Lead (ESCL) – primary contact, responsible for Site inspections (BMPs, visual monitoring, sampling, etc.); to be called upon in case of failure of any ESC measures. Because the disturbed area will be less than 1 acre this person does not need to be certified.
- Emergency Ecology Contact – individual to be contacted at Ecology in case of emergency.
- Emergency Owner Contact – individual that is the Site owner or representative of the Site owner to be contacted in the case of an emergency.
- Non-Emergency Ecology Contact – individual that is the Site owner or representative of the Site owner than can be contacted if required.

5.2 TEAM MEMBERS

Team members will be assigned to fill the roles and responsibilities listed above during the final project planning. Once team members have been selected, this section will be updated with their names and contact information and the SWPPP will be reissued.

**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

Bee-Jay Scales Site, Sunnyside, Washington
August 26, 2013

6.0 Site Inspections and Monitoring

Monitoring includes the visual inspection of the implemented erosion and sediment control BMPs and disturbed Site soil, as well as the documentation of the inspection and monitoring findings on an inspection report. A Site log book will be maintained for all Site SWPPP activities and will include:

- A record of the implementation of the SWPPP and other permit requirements; and
- Site SWPPP inspections.

This SWPPP may function as the Site log book if desired, or the forms may be separated and included in a separate Site log book. The Site log book must be maintained on-site or within reasonable access to the Site and be made available upon request to Ecology or the City.

6.1 SITE INSPECTION

All BMPs will be inspected, maintained, and repaired as needed to assure continued performance of their intended function. Site inspections will be conducted by a person who is knowledgeable in the principles and practices of erosion and sediment control. The on-site inspector will have the skills to assess the potential for water quality impacts as a result of the type of construction activities occurring on-site, and the knowledge of the appropriate and effective ESC measures needed to control the quality of storm water discharges.

Site inspection will occur in all areas disturbed by construction activities and at the Site perimeter, which would represent the discharge point for any surface storm water runoff. Storm water runoff (if present) will be examined for the presence of suspended sediment, turbidity, discoloration, and oily sheen. The Site inspector will evaluate and document the effectiveness of the installed BMPs and determine if it is necessary to repair or replace any of the BMPs to improve the quality of storm water discharges or erosion prevention. All maintenance and repairs will be documented in the inspection report provided in this document. All new BMPs or design changes will be documented in the Site inspection reports and log books.

6.1.1 Site Inspection Frequency

Site inspections will be conducted weekly and within 24 hours following any precipitation event resulting in greater than 0.25 inches of precipitation over a 24-hour period. Site inspections will only be conducted during construction activities.

6.1.2 Site Inspection Documentation

The Site inspector will record each Site inspection using the Site inspection form provided in **Attachment A**. The Site inspection form may be separated from this SWPPP document, but will be maintained on-site and be made available upon request to Ecology or the City.

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**STORMWATER POLLUTION PREVENTION PLAN
FOR SHALLOW SOIL EXCAVATION ACTIVITIES**

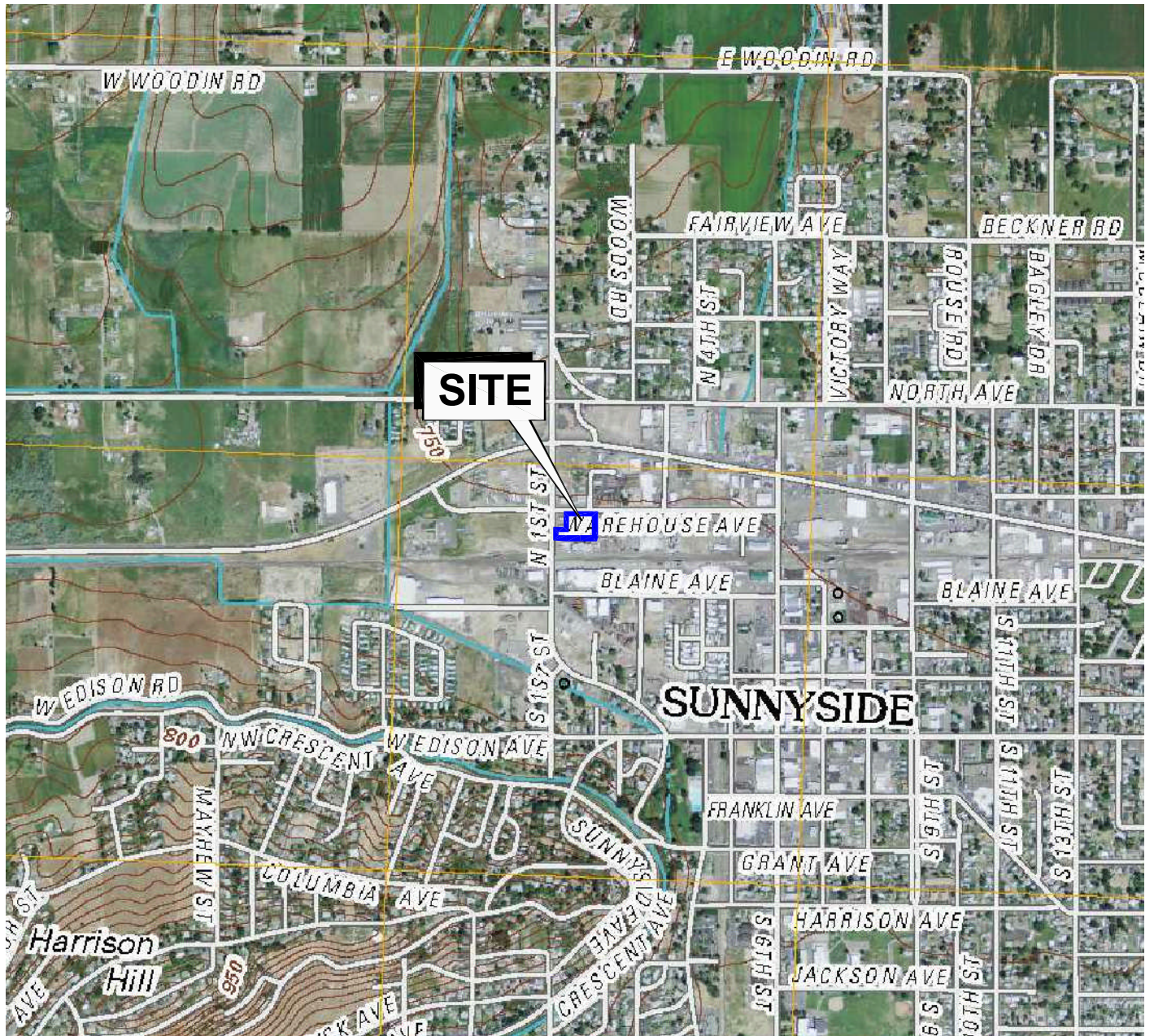
Bee-Jay Scales Site, Sunnyside, Washington

August 26, 2013

6.2 STORMWATER QUALITY MONITORING

The planned area of disturbance is less than 1 acre in size, and does not discharge to a surface water, and is therefore not subject to the general water quality monitoring requirements set forth in the Washington CSWGP.

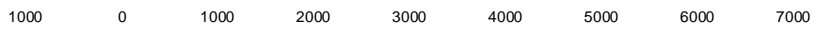
Figures



WASHINGTON



SCALE IN MILES



SCALE IN FEET

REFERENCE: USGS 7.5 MINUTE QUADRANGLE;
SUNNYSIDE, WASHINGTON; 2011



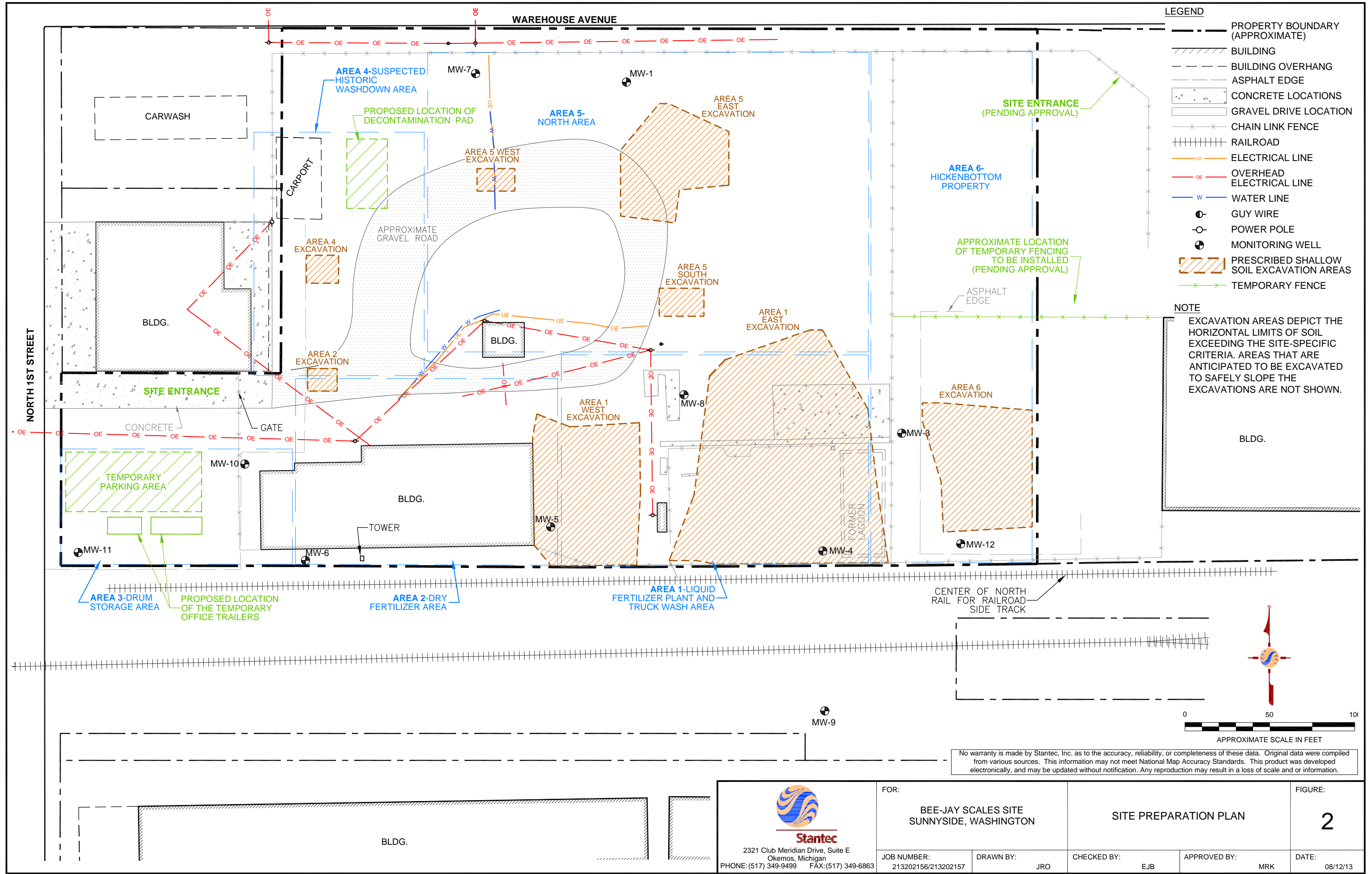
2321 Club Meridian Drive, Suite E
Okemos, Michigan
PHONE: (517) 349-9499 FAX: (517) 349-6863

FOR:
**BEE-JAY SCALES SITE
SUNNYSIDE, WASHINGTON**

SITE LOCATION MAP

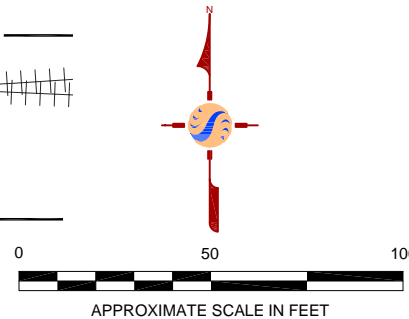
FIGURE:
1

JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13
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- LEGEND**
- PROPERTY BOUNDARY (APPROXIMATE)
 - ▨ BUILDING
 - - - BUILDING OVERHANG
 - ASPHALT EDGE
 - ▨ CONCRETE LOCATIONS
 - ▨ GRAVEL DRIVE LOCATION
 - CHAIN LINK FENCE
 - ||||| RAILROAD
 - UE ELECTRICAL LINE
 - OE OVERHEAD ELECTRICAL LINE
 - W WATER LINE
 - GUY WIRE
 - POWER POLE
 - ⊕ MONITORING WELL
 - ▨ PRESCRIBED SHALLOW SOIL EXCAVATION AREAS
 - TEMPORARY FENCE

NOTE
EXCAVATION AREAS DEPICT THE HORIZONTAL LIMITS OF SOIL EXCEEDING THE SITE-SPECIFIC CRITERIA. AREAS THAT ARE ANTICIPATED TO BE EXCAVATED TO SAFELY SLOPE THE EXCAVATIONS ARE NOT SHOWN.



No warranty is made by Stantec, Inc. as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and or information.

<p>2321 Club Meridian Drive, Suite E Okemos, Michigan PHONE: (517) 349-9499 FAX: (517) 349-6863</p>	FOR: BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON		SITE PREPARATION PLAN		FIGURE: 2
	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13

Attachment A
Site Inspection Report

SWPPP INSPECTION REPORT

Project Name: BEE-JAY SCALES SHALLOW SOIL EXCAVATION		Date of Inspection
Address: 116 N 1st ST and 301 WAREHOUSE AVE	City: SUNNYSIDE	County: YAKIMA

A GENERAL

Are approved plans available?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is sediment properly contained on project site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is earth disruption confined to areas specified on plans?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is there a potential for sediment to leave project site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

B CONTROL MEASURES

Are controls installed per plans?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Are controls adequate for this site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are controls properly maintained?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Is surface water being protected?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

C INSPECTOR'S COMMENTS

Specific on-site conditions:

Weather conditions:

Documentation (photos, samples, measurements, etc.):

Recommendations:

Corrections (if any) must be made by _____ / _____ / _____ (date)

Persons attending inspection:

D ACTION TAKEN

Inspector's Signature

Date

Appendix C
Dust Control Plan Application



RECEIVED AUG 26 2013

RECEIVED AUG 26 2013

329 North First Street,
Yakima WA 98901
(509) 834-2050
yakimacleanair.org

August 23, 2013

Stantec Consulting Services Inc.
C/o Marisa Kaffenberger
2321 Club Meridian Dr. Suite E
Okemos, MI 48864

RE: Project Dust Control Plans for the project of Bee-Jay Scales located at 116 N 1st Street Sunnyside WA.98944
(PDC # 14-522)

Ms. Kaffenberger:

This letter serves as the final approval for the Project Dust Control Plans submitted to this office on August 19, 2013, for the project of Bee-Jay Scales located at 116 N 1st Street Sunnyside WA.98944

We recognize the possibility of unanticipated dust emissions. If such an event occurs, and the emission is transported beyond the boundaries of the project, you need to contact this agency so that an investigation into the severity of the incident may be completed. We strongly encourage you to implement your plan as it is written and that you continually reevaluate the effectiveness of all your proposed control measures. Please note that any "sweeping" operations, weather conducted by street sweeper vehicles or hand brooms, must be conducted with water so as to minimize dust generation and transport.

If you have any questions concerning this approval please contact me at 509-834-2050 ext.113

A handwritten signature in blue ink that reads "Mark Edler".

Mark Edler
Compliance Division



Stantec

Stantec Consulting Services Inc.
2321 Club Meridian Dr., Suite E
Okemos, Michigan 48864
Tel: (517) 349-9499
Fax: (517) 349-6863

August 14, 2013

Yakima Regional Clean Air Agency
329 North First Street
Yakima, WA 98901

RE: Dust Control Plan for Bee-Jay Scales Site

To Whom It May Concern:

Stantec Consulting Services Inc., on behalf of Chevron Environmental Management Company and Atlantic Richfield Company, is submitting the enclosed Project Dust Control Plan and associated fee for planned shallow soil excavation activities at the Bee-Jay Scales Site, located at 116 N 1st Street and 301 Warehouse Avenue in Sunnyside, Washington.

Please let me know if the plan is approved as soon as possible. If you have any questions regarding this work, please do not hesitate to contact me at (517) 349-9499 ext. 275 or marisa.kaffenberger@stantec.com.

Sincerely,
Stantec Consulting Services Inc.

Marisa Kaffenberger

Marisa Kaffenberger, P.E.
Senior Engineer

Enclosures:

Project Dust Control Plan

YAKIMA REGIONAL CLEAN AIR AGENCY
329 NORTH FIRST STREET
YAKIMA WA 98901
(509)834-2050 / FAX(509)834-2060

PROJECT DUST CONTROL PLAN NO. _____

PROJECT NAME Bee-Jay Scales

LOCATION 116 N. 1st Street and 301 Warehouse Avenue, Sunnyside, WA 98944

PROJECT DESCRIPTION Shallow Soil Excavation of Nitrate and Ammonia Impacted Soil

START DATE Estimated March 2014

SIZE OF PROPERTY 3.4 acres SOIL TYPE(S) Sandy silt, silty sand, and gravel with sand.

PROPERTY OWNER Bee-Jay Scales, Inc (116 N 1st) & Western General Land (301 Warehouse)
name
116 N. 1st Street and 301 Warehouse Avenue, Sunnyside, WA 98944
address
Arno Johnson / George Johnson (509) 840-9450 / (509) 837-4214
contact person phone

GENERAL CONTRACTOR OR BUILDER Stantec Consulting Services Inc.
name
2321 Club Meridian Dr. Suite E, Okemos, MI 48864
address
Marisa Kaffenberger (517) 349-9499 ext. 275
contact person phone

SITE DEVELOPER OR EXCAVATOR Chevron Environmental Management Company / Atlantic Richfield Company
name
6101 Bollinger Canyon Rd., San Ramon, CA 94583 / 4 Centerpointe Dr.,
address
LPR-4-221 La Palma, CA 90623
Caryl Weekley / Kyle Christie (925) 790-3876 / (714) 670-5303
contact person phone

24-HOUR CONTACT PERSON Marisa Kaffenberger (517) 202-0459
name - please print phone numbers

DESCRIBE THE DUST PREVENTIVE REASONABLE PRECAUTIONS YOU WILL USE, INCLUDING METHOD OF APPLICATION, SPECIFIC TO EACH AREA, SUCH AS, SPOILS PILES, ALLEYWAYS, EMPLOYEE PARKING, ACCESSES, ETC.

See attached text.

YAKIMA REGIONAL CLEAN AIR AUTHORITY

Site Description

The Site is located in the City of Sunnyside (City), within Yakima County, and consists of the following two parcels: Parcel No. 22102522014 and Parcel No. 22102522015 as recorded by the Yakima County Department of Assessment. Parcel No. 22102522014 is located at 116 North 1st Street and is owned by Bee-Jay Scales, Inc. Parcel No. 22102522015 is located at 301 Warehouse Avenue and is currently owned by Western General Land, LLC (formerly owned by Hickenbottom & Sons, Inc.). The Site Location Map is shown on **Figure 1**. The Site is bordered to the north by Warehouse Avenue, to the east by North 1st Street, and to the south by active railroad tracks. One property to the north of the Site across Warehouse Avenue is a residence. The remaining adjacent properties to the north, east, and south of the Site are commercial/industrial facilities. The property west of the Site across North 1st Street is owned by the City and is currently vacant.

The Site is approximately 3.4 acres in size. There are a total of four structures located on the Site, totaling approximately 11,000 square feet (sf), and it is estimated an additional approximately 25,000 sf of the Site is paved with asphalt or concrete. Most of the areas without pavement have a layer of gravel with sand at the ground surface to a depth of 6 to 12 inches. Below that, soil at the Site consists mostly of sand and silt in various proportions to a depth of 30 feet below ground surface (bgs). The Site Preparation Plan is shown on **Figure 2**.

The Bee-Jay Scales parcel at 116 North 1st Street is approximately 2.8 acres in size. Three businesses currently operate at the Bee-Jay Scales portion of the property: Sandy Farms, a local trucking company; Sanleco, Inc., an interstate trucking company with an on-site tractor-trailer repair garage; and Bee-Jay Scales, a commercial scale operation. This parcel is accessed off North 1st Street at the west extent of the Site which is paved with concrete or asphalt for approximately 150 feet into the Site. This paved access will remain throughout the project. A gravel road is maintained through this parcel for semi-trucks to use as a turnaround when accessing the truck scale at the facility as part of the commercial activities. These commercial activities are planned to continue throughout the proposed soil remediation project.

The Western General Land parcel at 301 Warehouse Avenue is approximately 0.6 acres in size. The parcel is used to park semi-trucks and trailers as well as other equipment used by the food processing facility to the east. This parcel is accessed off Warehouse Avenue at the northeast extent of the Site. About 90 percent of this parcel is paved with asphalt or concrete or covered with gravel, and approximately 200 feet of pavement or gravel will remain between Warehouse Avenue and the excavation area throughout the proposed soil remediation project.

Excavation Activities

The main objective of the excavation activities is to remove nitrate and ammonia impacted soil located above the saturated zone. These excavation activities will remove an estimated 6,250 cubic yards (cy) of impacted soil from eight excavation areas with a combined footprint of approximately 36,000 sf. The impacted soil will be loaded to haul trucks for off-site disposal. An additional approximately 2,625 cy of non-impacted excavated overburden soil and soil to safely slope the excavations can be reused on-site as backfill soil. Soil that is disposed of off-site will be replaced by clean soil delivered by haul trucks.

In addition to the excavation and backfill activities described above, associated construction activities will include: Site preparation; abandonment of monitoring and injection wells within the excavation areas; removal of concrete and asphalt structures/surfaces; installation of replacement monitoring wells; and replacement of asphalt surfaces.

Dust Management

The best management practices (BMPs) for dust management expected to be implemented during the Site construction activities include:

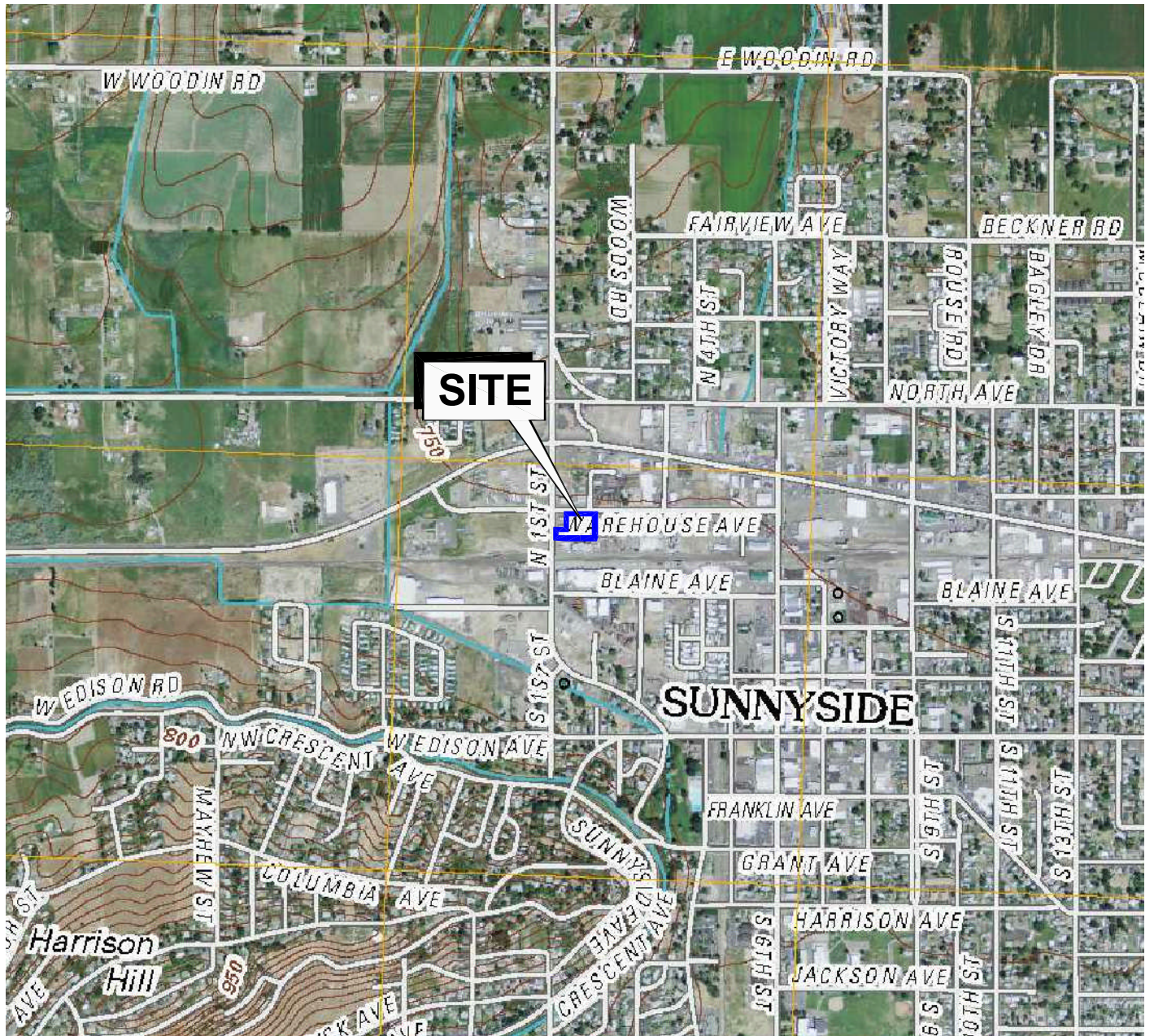
- Construction access:
 - Site access will be limited to two points with paved (asphalt or concrete) or gravel approaches of approximately 150 and 200 feet, respectively.
- Controlled excavation and backfilling:
 - Limit soil handling on-site;
 - Excavated soil requiring disposal will be directly loaded to haul trucks whenever practicable;
 - Open excavations will be backfilled as soon as practicable once the predetermined horizontal and vertical limits have been achieved;
 - Clean import backfill material will be unloaded directly to excavations whenever practicable; and
 - Excavation areas where backfill has been completed will have permanent stabilization installed as soon as possible.
- Soil stockpiling:
 - As is practicable, soil stockpiles will only be implemented temporarily and will be removed before the end of each work day;
 - Soil stockpiles that will remain in place for a forecasted sustained wind speed of 30 mph or greater will be wetted to minimize airborne particulates or covered with plastic.
- Haul truck management:
 - Truck traffic will utilize the existing gravel road on the Bee-Jay Scales parcel whenever practicable;
 - Haul trucks will only drive on undisturbed ground or disturbed ground with temporary or permanent stabilization of aggregate rock or equivalent;
 - Haul trucks speeds on-site will not exceed 10 mph;
 - All trucks used to haul material will utilize a tarp to cover the load; and
 - If street cleaning is required on 1st Street or Warehouse Avenue, water will be used to limit dust generation to the property boundary action levels described below.
- Regular air monitoring of particulates in work areas and at the downwind Site boundary to prevent exceedances of the action level established in the compliance monitoring plan and Site Health and Safety Plan.
 - Real-time air monitoring for particulates will be conducted every 120 minutes for a minimum 5-minute period at the limit of each active excavation area and at the property boundary during any earth moving activities;

- Action levels for particulate monitoring at the excavation area limits will be 2.5 milligrams per cubic meter (mg/m^3) and $5.0 \text{ mg}/\text{m}^3$. Action levels will be considered exceeded if the average readings exceed the action level for 3 consecutive minutes:
 - Exceedances of the $2.5 \text{ mg}/\text{m}^3$ action level will require additional monitoring as detailed in the compliance monitoring plan; and
 - Exceedances of the $5.0 \text{ mg}/\text{m}^3$ action level will require work to temporarily stop for the inspection of Site conditions and BMPs.
- Action levels for particulate monitoring at the property boundary will be set at $0.75 \text{ mg}/\text{m}^3$ and $1.0 \text{ mg}/\text{m}^3$. Action levels will be considered exceeded if the average readings exceed the action level for 3 consecutive minutes:
 - Exceedances of the $0.75 \text{ mg}/\text{m}^3$ action level will require additional monitoring as detailed in the compliance monitoring plan; and
 - Exceedances of the $1.0 \text{ mg}/\text{m}^3$ action level will require work to temporarily stop for the inspection of Site conditions and BMPs.

Where these BMPs are unable to maintain airborne particulate levels below the Site action levels, the following contingency measures will be available for implementation:

- Use of a water truck to apply water to Site haul routes or areas being backfilled; and
- Use of a manual water applicator to apply water to excavated soil, soil stockpiles, and other areas that are inaccessible to a water truck.

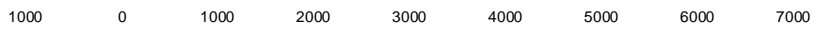
Water for dust control will be obtained from the City of Sunnyside Public Works Department.



WASHINGTON



SCALE IN MILES



SCALE IN FEET

REFERENCE: USGS 7.5 MINUTE QUADRANGLE;
SUNNYSIDE, WASHINGTON; 2011



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FOR:
BEE-JAY SCALES SITE
SUNNYSIDE, WASHINGTON

SITE LOCATION MAP

FIGURE:

1

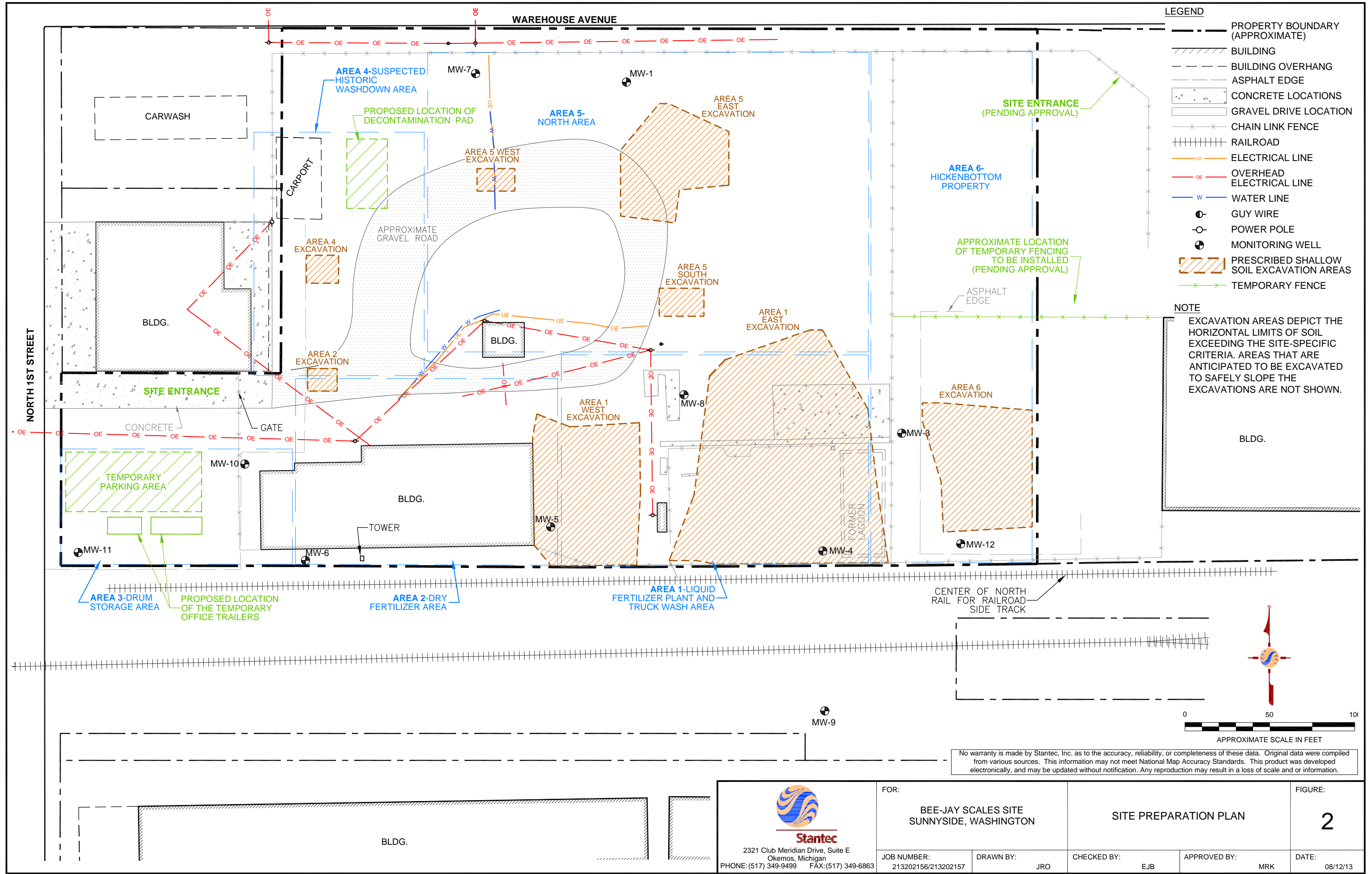
JOB NUMBER:
213202156/213202157

DRAWN BY:
JRO

CHECKED BY:
EJB

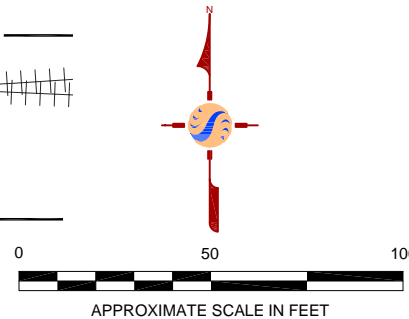
APPROVED BY:
MRK

DATE:
08/12/13




- LEGEND**
- PROPERTY BOUNDARY (APPROXIMATE)
 - ▨ BUILDING
 - - - BUILDING OVERHANG
 - ASPHALT EDGE
 - ▨ CONCRETE LOCATIONS
 - ▨ GRAVEL DRIVE LOCATION
 - CHAIN LINK FENCE
 - ||||| RAILROAD
 - UE ELECTRICAL LINE
 - OE OVERHEAD ELECTRICAL LINE
 - W WATER LINE
 - GUY WIRE
 - POWER POLE
 - ⊕ MONITORING WELL
 - ▨ PRESCRIBED SHALLOW SOIL EXCAVATION AREAS
 - TEMPORARY FENCE

NOTE
EXCAVATION AREAS DEPICT THE HORIZONTAL LIMITS OF SOIL EXCEEDING THE SITE-SPECIFIC CRITERIA. AREAS THAT ARE ANTICIPATED TO BE EXCAVATED TO SAFELY SLOPE THE EXCAVATIONS ARE NOT SHOWN.



No warranty is made by Stantec, Inc. as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and or information.

 Stantec 2321 Club Meridian Drive, Suite E Okemos, Michigan PHONE: (517) 349-9499 FAX: (517) 349-6863	FOR: BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON		SITE PREPARATION PLAN		FIGURE: 2
	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13

Appendix B
Additional Soil Delineation
Documentation Report



Stantec

**ADDITIONAL SOIL DELINEATION
DOCUMENTATION REPORT**

**Bee-Jay Scales Site
116 N 1st Street
Sunnyside, WA 98944**

Submitted to:

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Submitted by:

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August 26, 2013

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APPENDICES

Appendix A	Analytical Laboratory Reports
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1.0 Introduction

Stantec Consulting Services Inc. (Stantec) is submitting this *Additional Soil Delineation Documentation Report* to the Washington State Department of Ecology (Ecology) for the Bee-Jay Scales Site (the Site), on behalf of Chevron Environmental Management Company (CEMC) and Atlantic Richfield Company (ARC). This project is being implemented in accordance with the Ecology Washington Model Toxics Control Act (MTCA) and the Ecology prepared Corrective Action Plan (CAP).

The objectives of the additional soil delineation were to:

- Conduct shallow soil sampling (above the historic high groundwater table) in defined investigation areas; and
- Establish horizontal and vertical limits of excavation to be conducted to remove soils exceeding the Site-specific soil criteria for nitrate and ammonia as part of the Site CAP remedial actions.

The purpose of this report is to summarize the sampling activities conducted as part of the additional soil delineation and present the results in comparison to the Site-specific criteria.

The remaining sections of this report are organized as follows:

- Section 2 includes a summary of the Site background, historical operations, and previous investigations;
- Section 3 provides a summary of the additional soil delineation sampling activities and analytical results;
- Section 4 discusses the conclusions; and
- Section 5 lists references.

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August 26, 2013

2.0 Site Description & Background

The Site is located in the city of Sunnyside, within Yakima County, and consists of the following two parcels: Parcel No. 22102522014 and Parcel No. 22102522015 as recorded by the Yakima County Department of Assessment. Parcel No. 22102522014 is located at 116 North 1st Street and is owned by Bee-Jay Scales, Inc. Parcel No. 22102522015 is located at 301 Warehouse Avenue and is currently owned by Western General Land, LLC (formerly owned by Hickenbottom & Sons, Inc.).

The Site location is shown on **Figure 1**. The Site layout, including monitoring well locations, building locations, and additional Site features, is shown on **Figure 2**. Historically, the Site was divided into six main study areas as follows:

- Area 1 – Liquid Fertilizer Plant and Truck Wash Area;
- Area 2 – Dry Fertilizer Area;
- Area 3 – Drum Storage Area;
- Area 4 – Suspected Historic Washdown Area;
- Area 5 – North Area; and
- Area 6 – Hickenbottom Property.

For the purposes of this work plan, “the Site” will be defined by the boundaries of the two property parcels specified above.

The Site is bordered to the north and west by Warehouse Avenue and North 1st Street and to the south by active railroad tracks. Properties to the north, east, and south of the Site are industrial/commercial facilities. The property west of the Site across North 1st Street is currently vacant.

The Site and adjacent properties have been the location of agricultural warehouses, lumber yards, coal storage, and railroad transportation activities since approximately 1906. Portions of the Site were owned by the Northern Pacific Railroad Company from 1906 until 1989 when they were purchased by the Glacier Park Company. An agricultural distribution facility operated at the Site from the 1960s through at least 1986. This facility consisted of buildings and aboveground storage tanks (ASTs), and was operated by at least two separate companies: Laneger Agricultural Services and Valley Agricultural, Inc. The ASTs have since been removed from the Site. Documentation also indicates that American Oil Company (Amoco), now part of BP, leased portions of this property from Northern Pacific Railroad between 1965 and 1972.

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A lagoon was constructed by Valley Agricultural, Inc. in the early 1980s to collect water from the washdown of farm chemical applicator vehicles.

The western portion of Lot 10 was purchased by Chevron Chemical Company in 1981 and sold to Bee-Jay Scales, Inc. in 1987. Bee-Jay Scales, Inc. purchased additional portions of Lots 10 and 11 in 1995 and 1996. Lots 10 and 11 are referenced in the Summary of Ownership included as Appendix B of the RI/FS Work Plan and are not shown on any available figures. Three businesses currently operate at the Bee-Jay Scales portion of the property: Sandy Farms, a local trucking company; Sanleco, Inc., an interstate trucking company with an on-site tractor-trailer repair garage; and Bee-Jay Scales, a commercial scale operation.

Hickenbottom & Sons, Inc. leased a portion of the Site from the Northern Pacific Railroad Company beginning in 1961 and purchased portions of Lots 10 and 11 in 1992. The Hickenbottom & Sons property was previously used as pastureland; since 1961, it has been used for food packing, storage, and a transportation business, and is currently owned by Western General Land, LLC.

2.1 PREVIOUS INVESTIGATIONS

Key investigations, evaluations, and interim remedial measures conducted by Stantec (formerly SECOR) at the Site since 2003 are documented in the following reports:

- *Bee-Jay Scales Site Phase I Remedial Investigation Report* (SECOR, 2003);
- *Phase II Remedial Investigation Report for the Bee-Jay Scales Site* (SECOR, 2005);
- *Phase III Remedial Investigation Report for the Bee-Jay Scales Site* (SECOR, 2007a);
- *2006 Interim Remedial Measures Completion Report for the Bee-Jay Scales Site* (SECOR, 2007b);
- *Down-Gradient Assessment Documentation Report for the Bee-Jay Scales Site* (SECOR, 2008);
- *Revised Feasibility Study Report* (Stantec, 2009); and
- *Nitrate Synthetic Precipitation Leaching Procedure Shallow Soil Assessment Results and Discussion Draft 3/4/2011 Draft Cleanup Action Plan Comments for the Bee-Jay Scales Site* (Stantec, 2011).

The following subsections summarize the key findings of investigations and evaluations that are relevant to this report.

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Bee-Jay Scales Site, Sunnyside, Washington

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Phase I Remedial Investigation

The Phase I remedial investigation (RI) activities were conducted in July 2003 and consisted of soil and groundwater investigations. SECOR collected soil samples from boreholes completed to depths of up to 11 feet below ground surface (bgs) in each of the six identified main study areas at the Site and installed three groundwater monitoring wells (MW-5, MW-6, and MW-7) to supplement groundwater quality information provided by three previously installed wells (MW-1, MW-3, and MW-4). Eight soil boreholes were advanced in Area 1, seven soil boreholes in Area 2, two soil boreholes in Area 3, six soil boreholes in Area 4, five shallow soil boreholes in Area 5, and seven soil boreholes in Area 6 (two of which were shallow). The soil data suggested an above-ground source of stored fertilizer that had leached nitrogen compounds to the soil. The major nitrogen source area appeared to be directly east of the Dry Fertilizer Manufacturing Building in Area 2, and two source areas appeared to be located adjacent to the lagoon.

Phase II Remedial Investigation

The Phase II RI, conducted in 2004, included soil, groundwater, and surface water/sediment investigations. The Phase II groundwater investigation consisted of the advancement of 18 vertical profile boreholes in Areas 1, 5, and 6, and installation of five permanent monitoring wells (MW-8 through MW-12). Nitrate concentration isopleths showed source areas primarily located in the southeastern portion of the property (Area 1 and the southern section of Area 6). The average hydraulic conductivity from single well pump tests was 1.45E-04 centimeters per second (cm/s).

In the Phase II soil investigation, soil samples were collected from boreholes advanced in Areas 3 and 5. In Area 3, concentrations of total petroleum hydrocarbons as gasoline (TPH-Gx) at a depth of 7.5 feet bgs were above the Model Toxics Control Act (MTCA) Method B cleanup level (CUL). In Area 5, concentrations of constituents in subsurface soil (ammonia, iron, nitrate, nitrite, phosphate, and sulfate) did not exceed MTCA Method B CULs or other screening criteria. Ten of the soil samples from Area 5 were selected for synthetic precipitate leaching procedure (SPLP) analysis to evaluate the soil leaching to groundwater pathway. Comparing the detected results to MTCA Method B CULs or secondary Maximum Contaminant Levels (MCLs), nitrite and sulfate did not exceed CULs. Nitrate and iron did exceed MTCA Method B CULs and secondary MCLs, respectively.

A treatability investigation, including both a bench-scale study and field pilot study (consisting of *in situ* injection of sodium acetate into four injection wells around well MW-4), was conducted as part of the Phase II RI to guide potential nitrate and herbicide remediation activities. The treatability study determined the most effective treatment was denitrification using acetate as an electron donor. The pilot study demonstrated that injection of acetate was successful in remediating nitrate, nitrite, and dinoseb concentrations to below detectable limits in groundwater

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at well MW-4 within a 10-foot radius for the duration of the monitoring period and reducing concentrations of those constituents in saturated soils.

Interim Remedial Measures

In 2006, SECOR conducted interim remedial measures including: 1) lagoon closure activities; and 2) treatment of petroleum hydrocarbon impacts in Area 3 using persulfate injections. The former lagoon was removed as a potential source and safety hazard, and calcium acetate was placed into the excavation to mitigate residual impacts remaining in the soil. *In situ* injection of sodium persulfate into four injection wells was conducted in Area 3 for the treatment of petroleum hydrocarbons, and favorable geochemical conditions were observed in the injection wells during and immediately after injection. Groundwater samples collected from a nearby well three months after injection showed an average percent (%) reduction in petroleum hydrocarbon concentrations of over 78%.

Phase III Remedial Investigation

The Phase III RI was conducted in 2007 and included additional soil and groundwater investigation to evaluate horizontal and vertical extent of nitrate impacts down-gradient of the Bee-Jay Scales property. Twelve vertical profile boreholes and one permanent groundwater monitoring well (MW-13) were installed. The Phase III RI determined the nitrate plume extends off-property and is delineated to the east and west; however, the plume was not fully delineated to the south because a probable second source of nitrate and ammonia was encountered.

Down-Gradient Assessment

The down-gradient assessment was conducted in 2008 to further evaluate: 1) the off-property down-gradient extent of nitrate concentrations; and 2) a potential separate off-property source. One off-property vertical profile boring was advanced and sampled. The assessment results provided further evidence of a potential additional source based on the detached ammonia plumes and relatively higher concentrations of several constituents down-gradient rather than up-gradient of the potential off-property source. However, a commingled nitrate plume was observed.

Revised Feasibility Study Report

Stantec evaluated remedial alternatives to address soil and groundwater concentrations of indicator hazardous substances (IHSs) above specified CULs at the Site. The remedial alternatives were evaluated with respect to threshold criteria that must be met for all cleanup actions conducted under Ecology's authority. Based on the evaluation of on-site and off-property remedial alternatives, the following combination of remedial actions was recommended:

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- On-site *in situ* bioremediation, groundwater monitoring, soil excavation with off-site disposal and/or *ex situ* biological treatment, and institutional controls; and
- Off-property monitored natural attenuation (MNA), institutional controls, and a contingency plan.

Following review, Ecology requested modifications to the off-property remedial alternatives, and revised alternatives are presented in the CAP (discussed in Section 2.2).

Nitrate SPLP Soil Assessment

A nitrate SPLP shallow soil assessment was conducted in 2011 at the Site to evaluate the Site-specific leaching potential of nitrate. Twenty shallow soil boreholes were advanced, and 88 sample pair results demonstrated that a soil CUL of 220 milligrams per kilogram (mg/kg) will be protective of a nitrate concentration in groundwater of 10 milligrams per liter (mg/L) at the soil point of compliance.

2.2 CLEANUP ACTION PLAN

A CAP has been prepared for the Site by Ecology to address contamination that could pose a risk to human health and the environment. The objectives of the cleanup action at the Site are to:

- Prevent leaching of nitrate from soil to groundwater by reducing soil concentrations at the Site to the CUL of 220 mg/kg thereby preventing leaching to groundwater in excess of the Federal MCL of 10 mg/L.
- Prevent ingestion of groundwater with nitrate in excess of 10 mg/L by on-site and off-site receptors by reducing nitrate concentrations in groundwater to less than 10 mg/L.
- Prevent vaporization of ammonia from soil by reducing soil concentrations at the Site to 385 mg/kg.
- Design the groundwater treatment system, to the extent practicable, to reduce the potential for impacted groundwater to infiltrate storm/irrigation drains that may eventually discharge to a surface water.

The proposed cleanup action includes a combination of shallow soil excavation, *in situ* bioremediation injection wells/boreholes (for delivery of a sodium acetate solution or calcium acetate), institutional controls, natural attenuation, and construction of vertical barrier wall treatment system(s) or other Ecology-approved treatment method following public comment for the off-property groundwater plume attributable to the Bee-Jay Scales Site. The purpose of these systems is to remove the source material that is continuing to contribute to groundwater contamination; treat the existing nitrate groundwater plume attributable to the Bee-Jay Scales

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Bee-Jay Scales Site, Sunnyside, Washington

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Site to prevent its continued expansion and to reduce the potential for a discharge to storm/irrigation drains that may eventually discharge to surface waters; and provide for an estimated 30 to 40 year groundwater restoration timeframe.

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Bee-Jay Scales Site, Sunnyside, Washington

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3.0 Additional Soil Delineation Activities and Results

3.1 ADDITIONAL SOIL DELINEATION ACTIVITIES

Additional soil delineation activities were conducted according to the procedures described in the *Additional Soil Delineation Work Plan (Work Plan)*, dated February 20, 2013, during two separate field events in March and June 2013.

- The first additional soil delineation investigation included the advancement and sampling of 89 soil boreholes from March 18 through 26, 2013. Boreholes were advanced with samples collected from two to four depths above the historic high groundwater table. The boreholes were advanced in six investigation areas where previous soil sampling indicated the presence of nitrate and/or ammonia concentrations above the Site CULs.
- A second additional soil delineation investigation included the advancement and sampling of 15 soil boreholes from June 12 through 14, 2013. The second sampling event was not included as part of the original Work Plan, but was added to address those portions of the investigation areas where data gaps remained after reviewing the data from the first investigation. The boreholes advanced as part of this investigation were sampled at four depths above the historic high groundwater table. These boreholes were advanced in the Area 1 & 6 investigation area.

All boreholes were advanced and samples collected by hand auger. The hand auger was decontaminated at the completion of each borehole. Where asphalt, concrete, or compacted gravel road base was found at the ground surface, a pneumatic jackhammer was used to cut an approximate 6-inch square through the material and expose the underlying soil. At completion, boreholes were decommissioned by sealing the borehole with hydrated bentonite chips from the bottom to 0.5 feet bgs and then with native soil, gravel, or concrete, consistent with Washington Administrative Code (WAC) 173-160. Borehole locations were surveyed during both sampling events and can be found on **Figure 2**. The survey measured both the horizontal coordinates and land surface elevation. Horizontal coordinates were determined to the nearest 0.2-foot relative to the North American Datum of 1983 (NAD83), while the elevations were to the nearest 0.1-foot relative to the National Geodetic Vertical Datum of 1988 (NAVD88).

Soils were transferred from the hand auger at each sample depth to a 1-gallon Ziploc bag and sealed. A headspace analysis was performed and documented for each sample using a photo ionization detector (PID). Soil was then transferred to a 175 milliliter (mL) clear jar for laboratory analysis at Eurofins Lancaster Laboratories in Lancaster, Pennsylvania (Lancaster). Chains of custody can be found in **Appendix A**. The remaining portion of soil in the Ziploc bag was used for visual inspection and lithologic description. Soil lithology was described using the United Soil Classification System (USCS) as a guide. Lithologic descriptions included soil type(s),

ADDITIONAL SOIL DELINEATION DOCUMENTATION REPORT

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color, grain size/texture, degree of consolidation, and moisture content. Observations were recorded on borehole logs, which are included in **Appendix B**.

Soil cuttings and decontamination water were collected and transferred to 55-gallon Department of Transportation (DOT)-rated drums. The proper labels were affixed, and the drums were temporarily stored on a concrete pad in Area 1. All investigatory-derived wastes associated with this investigation were removed from the property in June 2013 by an approved waste hauler, in accordance with state and federal regulations.

3.2 ADDITIONAL SOIL DELINEATION RESULTS

Concentrations of nitrate and ammonia detected in soil during the additional soil delineation investigation were compared to criteria, and exceedances of Site-specific soil criteria for nitrate and ammonia are defined as follows:

- Exceedances of Site-specific soil criteria for nitrate (where more than one depth has been sampled at a single borehole location) are defined as either: 1) the average of the samples at all depths within a single borehole location is above the CUL of 220 mg/kg; or 2) the deepest sample depth above the historical high groundwater table (as estimated based on measurements collected from Site groundwater monitoring wells since Third Quarter 2005) exceeds the CUL of 220 mg/kg. Borehole locations that have at least one sample exceeding the nitrate CUL, but have an average nitrate concentration below 220 mg/kg and where the deepest sample depth above the historical high groundwater table is below the nitrate CUL will not be defined as nitrate exceedances. This soil CUL is based on Site-specific SPLP testing, where soils with nitrate concentrations below 220 mg/kg were determined to not have the potential to leach nitrate to groundwater above the 10 mg/L Federal MCL.
- Exceedances of Site-specific soil criteria for ammonia are defined as ammonia concentrations in soil above the CUL of 385 mg/kg. This soil CUL is based on protection against the acute vapor health effects for a construction worker.

Exceedances of the Site-specific nitrate and ammonia criteria are shown on **Figure 3** and **Figure 4**, respectively. A discussion of the investigation and results by delineation area is included below.

3.2.1 Area 2 Delineation Sampling

Sampling in Area 2 was conducted to delineate the exceedances of the Site-specific nitrate criteria, indicated by three samples collected at B-13 (concentrations ranging from 256 mg/kg to 417 mg/kg). All of the proposed borehole locations, two primary and two conditional, were advanced and samples were collected at four depths (1.5, 3, 4.5, and 6 feet bgs). **Table 1** summarizes the analytical results from the Area 2 delineation sampling.

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- Samples from primary borehole locations A2-DB-01 and A2-DB-02 did not exceed the Site-specific nitrate criteria.
- Based on results from A2-DB-01 and A2-DB-02, samples from conditional borehole locations A2-DB-01a and A2-DB-02a were discarded without analysis.

3.2.2 Area 4 Delineation Sampling

Sampling in Area 4 was conducted to resample and delineate possible exceedances of the Site-specific ammonia criteria, indicated by a sample collected at A4-SB-002 (680 mg/kg at 0.5 feet bgs). The two proposed primary and four of the six proposed conditional borehole locations were advanced and samples were collected at two depths (0.5 and 2.5 feet bgs). **Table 2** summarizes the analytical results from the Area 4 delineation sampling.

- Samples from two primary borehole locations (A4-DB-01 and A4-DB-02) were collected to resample the area near A4-SB-002. The samples from A4-DB-01 did not exceed the Site-specific ammonia criteria, while both samples from A4-DB-02 did exceed the Site-specific ammonia criteria.
 - Conditional borehole locations A4-DB-01a and A4-DB-01d were not advanced because A4-DB-01 had established the northern extent of the ammonia exceedances in the area.
 - Samples from the four conditional borehole locations (A4-DB-01b, A4-DB-01c, A4-DB-01e, and A4-DB-01f) were collected to delineate the southern, eastern, and western extents of ammonia exceedances at A4-DB-02.
 - A4-DB-01b exceeded the Site-specific ammonia criteria at a depth of 0.5 feet bgs. The samples from A4-DB-01c did not exceed the Site-specific ammonia criteria.
 - Following the review of results from A4-DB-01b and A4-DB-01c, analysis of samples from A4-DB-01e was requested and samples from A4-DB-01f were discarded without analysis. The samples from A4-DB-01e did not exceed the Site-specific ammonia criteria.

3.2.3 Area 5 West Delineation Sampling

Sampling in Area 5 West was conducted to resample and delineate possible exceedances of the Site-specific nitrate criteria, indicated by samples collected at 0.5 feet bgs from A5-SS-003, A5-SS-004, and A5-SS-005 (concentrations ranging from 234 mg/kg to 566 mg/kg). The two proposed primary and nine conditional borehole locations were advanced and samples were collected at two depths (0.5 and 2.5 feet bgs). **Table 3** summarizes the analytical results from the Area 5 West delineation sampling.

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- Samples from primary borehole location A5W-DB-01 were collected to resample the area near A5-SS-004. Samples from primary borehole location A5W-DB-02 were collected to resample the area near A5-SS-003 and A5-SS-005. None of the samples from the two primary locations exceeded the Site-specific nitrate criteria. As a result, all nine of the conditional locations were advanced.
 - Samples from A5W-DB-01a were collected as an additional resample of the area near A5-SS-004, and did not exceed the Site-specific nitrate criteria.
 - Based on the results from A5W-DB-01 and A5W-DB-01a, samples from conditional locations A5W-DB-01b through A5W-DB-01d were discarded without analysis.
 - Samples from conditional locations A5W-DB-02a and A5W-DB-02b were collected as additional resample locations for the area near A5-SS-003 and A5-SS-005. Samples from A5W-DB-02b did not exceed the Site-specific nitrate criteria; however, samples from A5W-DB-02a did exceed the Site-specific nitrate criteria (deepest sample exceeded the CUL).
 - Following the review of results from A5W-DB-02, A5W-DB-02a, and A5W-DB-02b, A5W-DB-02c was requested for analysis, while samples from A5W-DB-02d and A5W-DB-02e were discarded without analysis. Samples from A5W-DB-02c did not exceed the Site-specific nitrate criteria.

3.2.4 Area 5 East Delineation Sampling

Sampling in Area 5 East was conducted to delineate exceedances of Site-specific nitrate and ammonia criteria, indicated by samples collected at A5-SB-001 (nitrate concentration of 304 mg/kg at 9 feet bgs), A5-SB-010 (nitrate concentration of 450 mg/kg at 4.5 feet bgs), and A5-SS-001 (nitrate and ammonia concentrations of 271 mg/kg and 417 mg/kg, respectively, at 0.5 feet bgs). The seven proposed primary and four conditional borehole locations were advanced and samples were collected at four depths. **Table 4** summarizes the analytical results from the Area 5 East delineation sampling.

- Samples from primary borehole locations A5E-DB-01 through A5E-DB-05 were analyzed for nitrate only.
 - Samples from A5E-DB-01 exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL). As a result, conditional borehole A5E-DB-01a was advanced as a step-out location and submitted for nitrate analysis.
 - A5E-DB-01a did not exceed the Site-specific nitrate criteria.

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- Samples from A5E-DB-02 exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL).
- Samples from A5E-DB-03 did not exceed the Site-specific nitrate criteria. As a result, conditional borehole A5E-DB-03a was advanced as a step-in location.
 - A5E-DB-03a exceeded the Site-specific nitrate criteria (deepest sample exceeded the CUL).
- Samples from A5E-DB-04 exceeded the Site-specific nitrate criteria (deepest sample exceeded the CUL).
- Samples from A5E-DB-05 did not exceed the Site-specific nitrate criteria. As a result, conditional borehole A5E-DB-05a was advanced as a step-in location.
 - A5E-DB-05a exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL).
- Samples from primary borehole locations A5E-DB-06 and A5E-DB-07 were analyzed for nitrate and ammonia.
 - Samples from A5E-DB-06 did not exceed the Site-specific criteria for nitrate or ammonia.
 - Location A5E-DB-07 was initially intended as a resample of A5-SS-001, but was advanced approximately 10 feet north of the planned location due to poor global positioning system (GPS) accuracy. Samples from A5E-DB-07 exceeded the Site-specific nitrate criteria (deepest sample exceeded the CUL), but did not exceed the Site-specific ammonia criteria. As a result, the samples from the second resample location, A5E-DB-07a, were discarded without analysis.

3.2.5 Area 5 South Delineation Sampling

The Area 5 South delineation sampling was not included in the original Work Plan. It was added shortly before the start of the investigation activities to address Ecology's comments that soil delineation samples should be collected above the historic high groundwater table. B-6 had initially been considered to be below the Site-specific nitrate criteria, because the average nitrate concentration was below the CUL and the deepest sample was below the nitrate CUL. However, removing samples that were collected below the historic high groundwater table would remove the samples at 7.5 and 10 feet bgs in this area. The deepest sample above the groundwater table, collected at 5 feet bgs (279 mg/kg), would then exceed the nitrate CUL.

As a result, sampling in Area 5 South was conducted to delineate exceedances of Site-specific nitrate criteria as described above at B-6. Three primary and two conditional borehole locations

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were advanced and sampled at four depths (1.5, 3, 4.5, and 6.5 feet bgs). **Table 5** summarizes the analytical results from the Area 5 South delineation sampling.

- Samples from primary borehole locations A5S-DB-01, A5S-DB-02, and A5S-DB-03 were submitted for nitrate analysis. Samples from A5S-DB-01 and A5S-DB-02 did not exceed the Site-specific nitrate criteria. Samples from A5S-DB-03 exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL).
 - Because samples from A5S-DB-01 did not exceed the Site-specific nitrate criteria, the samples from step-out location A5S-DB-01a were discarded without analysis.
 - Because samples from A5S-DB-03 exceeded the Site-specific nitrate criteria, analysis was requested for the samples from step-out location A5S-DB-03a. Samples from this location did not exceed the Site-specific nitrate criteria.

3.2.6 Area 1 & 6 Delineation Sampling

Additional delineation sampling was conducted in Area 1 & 6 to delineate exceedances of Site-specific nitrate and ammonia criteria, indicated by samples collected at 21 locations at depths of 0.5 to 9 feet bgs. All 22 of the planned primary borehole locations and 29 of the 31 proposed conditional borehole locations were advanced and sampled during the first additional soil delineation investigation in March 2013. An additional conditional borehole location (A6-DB-09b) was added to the scope of work during the March 2013 investigation for a total of 30 conditional borehole locations. Another 15 soil boreholes were advanced and sampled in Area 1 & 6 during the second additional soil delineation investigation in June 2013.

Area 1 Delineation Sampling

Samples were collected from 13 primary and 20 conditional borehole locations during the March 2013 investigation, and another nine borehole locations were sampled during the June 2013 investigation. Borehole locations were sampled at four depths unless otherwise detailed below. The analytical results from the Area 1 delineation sampling are summarized in **Table 6**.

- Primary borehole location A1-DB-01 was advanced to sample for ammonia in the area of B-5. The samples at depths of 1.5 and 3 feet bgs exceeded the Site-specific ammonia criteria. As a result, conditional borehole locations A1-DB-01a and A1-DB-01b were advanced, but sampling was limited to three depths (1.5, 3, and 4.5 feet bgs) based on the data from A1-DB-01.
 - A1-DB-01a was relocated to be a 15-foot step-out to the north-northwest from A1-DB-01. Samples from A1-DB-01a did not exceed the Site-specific ammonia criteria.

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- A1-DB-01b was relocated to be a 15-foot step-out to the east-northeast from A1-DB-01. Samples from A1-DB-01b did not exceed the Site-specific ammonia criteria.
- Samples from primary borehole location A1-DB-02 were analyzed for nitrate, and exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL). As a result, conditional borehole locations A1-DB-02a and A1-DB-02b were advanced as step-out locations.
 - Samples from A1-DB-02a exceeded the Site-specific nitrate criteria (deepest sample exceeded the CUL).
 - Samples from A1-DB-02b exceeded the Site-specific nitrate criteria (deepest sample and average concentration exceeded the CUL).
- Samples from primary borehole location A1-DB-03 were analyzed for nitrate and ammonia. Samples from this location exceeded the Site-specific nitrate and ammonia criteria (only the deepest sample did not exceed either CUL). As a result, conditional borehole locations A1-DB-03a and A1-DB-03b were advanced as step-out locations.
 - Samples from A1-DB-03a exceeded the Site-specific nitrate criteria (deepest sample and average concentration exceeded the CUL) and Site-specific ammonia criteria at three of four depths.
 - Samples from A1-DB-03b exceeded the Site-specific nitrate criteria (deepest sample and average concentration exceeded the CUL) and Site-specific ammonia criteria at two of four depths.
 - Borehole location A1-DB-03c was advanced and sampled as part of the June 2013 investigation to delineate the eastern extent of nitrate and ammonia exceedances between A1-DB-03a and A1-DB-05c. The location exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL) and exceeded the Site-specific ammonia criteria at 1.5 feet bgs.
 - Borehole locations A1-DB-03d, A1-DB-03f, and A1-DB-03g were advanced and sampled as part of the June 2013 investigation to delineate the eastern extent of nitrate and ammonia exceedances between A1-DB-03b and A1-DB-05.
 - Samples from A1-DB-03d did not exceed the Site-specific criteria for nitrate or ammonia.
 - As a result, the samples from A1-DB-03f and A1-DB-03g were discarded without analysis.

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- Samples from primary borehole location A1-DB-04 were analyzed for nitrate and ammonia, and did not exceed the Site-specific criteria for nitrate or ammonia. Based on early data results, conditional borehole location A1-DB-04b was not advanced as originally planned and A1-DB-04a was relocated.
 - Conditional borehole location A1-DB-04a was relocated to fill a data gap between A1-DB-02 and A1-DB-04. A1-DB-04a exceeded the Site-specific nitrate criteria (deepest sample and average concentration exceeded the CUL) and Site-specific ammonia criteria at the deepest sample depth (6.5 feet bgs).
 - A1-DB-04b and A1-DB-04c were advanced and sampled as part of the June 2013 investigation to delineate the eastern extent of nitrate and ammonia exceedances between A1-DB-04 and A1-DB-04a. Sampling for ammonia at location A1-DB-04b was limited to the two deepest samples (4.5 and 6 feet bgs) based on the results from A1-DB-04a.
 - Samples from A1-DB-04b did not exceed the Site-specific criteria for nitrate or ammonia.
 - As a result, the samples from A1-DB-04c were discarded without analysis.
- Samples from primary borehole location A1-DB-05 were analyzed for nitrate and ammonia and did not exceed the Site-specific criteria for nitrate or ammonia. Based on the early results from the investigation, conditional borehole locations A1-DB-05a through A1-DB-05d were advanced.
 - Samples from A1-DB-05d did not exceed the Site-specific criteria for nitrate or ammonia.
 - Samples from A1-DB-05b and A1-DB-05c were requested for analysis following the review of results from locations A1-DB-03a and A1-DB-05d. Samples from A1-DB-05b exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL), but did not exceed the Site-specific ammonia criteria. Samples from A1-DB-05c did not exceed the Site-specific criteria for nitrate or ammonia.
 - After reviewing the data from other borehole locations, the samples from A1-DB-05a were discarded without analysis.
- Samples from primary borehole location A1-DB-06 were analyzed for nitrate and ammonia, and did not exceed the Site-specific criteria for nitrate or ammonia. Following the review of results from A1-DB-06 and A1-DB-10, samples from A1-DB-06a and

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A1-DB-06b were analyzed for nitrate and ammonia to delineate the area east of A1-DB-06.

- Samples from A1-DB-06a and A1-DB-06b exceeded the Site-specific nitrate criteria (deepest samples and average concentrations exceeded the CUL), but did not exceed the Site-specific ammonia criteria.
- Samples from primary borehole location A1-DB-07 were analyzed for nitrate and ammonia. This location exceeded the Site-specific nitrate criteria (deepest sample and average concentration exceed the CUL), but did not exceed the Site-specific ammonia criteria at any depth. As a result, conditional location A1-DB-07a was advanced as a step-out location and analyzed for nitrate only.
 - The samples from A1-DB-07a exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL).
 - Borehole locations A1-DB-07b and A1-DB-07c were advanced and sampled as part of the June 2013 investigation to delineate the northern extent of nitrate exceedances beyond A1-DB-07a.
 - Samples from A1-DB-07b did not exceed the Site-specific nitrate criteria.
 - As a result, the samples from A1-DB-07c were discarded without analysis.
- Samples from primary borehole location A1-DB-08 were analyzed for ammonia and nitrate. The location exceeded the Site-specific nitrate criteria (deepest sample exceeded the CUL) and exceeded the Site-specific ammonia criteria at the same depth (5.5 feet bgs).
 - Following the review of results from A1-DB-07, A1-DB-08, and A1-DB-12, samples from A1-DB-08a were analyzed for nitrate and ammonia, and did not exceed the Site-specific criteria for nitrate or ammonia.
- Samples from primary borehole location A1-DB-09 were analyzed for ammonia and nitrate. Concrete and gravel was encountered to a depth of 1 foot bgs and a large tree root was encountered at a depth of 1.5 feet bgs. As a result, the sample depths were adjusted to 2, 3, 4, and 5.5 feet bgs. The location did not exceed the Site-specific criteria for nitrate or ammonia.
 - Samples from conditional borehole location A1-DB-09a were analyzed for nitrate and ammonia following the review of results from A1-DB-09. The location exceeded the Site-specific nitrate criteria (deepest sample exceeded the CUL) and exceeded the Site-specific ammonia criteria at two of four depths.

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- Samples from primary borehole location A1-DB-10 were analyzed for nitrate, and exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL).
 - Following the review of results from A1-DB-10 and A1-DB-11, samples from conditional borehole location A1-DB-10a were discarded without analysis.
- Samples from primary borehole location A1-DB-11 were analyzed for nitrate, and exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL). As a result, conditional location A1-DB-11a was advanced as a step out location.
 - The samples from A1-DB-11a exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL).
 - Borehole location A1-DB-11b was advanced and sampled as part of the June 2013 investigation to delineate the eastern extent of nitrate exceedances beyond A1-DB-11a. The samples from A1-DB-11b did not exceed the Site-specific nitrate criteria.
- Samples from primary borehole location A1-DB-12 were analyzed for ammonia, and exceeded the Site-specific ammonia criteria at 2.5 feet bgs. Conditional borehole locations A1-DB-12a and A1-DB-12b were both relocated and advanced.
 - A1-DB-12a was relocated to be a 10-foot step-out from A1-DB-12. Samples were analyzed for ammonia from three depths (1, 2.5, and 4 feet bgs) based on the results from A1-DB-12. This location exceeded the Site-specific ammonia criteria at 2.5 feet bgs.
 - A1-DB-12b was relocated to be a 10-foot step-out from A1-DB-12a. Samples were analyzed for ammonia from three depths (1, 2.5, and 4 feet bgs) based on the results from A1-DB-12a. The samples did not exceed the Site-specific ammonia criteria.
- A1-DB-13 was relocated approximately 20 feet southwest to avoid debris and concrete bin blocks at the planned location as well as the former lagoon area to the south. The samples were analyzed for nitrate and ammonia. The location exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL) and exceeded the Site-specific ammonia criteria at the deepest sample depth (5.5 feet bgs).

Area 6 Delineation Sampling

Samples were collected from nine primary and 10 conditional borehole locations in Area 6 during the March 2013 investigation and another 6 borehole locations during the June 2013 investigation. Borehole locations were sampled at four depths unless otherwise detailed below.

Table 7 summarizes the analytical results from the Area 6 delineation sampling.

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- Samples from primary borehole location A6-DB-01 were analyzed for nitrate and ammonia, and did not exceed the Site-specific criteria for nitrate or ammonia. Because at least a portion of the sampling was conducted in the backfill material for the lagoon closure, conditional borehole locations A6-DB-01a and A6-DB-01b were advanced as step-out locations. Conditional borehole location A6-DB-01c was not advanced.
 - Samples from A6-DB-01a and A6-DB-01b did not exceed the Site-specific criteria for nitrate or ammonia.
- Samples from primary borehole location A6-DB-02 were analyzed for nitrate and ammonia, and did not exceed the Site-specific criteria for nitrate or ammonia.
- Samples from primary borehole locations A6-DB-03 and A6-DB-04 were collected to resample the location near A6-SB-003 (ammonia concentration of 684 mg/kg at 0.5 feet bgs). Samples were collected from two depths (0.5 and 2.5 feet bgs) and analyzed for ammonia only. None of the samples exceeded the Site-specific ammonia criteria.
- Samples from primary borehole location A6-DB-05 were analyzed for nitrate and ammonia, and exceeded the Site-specific nitrate and ammonia criteria (the deepest sample did not exceed either CUL). As a result, conditional borehole locations A6-DB-05a through A6-DB-05c were advanced.
 - Samples from A6-DB-05a and A6-DB-05b were analyzed for nitrate and ammonia, and did not exceed the Site-specific criteria for nitrate or ammonia.
 - Samples from A6-DB-05c were discarded without analysis following the review of the results from A6-DB-05a and A6-DB-05b.
- Samples from primary borehole location A6-DB-06 were analyzed for nitrate and ammonia, and did not exceed the Site-specific criteria for nitrate or ammonia.
 - After reviewing the results from A6-DB-06, samples from A6-DB-06a were analyzed for nitrate and ammonia to delineate the area north of A6-DB-06. The location exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL) and the Site-specific ammonia criteria at all depths.
 - Because the samples from A6-DB-03, A6-DB-04, and A6-DB-06 were below the Site-specific nitrate and ammonia criteria, samples from conditional location A6-DB-06b were discarded without analysis.
- Samples from primary borehole location A6-DB-07 were analyzed for nitrate and ammonia, and exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL) and the Site-specific ammonia criteria at the deepest sample.

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- Borehole locations A6-DB-07a and A6-DB-07b were advanced and sampled as part of the June 2013 investigation to delineate the southern and western extent of nitrate and ammonia exceedances beyond A6-DB-07. Sampling for ammonia at location A1-DB-07a was limited to the two deepest samples (5 and 7 feet bgs) based on the results from A1-DB-07.
 - Samples from A6-DB-07a did not exceed the Site-specific criteria for nitrate or ammonia.
 - As a result, the samples from A6-DB-07b were discarded without analysis.
- Samples from primary borehole location A6-DB-08 were analyzed for both nitrate and ammonia, and exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL) and the Site-specific ammonia criteria at 1.5 and 3 feet bgs. As a result, conditional borehole location A6-DB-08a was relocated to be a 10-foot step-out instead of a 10-foot step-in from A6-DB-08.
 - Samples from A6-DB-08a were analyzed for both nitrate and ammonia, except at 7 feet bgs where ammonia was excluded based on the results from A1-DB-08. The samples from A1-DB-08a exceeded the Site-specific nitrate criteria (average concentration exceeded the CUL) and the Site-specific ammonia criteria (at all depths analyzed).
 - Borehole locations A6-DB-08b and A6-DB-08d were advanced and sampled as part of the June 2013 investigation to delineate the southern and eastern extent of nitrate and ammonia exceedances beyond A6-DB-08 and A6-DB-08a.
 - Samples from A6-DB-08b did not exceed the Site-specific criteria for nitrate or ammonia.
 - As a result the samples from A6-DB-08d were discarded without analysis.
 - Borehole location A6-DB-08c was advanced and sampled as part of the June 2013 investigation to delineate the eastern extent of nitrate and ammonia exceedances beyond A6-DB-08a and A6-DB-09b.
 - Samples from A6-DB-08c exceeded the Site-specific nitrate criteria (deepest sample and average concentration exceeded the CUL) and the Site-specific ammonia criteria at all depths.
- Samples from primary borehole location A6-DB-09 were analyzed for both nitrate and ammonia, and did not exceed the Site-specific criteria for nitrate or ammonia. As a result, conditional borehole A6-DB-09a was collected as a 10-foot step-in from

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A6-DB-09. An additional borehole location, A6-DB-09b, was added between A6-DB-09 and A6-DB-08a to fill a data gap.

- Samples from A6-DB-09a and A6-DB-09b were analyzed for both nitrate and ammonia. Samples from A6-DB-09a exceeded the Site-specific nitrate and ammonia criteria (the deepest sample did not exceed either CUL). Samples from A6-DB-09b exceeded Site-specific nitrate and ammonia criteria at all depths.
- Borehole location A6-DB-09c was advanced and sampled as part of the June 2013 investigation to delineate the eastern extent of exceedances beyond A6-DB-09 and A6-DB-09b.
 - Samples from A6-DB-09c did not exceed the Site-specific nitrate criteria, but did exceed the Site-specific ammonia criteria at the deepest sample (7 feet bgs).

3.3 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

To ensure accuracy in the sampling results, the following quality assurance/quality control (QA/QC) samples were collected during the sampling activities: duplicates and equipment blanks.

Duplicate samples were collected at a frequency of approximately 10 percent (%) to evaluate the laboratory’s performance by comparing the analytical results of two samples collected at the same location. A total of 302 soil samples were analyzed as part of the soil delineation investigation and 31 duplicate samples were analyzed from those samples. The relative percent difference (RPD) was calculated using Equation 1 for each constituent.

Equation 1
$$RPD = \left[\frac{|S - D|}{(S + D) \div 2} \right] \times 100$$

Where: RPD = Relative Percent Difference
 S = First Sample Value (original)
 D = Second Sample Value (duplicate)

The average RPD for samples analyzed for nitrate was 11.4% and the average RPD for samples analyzed for ammonia was 17.3%, indicating acceptable precision by the analytical laboratory for each given method. Duplicate sample analytical results and the RPD calculations are shown in **Table 8**.

Equipment blanks were collected from the hand auger at a frequency of one per day to evaluate for cross-contamination due to sampling equipment. Nitrate and ammonia were not detected in

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any of the equipment blank samples, indicating that the field decontamination procedures were adequate in preventing cross-contamination between borehole locations.

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4.0 Conclusions

The objective of the additional soil delineation investigation was to delineate the horizontal and vertical limits of the nitrate and ammonia exceedances in Site soils for the purpose of delineating prescribed excavation limits as part of the CAP.

4.1 AREA 2 DELINEATION

The Area 2 delineation area was approximately 1,500 square feet (sf) based on previous sample locations that did not exceed the Site-specific nitrate and ammonia criteria. The additional delineation sampling was able to establish new southern and eastern extents (at A2-DB-01 and A2-DB-02), while two sample locations from previous investigations (A4-SB-005 and A4-SB-006) established the northern and western excavation extents. The prescribed excavation area is approximately 235 sf. The vertical delineation of the prescribed excavation area remains defined by the sample from B-13 at a depth of 6 feet bgs.

The Area 2 prescribed excavation is well delineated and no additional delineation sampling is recommended.

4.2 AREA 4 DELINEATION

The Area 4 delineation area covered approximately 4,500 sf based on previous sample locations that did not exceed the Site-specific nitrate and ammonia criteria. One resample location (A4-DB-02) confirmed the presence of soil exceeding the Site-specific ammonia criteria, while the other established the northern extent of those exceedances (A4-DB-01). Two conditional borehole locations established the southern, eastern, and western extents of the exceedances (A4-DB-01c and A4-DB-01e), limiting the prescribed excavation area to 320 sf. The sample result from A4-SB-002 at 4.5 feet bgs and from A4-DB-01b at 2.5 feet bgs will be used to delineate the vertical limits of the prescribed excavation.

The Area 4 prescribed excavation is well delineated and no additional delineation sampling is recommended.

4.3 AREA 5 WEST DELINEATION

The Area 5 West delineation area comprised approximately 3,900 sf based on previous sample locations that did not exceed the Site-specific nitrate and ammonia criteria. The two resample locations near A5-SS-004 (A5W-DB-01 and A5W-DB-01a) did not exceed the Site-specific nitrate criteria, and the western portion of the delineation area has been removed from the prescribed excavation. One resample location near A5-SS-003 and A5-SS-005 (A5W-DB-02a) confirmed the presence of soil exceeding the Site-specific nitrate criteria, while the other two established the southern and eastern extents of the exceedances (A5W-DB-02 and

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A5W-DB-02b). A conditional borehole location established the northern extent of the exceedances (A5W-DB-02c), while the western extent was established by a previous location (B-1). The prescribed excavation area has been limited to approximately 300 sf. The sample result from B-1 at 4.5 feet bgs will be used to define the vertical limit of the prescribed excavation.

The Area 5 West prescribed excavation is well delineated and no additional delineation sampling is recommended.

4.4 AREA 5 EAST DELINEATION

The Area 5 East delineation area consisted of approximately 9,700 sf based on previous sample locations that did not exceed the Site-specific nitrate and ammonia criteria and the northern property boundary. Three resample locations confirmed the presence of soil exceeding the Site-specific nitrate criteria (A5E-DB-02, A5E-DB-04, and A5E-DB-07). Delineation sampling locations established the northern, western, and southern extents of the nitrate exceedances (A5E-DB-01a, A5E-DB-03, and A5E-DB-05), while the eastern extent remained set by a previous location (A5-SB-002). The prescribed excavation area has been limited to approximately 3,300 sf.

Each of the six delineation locations that had exceedances of Site-specific nitrate criteria (A5E-DB-01, A5E-DB-02, A5E-DB-03a, A5E-DB-04, A5E-DB-05a, and A5E-DB-07) also had one or more sample depths that did not exceed the Site-specific nitrate criteria. Therefore, there are several opportunities to limit sections of the excavation area to specific depths. The vertical limits of this prescribed excavation will be based on the analytical results and a cost analysis of the excavation costs versus disposal costs. Those vertical limits will be detailed in the *Shallow Soil Excavation Engineering Design Report*.

The soil exceedances in this area are considered well delineated by three sample locations collected during this investigation and one previous sample location. However, additional pre-excavation delineation sampling could further reduce the excavation area in the southeast and southwest portions of the prescribed excavation area where relatively large sections have not been sampled.

4.5 AREA 5 SOUTH DELINEATION

The Area 5 South delineation area was not defined within the original Work Plan. Soil exceedances of Site-specific nitrate criteria in this area are well delineated by three delineation sample locations collected during this investigation, establishing a prescribed excavation area of approximately 440 sf.

The locations that had exceedances of Site-specific nitrate criteria (B-6 and A5S-DB-03) also had one or more sample depths that did not exceed the Site-specific nitrate criteria. Therefore,

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there are several opportunities to limit sections of the excavation area to specific depths. The vertical limits will be detailed in the *Shallow Soil Excavation Engineering Design Report*.

The Area 5 South prescribed excavation is well delineated and no additional delineation sampling is recommended.

4.6 AREA 1 & 6 DELINEATION

The Area 1 & 6 delineation area covered approximately 33,000 sf based on previous sample locations that did not exceed the Site-specific nitrate and ammonia criteria, the southern and eastern property boundaries, and the former fertilizer blending building to the west. The two resample locations near A6-SB-003 did not exceed the Site-specific ammonia criteria, and that area has been removed from the prescribed excavation. Additional delineation sampling shows that this delineation area can be divided into three separate prescribed excavations totaling approximately 22,500 sf in area.

4.6.1 Area 1 Delineation

The delineation sampling in Area 1 established two separate prescribed excavation areas. One is located at the west extent of Area 1 and extends into the east portion of Area 2, while the second comprises a large portion of the east half of Area 1 and extends into the southern portion of Area 5 and the eastern portion of Area 6.

Most of the two prescribed excavations in Area 1 will extend from the ground surface to the groundwater table. However, there are several portions of the prescribed excavation area where overlying soil may be reused as backfill and/or the excavation can be limited to a shallower depth based on the delineation sampling. The vertical limits of this prescribed excavation will be based on the analytical results and a cost analysis of the segregation costs versus disposal costs. Those vertical limits will be detailed in the *Shallow Soil Excavation Engineering Design Report*.

The Area 1 prescribed excavations are well delineated and no additional delineation sampling is recommended.

Area 1 West

The delineation sampling established an eastern extent of soil exceedances distinct from the exceedances in the east portion of Area 1 at three sample locations (A1-DB-03d, A1-DB-04b, and A1-DB-05c). Delineation sample locations A1-DB-01a, A1-DB-01b, and A1-DB-05c established a northern extent of soil exceedances in this area. The southern extent remains the property boundary, and the fertilizer blending building in Area 2 establishes the western extent of the excavation in addition to sample location B-16. The prescribed excavation area for Area 1 West is approximately 5,200 sf.

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Area 1 East

The delineation sampling established a western extent of soil exceedances distinct from the exceedances in the west portion of Area 1 at three sample locations (A1-DB-04, A1-DB-05, and A1-DB-05d). Two additional delineation sample locations (A1-DB-11b and A6-DB-01) and one previous sample location (A1-SB-001) established an eastern extent of soil exceedances distinct from the Area 6 exceedances. Delineation sample locations A1-DB-07b and A1-DB-12b established a northern extent of the soil exceedances in this area. The southern extent remains the property boundary. The prescribed excavation area for Area 1 East is 13,100 sf.

4.6.2 Area 6 Delineation

Three additional delineation sample locations (A6-DB-05a, A6-DB-06, and A6-DB-07a) established a western extent of soil exceedances distinct from the exceedances in Area 1. The northern extent of the soil exceedances was established by two additional delineation locations (A6-DB-05b and A6-DB-09), while the southern extent was also established by two additional delineation locations (A6-DB-07a and A6-DB-08b). Additional delineation sampling was unable to establish an eastern extent to the ammonia exceedances and the property boundary will remain the extent of the prescribed excavation to the east. The prescribed excavation area for Area 6 is 4,200 sf.

Over half of the prescribed excavation in Area 6 will extend from the ground surface to the groundwater table. However, there are several portions of the prescribed excavation area where either overlying soil may be reused as backfill or the excavation can be limited to a shallower depth based on the delineation sampling. The vertical limits of this prescribed excavation will be based on the analytical results and a cost analysis of the segregation costs versus disposal costs. Those vertical limits will be detailed in the *Shallow Soil Excavation Engineering Design Report*.

The Area 6 prescribed excavation is well delineated and no additional delineation sampling is recommended.

ADDITIONAL SOIL DELINEATION DOCUMENTATION REPORT

Bee-Jay Scales Site, Sunnyside, Washington
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5.0 References

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ADDITIONAL SOIL DELINEATION DOCUMENTATION REPORT

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6.0 Limitations and Certification

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of CEMC and ARC for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

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All information, conclusions, and recommendations provided by Stantec in this document regarding the Subject Property have been prepared under the supervision of and reviewed by the Licensed Professional whose signature appears below:

Licensed Approver:

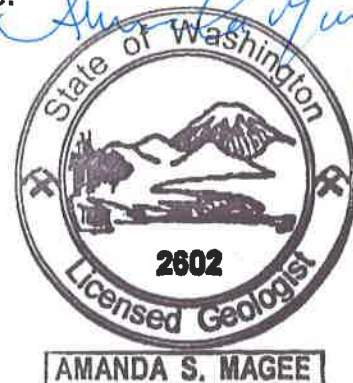
**Name: Amanda Magee, R.G.
Associate Geologist**

Date: 8/23/13

Signature:



Stamp:



Tables

Table 1
Analytical Results from Area 2 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A2-DB-01	3/21/2013	1.5	75.7	Not analyzed	10.8
	3/21/2013	3	394	Not analyzed	18.7
	3/21/2013	4.5	142	Not analyzed	20.3
	3/21/2013	6	11.8	Not analyzed	19.3
Average			156		
Exceeds Site-specific soil criteria?			No		
A2-DB-01a	3/21/2013	1.5	Sample discarded without analysis		
	3/21/2013	3	Sample discarded without analysis		
	3/21/2013	4.5	Sample discarded without analysis		
	3/21/2013	6	Sample discarded without analysis		
A2-DB-02	3/21/2013	1.5	198	Not analyzed	7.9
	3/21/2013	3	375	Not analyzed	19.2
	3/21/2013	4.5	135	Not analyzed	18.7
	3/21/2013	6	6.0	Not analyzed	20.2
Average			179		
Exceeds Site-specific soil criteria?			No		
A2-DB-02a	3/21/2013	1.5	Sample discarded without analysis		
	3/21/2013	3	Sample discarded without analysis		
	3/21/2013	4.5	Sample discarded without analysis		
	3/21/2013	6	Sample discarded without analysis		

Notes:

bgs = below ground surface

mg/kg = milligrams per kilogram

% = percent

Analytical results exceeding the nitrate or ammonia CULs are shown in **bold**.

If one or more samples from a borehole exceed the nitrate CUL, the average concentration of the nitrate samples for that location is shown (**bold** if it exceeds the nitrate CUL).

A location exceeds the Site-specific soil criteria for nitrate if; 1) the average concentration exceeds the nitrate CUL, or 2) the deepest sample exceeds the nitrate CUL.

Table 2
Analytical Results from the Area 4 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A4-DB-01	3/19/2013	0.5	Not analyzed	ND (<95.9)	11.4
	3/19/2013	2.5	Not analyzed	119 J	14.8
A4-DB-02	3/19/2013	0.5	Not analyzed	1,030	5.6
	3/19/2013	2.5	Not analyzed	885	8.1
A4-DB-01a	Borehole not advanced				
A4-DB-01b	3/25/2013	0.5	Not analyzed	940	10.3
	3/25/2013	2.5	Not analyzed	224 J	14.8
A4-DB-01c	3/25/2013	0.5	Not analyzed	ND (<92.4)	8.0
	3/25/2013	2.5	Not analyzed	ND (<95.7)	11.2
A4-DB-01d	Borehole not advanced				
A4-DB-01e	3/25/2013	0.5	Not analyzed	ND (<96.5)	11.9
	3/25/2013	2.5	Not analyzed	ND (<99.1)	14.2
A4-DB-01f	3/25/2013	0.5	Sample discarded without analysis		
	3/25/2013	2.5	Sample discarded without analysis		

Notes:

bgs = below ground surface

mg/kg = milligrams per kilogram

% = percent

J = estimated concentration (the result is \geq the MDL and $<$ the LOQ)

Analytical results exceeding the nitrate or ammonia CULs are shown in **bold**.

"ND" denotes the sample concentration was below the method detection limit shown in parenthesis.

Table 3
Analytical Results from the Area 5 West Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A5W-DB-01	3/20/2013	0.5	104	Not analyzed	6.8
	3/20/2013	2.5	55.1	Not analyzed	13.7
A5W-DB-01a	3/25/2013	0.5	95.3	Not analyzed	7.0
	3/25/2013	2.5	72.3	Not analyzed	13.8
A5W-DB-01b	3/25/2013	0.5	Sample discarded without analysis		
	3/25/2013	2.5	Sample discarded without analysis		
A5W-DB-01c	3/25/2013	0.5	Sample discarded without analysis		
	3/25/2013	2.5	Sample discarded without analysis		
A5W-DB-01d	3/25/2013	0.5	Sample discarded without analysis		
	3/25/2013	2.5	Sample discarded without analysis		
A5W-DB-02	3/19/2013	0.5	13.8	Not analyzed	10.2
	3/19/2013	2.5	150	Not analyzed	16.2
A5W-DB-02a	3/25/2013	0.5	69.1	Not analyzed	9.3
	3/25/2013	2.5	340	Not analyzed	19.0
Average			205		
Exceeds Site-specific soil criteria?			Yes		
A5W-DB-02b	3/25/2013	0.5	2.8	Not analyzed	9.6
	3/25/2013	2.5	48.6	Not analyzed	10.4
A5W-DB-02c	3/25/2013	0.5	24.1	Not analyzed	9.3
	3/25/2013	2.5	113	Not analyzed	12.0
A5W-DB-02d	3/25/2013	0.5	Sample discarded without analysis		
	3/25/2013	2.5	Sample discarded without analysis		
A5W-DB-02e	3/25/2013	0.5	Sample discarded without analysis		
	3/25/2013	2.5	Sample discarded without analysis		

Notes:

bgs = below ground surface

mg/kg = milligrams per kilogram

% = percent

Analytical results exceeding the nitrate or ammonia CULs are shown in **bold**.

If one or more samples from a borehole exceed the nitrate CUL, the average concentration of the nitrate samples

A location exceeds the Site-specific soil criteria for nitrate if; 1) the average concentration exceeds the nitrate

Table 4
Analytical Results from the Area 5 East Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A5E-DB-01	3/20/2013	2	82.9	Not analyzed	14.7
	3/20/2013	4.5	1,490	Not analyzed	12.3
	3/20/2013	7	31.3	Not analyzed	23.5
	3/20/2013	9.5	9.3	Not analyzed	22.8
Average			403		
Exceeds Site-specific soil criteria?			Yes		
A5E-DB-01a	3/20/2013	2	104	Not analyzed	21.5
	3/20/2013	4.5	79.2	Not analyzed	14.6
	3/20/2013	6	362	Not analyzed	22.5
	3/20/2013	9.5	7.2	Not analyzed	18.7
Average			138		
Exceeds Site-specific soil criteria?			No		
A5E-DB-02	3/20/2013	2	197	Not analyzed	14.6
	3/20/2013	4	392	Not analyzed	13.8
	3/20/2013	6	262	Not analyzed	19.2
	3/20/2013	8.5	114	Not analyzed	27.6
Average			241		
Exceeds Site-specific soil criteria?			Yes		
A5E-DB-03	3/20/2013	2.5	145	Not analyzed	11.8
	3/20/2013	5	180	Not analyzed	16.5
	3/20/2013	7.5	69.7	Not analyzed	24.2
	3/20/2013	10	7.7	Not analyzed	23.6
A5E-DB-03a	3/23/2013	2.5	101	Not analyzed	10.5
	3/23/2013	5	116	Not analyzed	15.4
	3/23/2013	7.5	32.8	Not analyzed	22.7
	3/23/2013	10	297	Not analyzed	29.1
Average			137		
Exceeds Site-specific soil criteria?			Yes		
A5E-DB-04	3/21/2013	2	8.3	Not analyzed	13.5
	3/21/2013	4.5	25.3	Not analyzed	13.6
	3/21/2013	7	126	Not analyzed	18.4
	3/21/2013	9.5	451	Not analyzed	26.5
Average			153		
Exceeds Site-specific soil criteria?			Yes		
A5E-DB-05	3/20/2013	2	165	Not analyzed	14.5
	3/20/2013	4	87.7	Not analyzed	19.2
	3/20/2013	6	56.0	Not analyzed	29.0
	3/20/2013	8	31.5	Not analyzed	27.3

Table 4
Analytical Results from the Area 5 East Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A5E-DB-05a	3/23/2013	2	345	Not analyzed	11.1
	3/23/2013	4	682	Not analyzed	14.0
	3/23/2013	6	365	Not analyzed	23.2
	3/23/2013	8	17.7	Not analyzed	18.7
Average			352		
Exceeds Site-specific soil criteria?			Yes		
A5E-DB-06	3/21/2013	2	41.6	ND (<102)	16.9
	3/21/2013	4	39.3	ND (<101)	15.7
	3/21/2013	6.5	214	ND (<108)	21.0
	3/21/2013	9	7.9	ND (<107)	20.7
A5E-DB-07	3/20/2013	2	50.1	ND (<95.5)	11.0
	3/20/2013	4	39.3	ND (<105)	18.8
	3/20/2013	6	153	ND (<104)	17.9
	3/20/2013	8.5	244	ND (<107)	20.7
Average			122		
Exceeds Site-specific soil criteria?			Yes		
A5E-DB-07a	3/20/2013	2	Sample discarded without analysis		
	3/20/2013	4	Sample discarded without analysis		
	3/20/2013	6	Sample discarded without analysis		
	3/20/2013	8.5	Sample discarded without analysis		

Notes:

bgs = below ground surface

mg/kg = milligrams per kilogram

% = percent

Analytical results exceeding the nitrate or ammonia CULs are shown in **bold**.

"ND" denotes the sample concentration was below the method detection limit shown in parenthesis.

If one or more samples from a borehole exceed the nitrate CUL, the average concentration of the nitrate samples for that location is shown (**bold** if it exceeds the nitrate CUL).

A location exceeds the Site-specific soil criteria for nitrate if; 1) the average concentration exceeds the nitrate CUL, or 2) the deepest sample exceeds the nitrate CUL.

Table 5
Analytical Results from the Area 5 South Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A5S-DB-01	3/23/2013	1.5	154	Not analyzed	10.2
	3/23/2013	3	178	Not analyzed	19.1
	3/23/2013	4.5	91.0	Not analyzed	17.2
	3/23/2013	6.5	66.8	Not analyzed	25.8
A5S-DB-01a	3/23/2013	1.5	Sample discarded without analysis		
	3/23/2013	3	Sample discarded without analysis		
	3/23/2013	4.5	Sample discarded without analysis		
	3/23/2013	6.5	Sample discarded without analysis		
A5S-DB-02	3/23/2013	1.5	2.2	Not analyzed	11.0
	3/23/2013	3	4.4	Not analyzed	18.1
	3/23/2013	4.5	3.1	Not analyzed	18.3
	3/23/2013	6.5	219	Not analyzed	22.2
A5S-DB-03	3/23/2013	1.5	284	Not analyzed	10.4
	3/23/2013	3	291	Not analyzed	13.3
	3/23/2013	4.5	175	Not analyzed	17.5
	3/23/2013	6.5	212	Not analyzed	28.4
Average			241		
Exceeds Site-specific soil criteria?			Yes		
A5S-DB-03a	3/23/2013	1.5	9.6	Not analyzed	10.8
	3/23/2013	3	7.9	Not analyzed	18.3
	3/23/2013	4.5	14.7	Not analyzed	16.2
	3/23/2013	6.5	112	Not analyzed	25.4

Notes:

bgs = below ground surface

mg/kg = milligrams per kilogram

% = percent

Analytical results exceeding the nitrate or ammonia CULs are shown in **bold**.

If one or more samples from a borehole exceed the nitrate CUL, the average concentration of the nitrate samples for that location is shown (**bold** if it exceeds the nitrate CUL).

A location exceeds the Site-specific soil criteria for nitrate if; 1) the average concentration exceeds the nitrate CUL, or 2) the deepest sample exceeds the nitrate CUL.

Table 6
Analytical Results from the Area 1 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A1-DB-01	3/19/2013	1.5	Not analyzed	847	11.8
	3/19/2013	3	Not analyzed	1,060	13.5
	3/19/2013	4.5	Not analyzed	158 J	24.9
	3/19/2013	6.5	Not analyzed	ND (<112)	24.0
A1-DB-01a	3/25/2013	1.5	Not analyzed	ND (<96.2)	11.6
	3/25/2013	3	Not analyzed	ND (<104)	18.2
	3/25/2013	4.5	Not analyzed	ND (<113)	24.6
A1-DB-01b	3/25/2013	1.5	Not analyzed	188 J	13.7
	3/25/2013	3	Not analyzed	330	15.0
	3/25/2013	4.5	Not analyzed	ND (<111)	23.1
A1-DB-02	3/18/2013	1.5	185	Not analyzed	12.9
	3/18/2013	3	533	Not analyzed	19.0
	3/18/2013	4.5	387	Not analyzed	23.5
	3/18/2013	6.5	72.6	Not analyzed	23.1
Average			294		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-02a	3/22/2013	1.5	61.6	Not analyzed	14.9
	3/22/2013	3	172	Not analyzed	21.2
	3/22/2013	4.5	187	Not analyzed	24.3
	3/22/2013	6.5	223	Not analyzed	24.8
Average			161		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-02b	3/22/2013	1.5	89.3	Not analyzed	18.1
	3/22/2013	3	182	Not analyzed	22.2
	3/22/2013	4.5	429	Not analyzed	23.0
	3/22/2013	6.5	453	Not analyzed	23.0
Average			288		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-03	3/18/2013	1.5	223	1,470	17.7
	3/18/2013	3	375	1,980	17.9
	3/18/2013	4.5	630	489	15.9
	3/18/2013	6.5	118	146 J	26.5
Average			337		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-03a	3/22/2013	1.5	164	1,390	14.3
	3/22/2013	3	617	1,090	17.1
	3/22/2013	4.5	606	630	19.3
	3/22/2013	6.5	256	ND (<107)	20.4
Average			411		
Exceeds Site-specific soil criteria?			Yes		

Table 6
Analytical Results from the Area 1 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A1-DB-03b	3/22/2013	1.5	308	1,090	13.6
	3/22/2013	3	437	487	16.4
	3/22/2013	4.5	373	ND (<104)	18.5
	3/22/2013	6.5	283	ND (<104)	18.4
Average			350		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-03c	6/14/2013	1.5	86.4	698	9.1
	6/14/2013	3	690	ND (<109)	21.9
	6/14/2013	4.5	344	ND (<103)	17.1
	6/14/2013	6	177	ND (<115)	25.8
Average			324		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-03d	6/14/2013	1.5	5.0	ND (<98.5)	13.7
	6/14/2013	3	23.8	ND (<104)	18.1
	6/14/2013	4.5	163	ND (<108)	21.2
	6/14/2013	6	112	ND (<110)	22.9
A1-DB-03f	6/14/2013	1.5	Sample discarded without analysis		
	6/14/2013	3	Sample discarded without analysis		
	6/14/2013	4.5	Sample discarded without analysis		
	6/14/2013	6	Sample discarded without analysis		
A1-DB-03g	6/12/2013	1.5	Sample discarded without analysis		
	6/12/2013	3	Sample discarded without analysis		
	6/12/2013	4.5	Sample discarded without analysis		
	6/12/2013	6	Sample discarded without analysis		
A1-DB-04	3/18/2013	1.5	32.4	ND (<100)	15.0
	3/18/2013	3	133	ND (<106)	19.9
	3/18/2013	4.5	46.5	ND (<102)	16.5
	3/18/2013	6.5	10.4	ND (<113)	24.7
A1-DB-04a	3/22/2013	1.5	48.5	ND (<93.8)	9.4
	3/22/2013	3	288	ND (<104)	17.9
	3/22/2013	4.5	643	ND (<106)	19.6
	3/22/2013	6.5	643	1,010	25.7
Average			406		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-04b	6/12/2013	1.5	36.6	Not analyzed	16.3
	6/12/2013	3	59.8	Not analyzed	19.5
	6/12/2013	4.5	163	ND (<104)	18.6
	6/12/2013	6	150	ND (<105)	19.2

Table 6
Analytical Results from the Area 1 Additional Soil Delineation Sampling

Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A1-DB-04c	6/12/2013	1.5	Sample discarded without analysis		
	6/12/2013	3	Sample discarded without analysis		
	6/12/2013	4.5	Sample discarded without analysis		
	6/12/2013	6	Sample discarded without analysis		
A1-DB-05	3/18/2013	1	24.8	97.5 J	5.4
	3/18/2013	2.5	632	122 J	20.2
	3/18/2013	4	94.6	ND (<110)	22.9
	3/18/2013	5.5	37.8	ND (<111)	23.4
Average			197		
Exceeds Site-specific soil criteria?			No		
A1-DB-05a	3/22/2013	1	Sample discarded without analysis		
	3/22/2013	2.5	Sample discarded without analysis		
	3/22/2013	4	Sample discarded without analysis		
	3/22/2013	5.5	Sample discarded without analysis		
A1-DB-05b	3/22/2013	1	578	ND (<99.4)	14.5
	3/22/2013	2.5	847	ND (<102)	17.0
	3/22/2013	4	533	ND (<109)	22.2
	3/22/2013	5.5	184	ND (<108)	21.1
Average			536		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-05c	3/22/2013	1	6.1	137 J	19.9
	3/22/2013	2.5	16.2	ND (<107)	20.8
	3/22/2013	4	9.5	ND (<107)	20.5
	3/22/2013	5.5	14.8	ND (<111)	23.6
A1-DB-05d	3/22/2013	1	5.4	ND (<96.8)	12.2
	3/22/2013	2.5	10.7	ND (<103)	17.2
	3/22/2013	4	16	ND (<110)	22.9
	3/22/2013	5.5	110	ND (<105)	19.0
A1-DB-06	3/19/2013	1.5	130	ND (<97.9)	13.2
	3/19/2013	3	474	ND (<110)	22.5
	3/19/2013	4.5	145	ND (<106)	19.6
	3/19/2013	6.5	84.7	ND (<117)	27.3
Average			208		
Exceeds Site-specific soil criteria?			No		
A1-DB-06a	3/21/2013	1.5	272	ND (<95.9)	11.4
	3/21/2013	3	776	148 J	20.1
	3/21/2013	4.5	363	ND (<101)	16.2
	3/21/2013	6.5	461	211 J	21.6
Average			468		
Exceeds Site-specific soil criteria?			Yes		

Table 6
Analytical Results from the Area 1 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A1-DB-06b	3/21/2013	1.5	189	ND (<96.8)	12.2
	3/21/2013	3	904	ND (<112)	23.9
	3/21/2013	4.5	1,310	ND (<110)	22.6
	3/21/2013	6.5	523	270 J	22.4
Average			732		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-07	3/18/2013	1	4.6	ND (<100)	15.4
	3/18/2013	2.5	54.4	ND (<108)	21.5
	3/18/2013	4	833	ND (<110)	22.9
	3/18/2013	5.5	320	329 J	23.1
Average			303		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-07a	3/25/2013	1	84.9	Not analyzed	13.0
	3/25/2013	2.5	629	Not analyzed	20.3
	3/25/2013	4	738	Not analyzed	23.1
	3/25/2013	5.5	208	Not analyzed	20.8
Average			415		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-07b	6/13/2013	1	103	Not analyzed	7.9
	6/13/2013	2.5	179	Not analyzed	15.5
	6/13/2013	4	252	Not analyzed	21.2
	6/13/2013	5.5	137	Not analyzed	22.3
Average			168		
Exceeds Site-specific soil criteria?			No		
A1-DB-07c	6/14/2013	1	Sample discarded without analysis		
	6/14/2013	2.5	Sample discarded without analysis		
	6/14/2013	4	Sample discarded without analysis		
	6/14/2013	5.5	Sample discarded without analysis		
A1-DB-08	3/21/2013	2	17.5	ND (<114)	25.3
	3/21/2013	3	64.6	ND (<111)	23.7
	3/21/2013	4	89.9	ND (<110)	22.5
	3/21/2013	5.5	868	672	24.1
Average			260		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-08a	3/21/2013	1	5.2	ND (<101)	25.3
	3/21/2013	2.5	5.9	ND (<113)	23.7
	3/21/2013	4	11.1	ND (<105)	22.5
	3/21/2013	5.5	70.5	ND (<103)	24.1

Table 6
Analytical Results from the Area 1 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A1-DB-09	3/21/2013	1.5	11.5	ND (<103)	17.1
	3/21/2013	3	28.2	ND (<114)	25.2
	3/21/2013	4.5	19.7	ND (<109)	22.3
	3/21/2013	6	44.1	162 J	19.7
A1-DB-09a	3/21/2013	1	21.7	791	12.4
	3/21/2013	2.5	121	932	17.2
	3/21/2013	4	255	ND (<113)	24.8
	3/21/2013	5.5	434	ND (<114)	25.4
Average			208		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-10	3/19/2013	1.5	452	Not analyzed	13.6
	3/19/2013	3	2,800	Not analyzed	27.5
	3/19/2013	5	608	Not analyzed	23.0
	3/19/2013	7	160	Not analyzed	25.1
Average			1,005		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-10a	3/22/2013	1.5	Sample discarded without analysis		
	3/22/2013	3	Sample discarded without analysis		
	3/22/2013	5	Sample discarded without analysis		
	3/22/2013	7	Sample discarded without analysis		
A1-DB-11	3/19/2013	1.5	1,490	Not analyzed	17.7
	3/19/2013	3	983	Not analyzed	19.3
	3/19/2013	5	273	Not analyzed	23.5
	3/19/2013	7	147	Not analyzed	24.3
Average			723		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-11a	3/22/2013	1.5	643	Not analyzed	11.6
	3/22/2013	3	384	Not analyzed	18.0
	3/22/2013	5	28.7	Not analyzed	19.1
	3/22/2013	7	215	Not analyzed	24.8
Average			318		
Exceeds Site-specific soil criteria?			Yes		
A1-DB-11b	6/12/2013	1.5	171	Not analyzed	16.3
	6/12/2013	3	334	Not analyzed	17.8
	6/12/2013	5	54.4	Not analyzed	15.7
	6/12/2013	7	12.6	Not analyzed	25.5
Average			143		
Exceeds Site-specific soil criteria?			No		

Table 6
Analytical Results from the Area 1 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A1-DB-12	3/18/2013	1.5	Not analyzed	373	10.1
	3/18/2013	2.5	Not analyzed	1,230	17.9
	3/18/2013	4	Not analyzed	ND (<105)	19.4
	3/18/2013	5.5	Not analyzed	ND (<107)	20.6
A1-DB-12a	3/25/2013	1	Not analyzed	155 J	6.7
	3/25/2013	2.5	Not analyzed	1,250	13.0
	3/25/2013	4	Not analyzed	ND (<105)	19.3
A1-DB-12b	3/25/2013	1	Not analyzed	143 J	14.7
	3/25/2013	2.5	Not analyzed	122 J	12.6
	3/25/2013	4	Not analyzed	ND (<106)	19.6
A1-DB-13	3/21/2013	1	1,010	ND (<103)	17.1
	3/21/2013	2.5	817	ND (<106)	20.0
	3/21/2013	4	301	301 J	21.1
	3/21/2013	5.5	59.9	911	17.9
Average			547		
Exceeds Site-specific soil criteria?			Yes		

Notes:

bgs = below ground surface

mg/kg = milligrams per kilogram

% = percent

J = estimated concentration (the result is \geq the MDL and $<$ the LOQ)

Analytical results exceeding the nitrate or ammonia CULs are shown in **bold**.

"ND" denotes the sample concentration was below the method detection limit shown in parenthesis.

If one or more samples from a borehole exceed the nitrate CUL, the average concentration of the nitrate samples for that location is shown (**bold** if it exceeds the nitrate CUL).

A location exceeds the Site-specific soil criteria for nitrate if; 1) the average concentration exceeds the nitrate CUL, or 2) the deepest sample exceeds the nitrate CUL.

Table 7
Analytical Results from the Area 6 Additional Soil Delineation Sampling

Bee-Jay Scales Site
Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A6-DB-01	3/19/2013	1.5	2.0	ND (<90.5)	6.1
	3/19/2013	3	2.6	ND (<90.0)	5.6
	3/19/2013	4.5	12.0	ND (<102)	16.4
	3/19/2013	6	3.3	ND (<113)	24.8
A6-DB-01a	3/22/2013	1.5	19.7	ND (<95.1)	10.6
	3/22/2013	3	17.8	ND (<105)	18.8
	3/22/2013	4.5	8.2	ND (<102)	16.8
	3/22/2013	6	43.6	ND (<105)	19.2
A6-DB-01b	3/22/2013	1.5	14.1	ND (<95.6)	11.1
	3/22/2013	3	36.1	ND (<106)	19.6
	3/22/2013	4.5	23.7	ND (<102)	16.3
	3/22/2013	6	27.6	ND (<106)	19.7
A6-DB-01c	Borehole not advanced				
A6-DB-02	3/19/2013	1	24.9	ND (<98.6)	13.8
	3/19/2013	2.5	22.8	ND (<108)	21.3
	3/19/2013	4	8.7	ND (<106)	19.8
	3/19/2013	5.5	3.7	ND (<110)	23.0
A6-DB-03	3/19/2013	0.5	Not analyzed	ND (<97.8)	13.1
	3/19/2013	2.5	Not analyzed	325 J	22.3
A6-DB-04	3/19/2013	0.5	Not analyzed	ND (<101)	15.5
	3/19/2013	2.5	Not analyzed	376	17.2
A6-DB-05	3/19/2013	1	168	2,000	14.9
	3/19/2013	2.5	165	1,860	10.8
	3/19/2013	4	615	1,210	15.9
	3/19/2013	5.5	61.2	282 J	23.1
Average			252		
Exceeds Site-specific soil criteria?			Yes		
A6-DB-05a	3/26/2013	1	3.4	ND (<105)	19.1
	3/26/2013	2.5	2.2	ND (<101)	15.7
	3/26/2013	4	1.8	ND (<99.8)	14.8
	3/26/2013	5.5	6.4	ND (<108)	21.6
A6-DB-05b	3/26/2013	1	53.5	ND (<91.9)	7.5
	3/26/2013	2.5	38.0	ND (<99.8)	14.8
	3/26/2013	4	37.2	ND (<102)	17.0
	3/26/2013	5.5	16.3	ND (<112)	24.2
A6-DB-05c	3/26/2013	1	Sample discarded without analysis		
	3/26/2013	2.5	Sample discarded without analysis		
	3/26/2013	4	Sample discarded without analysis		
	3/26/2013	5.5	Sample discarded without analysis		

Table 7
Analytical Results from the Area 6 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A6-DB-06	3/20/2013	1.5	11.3	ND (<101)	16.1
	3/20/2013	3	360	ND (<109)	22.2
	3/20/2013	4.5	216	ND (<101)	16.0
	3/20/2013	6.5	10.1	ND (<107)	20.5
Average			149		
Exceeds Site-specific soil criteria?			No		
A6-DB-06a	3/20/2013	1.5	2,130	5,370	10.4
	3/20/2013	3	2,910	8,090	13.8
	3/20/2013	4.5	2,700	7,310	11.5
	3/20/2013	6.5	112	669	21.4
Average			1,963		
Exceeds Site-specific soil criteria?			Yes		
A6-DB-06b	3/20/2013	1.5	Sample discarded without analysis		
	3/20/2013	3	Sample discarded without analysis		
	3/20/2013	4.5	Sample discarded without analysis		
	3/20/2013	6.5	Sample discarded without analysis		
A6-DB-07	3/20/2013	1.5	67.3	ND (<101)	15.7
	3/20/2013	3	159	ND (<96.8)	12.2
	3/20/2013	5	582	ND (<107)	20.2
	3/20/2013	7	150	494	23.7
Average			240		
Exceeds Site-specific soil criteria?			Yes		
A6-DB-07a	6/13/2013	1.5	30.0	Not analyzed	8.3
	6/13/2013	3	61.2	Not analyzed	19.5
	6/13/2013	5	36.9	ND (<103)	17.5
	6/13/2013	7	102	149 J	19.5
A6-DB-07b	6/13/2013	1.5	Sample discarded without analysis		
	6/13/2013	3	Sample discarded without analysis		
	6/13/2013	5	Sample discarded without analysis		
	6/13/2013	7	Sample discarded without analysis		
A6-DB-08	3/18/2013	1.5	16.2	1,230	16.1
	3/18/2013	3	124	4,260	20.8
	3/18/2013	5	1,020	ND (<107)	20.7
	3/18/2013	7	36.5	178 J	21.8
Average			299		
Exceeds Site-specific soil criteria?			Yes		

Table 7
Analytical Results from the Area 6 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A6-DB-08a	3/26/2013	1.5	782	927	10.9
	3/26/2013	3	667	1,580	12.9
	3/26/2013	5	274	994	14.4
	3/26/2013	7	49.5	Not analyzed	27.8
Average			443		
Exceeds Site-specific soil criteria?			Yes		
A6-DB-08b	6/13/2013	1.5	313	ND (<92.9)	8.5
	6/13/2013	3	244	ND (<93.4)	9.0
	6/13/2013	5	181	ND (<100)	15.2
	6/13/2013	7	96.6	ND (<108)	21.0
Average			209		
Exceeds Site-specific soil criteria?			No		
A6-DB-08c	6/13/2013	1.5	486	600	13.1
	6/13/2013	3	593	838	17.4
	6/13/2013	5	191	1,390	20.0
	6/13/2013	7	329	1,200	28.6
Average			400		
Exceeds Site-specific soil criteria?			Yes		
A6-DB-08d	6/13/2013	1.5	Sample discarded without analysis		
	6/13/2013	3	Sample discarded without analysis		
	6/13/2013	5	Sample discarded without analysis		
	6/13/2013	7	Sample discarded without analysis		
A6-DB-09	3/18/2013	1.5	168	ND (<99.4)	14.5
	3/18/2013	3	329	ND (<99.4)	14.5
	3/18/2013	5	147	ND (<99.5)	14.6
	3/18/2013	7	34.4	ND (<115)	26.1
Average			170		
Exceeds Site-specific soil criteria?			No		
A6-DB-09a	3/26/2013	1.5	442	7,070	21.1
	3/26/2013	3	268	2,050	11.0
	3/26/2013	5	608	1,280	20.4
	3/26/2013	7	59.5	326 J	22.4
Average			344		
Exceeds Site-specific soil criteria?			Yes		
A6-DB-09b	3/26/2013	1.5	346	1,150	8.4
	3/26/2013	3	585	1,540	15.3
	3/26/2013	5	272	1,660	17.2
	3/26/2013	7	344	1,400	21.2
Average			387		
Exceeds Site-specific soil criteria?			Yes		

Table 7
Analytical Results from the Area 6 Additional Soil Delineation Sampling
 Bee-Jay Scales Site
 Sunnyside, Washington

Sample ID	Sample Date	Sample Depth (feet bgs)	Nitrate Concentration (mg/kg)	Ammonia Concentration (mg/kg)	Moisture Content (%)
A6-DB-09c	6/13/2013	1.5	42.2	ND (<91.6)	7.2
	6/13/2013	3	258	ND (<101)	16.0
	6/13/2013	5	268	ND (<104)	18.3
	6/13/2013	7	145	661	28.1
Average			178		
Exceeds Site-specific soil criteria?			No		

Notes:

bgs = below ground surface

mg/kg = milligrams per kilogram

% = percent

J = estimated concentration (the result is \geq the MDL and $<$ the LOQ)

Analytical results exceeding the nitrate or ammonia CULs are shown in **bold**.

"ND" denotes the sample concentration was below the method detection limit shown in parenthesis.

If one or more samples from a borehole exceed the nitrate CUL, the average concentration of the nitrate samples for that location is shown (**bold** if it exceeds the nitrate CUL).

A location exceeds the Site-specific soil criteria for nitrate if; 1) the average concentration exceeds the nitrate CUL, or 2) the deepest sample exceeds the nitrate CUL.

Table 8
Additional Delineation Sampling Duplicate Results and Relative Percent Difference

Bee-Jay Scales Site
Sunnyside, Washington

Duplicate Sample ID	Borehole Location	Sample Depth (feet bgs)	Nitrate Analytical Result (mg/kg)	Duplicate Analytical Result (mg/kg)	Relative Percent Difference	Ammonia Analytical Result (mg/kg)	Duplicate Analytical Result (mg/kg)	Relative Percent Difference
DUP-1	A1-DB-02	3.0	533	548	2.78%	Not analyzed		
DUP-2	A1-DB-12	1.5	Not analyzed			373	533	35.32%
DUP-3	A6-DB-09	5.0	147	140	4.88%	< 99.5	< 99.0	0.50%
DUP-4	A4-DB-02	2.5	Not analyzed			885	< 93.0	161.96%
DUP-5	A1-DB-01	6.5	Not analyzed			< 112	< 112	0.00%
DUP-6	A6-DB-04	0.5	Not analyzed			< 101	< 101	0.00%
DUP-7	A1-DB-10	5.0	608	561	8.04%	Not analyzed		
DUP-8	A5E-DB-01	4.5	1,490	1,520	1.99%	Not analyzed		
DUP-9	A5E-DB-03	5.0	180	188	4.35%	Not analyzed		
DUP-10	A1-DB-06a	1.5	Sample discarded without analysis					
DUP-11	A2-DB-02	3.0	375	392	4.43%	Not analyzed		
DUP-12	A1-DB-08	4.0	89.9	73.1	20.61%	< 110	< 110	0.00%
DUP-13	A5E-DB-04	2.0	8.3	7.9	4.94%	Not analyzed		
DUP-14	A1-DB-10a	5.0	Sample discarded without analysis					
DUP-15	A6-DB-01b	3.0	36.1	34.6	4.24%	< 106	< 105	0.95%
DUP-16	A1-DB-02a	3.0	172	169	1.76%	Not analyzed		
DUP-17	A1-DB-04a	1.5	48.5	68.3	33.90%	< 93.8	< 93.9	0.11%
DUP-18	A1-DB-05d	5.5	110	117	6.17%	< 105	< 107	1.89%
DUP-19	A5S-DB-01	6.5	66.8	59.6	11.39%	Not analyzed		
DUP-20	A5S-DB-03	3.0	291	286	1.73%	Not analyzed		
DUP-21	A5S-DB-01a	4.5	Sample discarded without analysis					
DUP-22	A5E-DB-03a	5.0	116	111	4.41%	Not analyzed		
DUP-23	A1-DB-12a	2.5	Not analyzed			1,250	1,240	0.80%
DUP-24	A1-DB-07a	4.0	738	717	2.89%	Not analyzed		
DUP-25	A1-DB-01b	3.0	Not analyzed			330	670	68.00%
DUP-26	A4-DB-01c	0.5	Not analyzed			< 92.4	< 92.6	0.22%
DUP-27	A5W-DB-01a	2.5	72.3	67.7	6.57%	Not analyzed		
DUP-28	A5W-DB-02b	0.5	2.8	5.2	60.00%	Not analyzed		
DUP-29	A1-DB-01a	3.0	Not analyzed			< 104	< 104	0.00%
DUP-30	A6-DB-05b	4.0	37.2	33.7	9.87%	< 102	< 102	0.00%
DUP-31	A6-DB-09a	5.0	608	570	6.45%	1,280	1,360	6.06%
DUP-32	A1-DB-03g	6.0	Sample discarded without analysis					
DUP-33	A6-DB-07a	1.5	30.0	25.4	16.61%	Not analyzed		
DUP-34	A6-DB-08b	1.5	313	368	16.15%	< 92.9	< 94.4	1.60%
DUP-35	A1-DB-07b	1.0	103	77.4	28.38%	Not analyzed		
Average RPD					11.42%	Average RPD		17.34%

Notes:

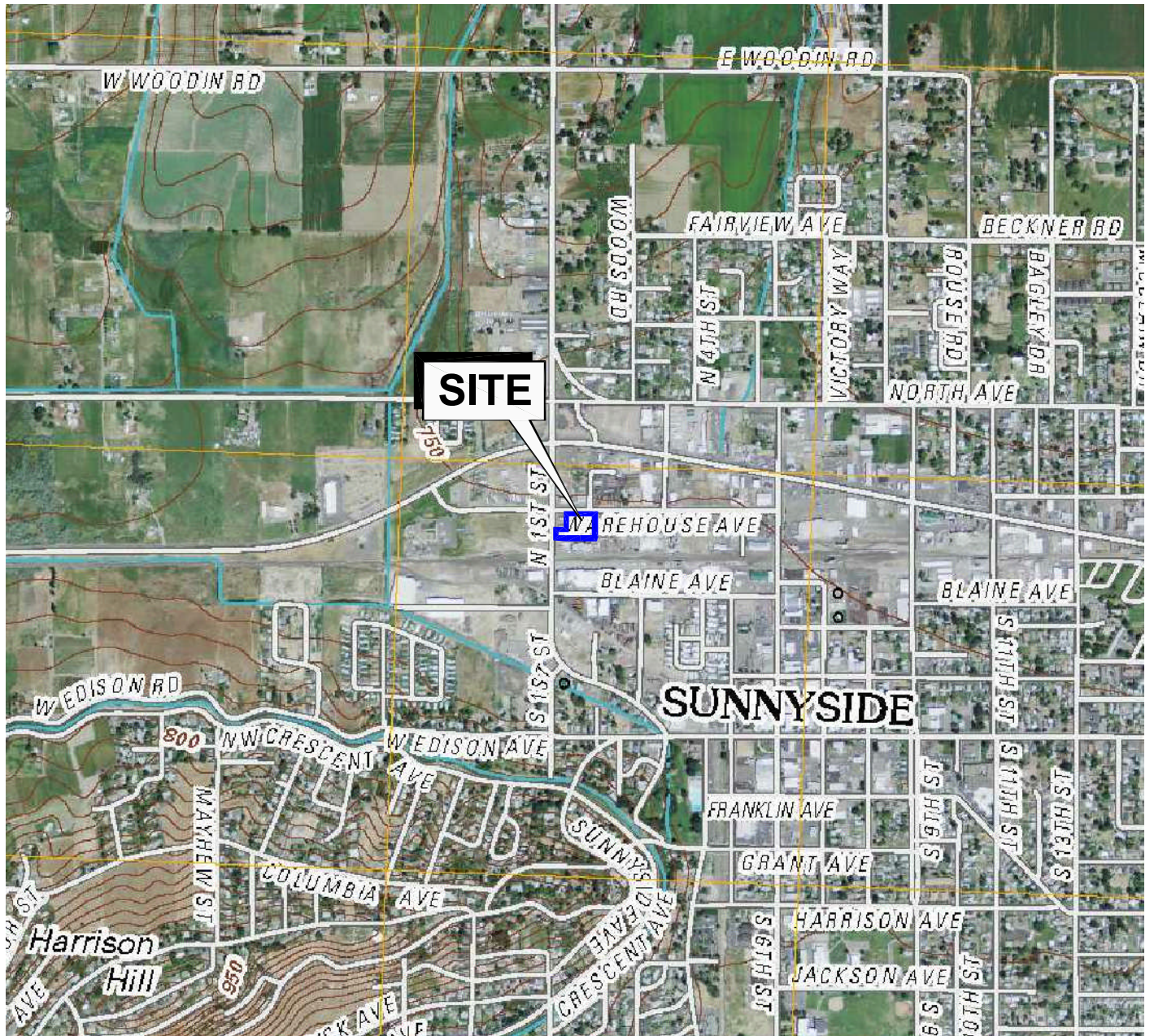
bgs = below ground surface

mg/kg = milligrams per kilogram

% = percent

Results with a "<" denote the sample concentration was below the method detection limit shown.

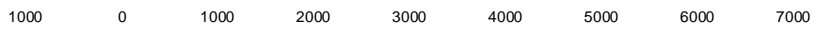
Figures



WASHINGTON



SCALE IN MILES



SCALE IN FEET

REFERENCE: USGS 7.5 MINUTE QUADRANGLE;
SUNNYSIDE, WASHINGTON; 2011



2321 Club Meridian Drive, Suite E
Okemos, Michigan

PHONE: (517) 349-9499 FAX: (517) 349-6863

FOR:
BEE-JAY SCALES SITE
SUNNYSIDE, WASHINGTON

JOB NUMBER:
213202156/213202157

DRAWN BY:
JRO

CHECKED BY:
EJB

APPROVED BY:
MRK

FIGURE:

1

DATE:
08/01/13

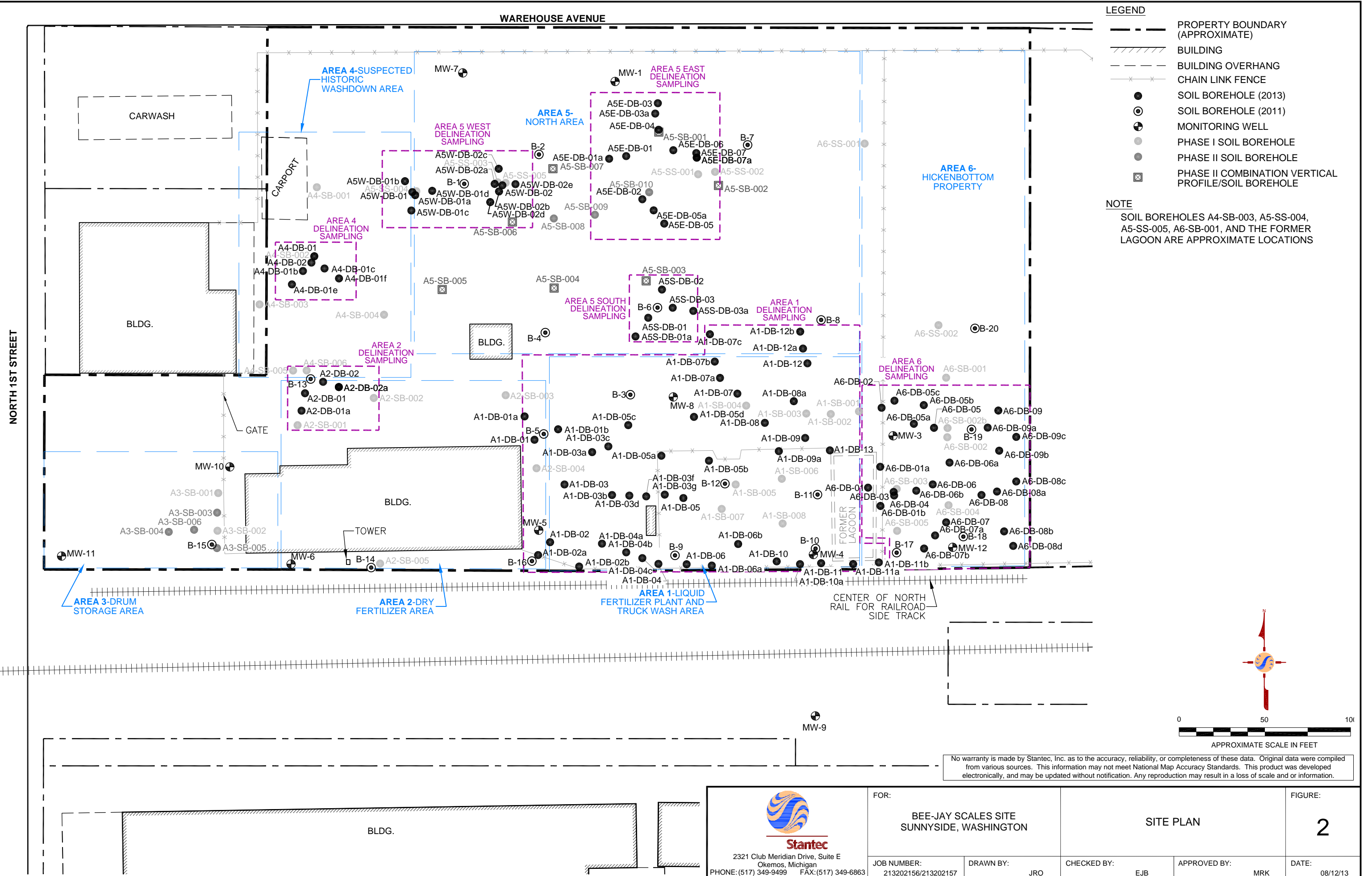
WAREHOUSE AVENUE

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- ▨ BUILDING
- - - BUILDING OVERHANG
- x-x- CHAIN LINK FENCE
- SOIL BOREHOLE (2013)
- ⊙ SOIL BOREHOLE (2011)
- ⊕ MONITORING WELL
- PHASE I SOIL BOREHOLE
- PHASE II SOIL BOREHOLE
- ⊠ PHASE II COMBINATION VERTICAL PROFILE/SOIL BOREHOLE

NOTE

SOIL BOREHOLES A4-SB-003, A5-SS-004, A5-SS-005, A6-SB-001, AND THE FORMER LAGOON ARE APPROXIMATE LOCATIONS



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<p>2321 Club Meridian Drive, Suite E Okemos, Michigan PHONE: (517) 349-9499 FAX: (517) 349-6863</p>	FOR:		SITE PLAN		FIGURE:
	BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON				2
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	
213202156/213202157	JRO	EJB	MRK	08/12/13	

WAREHOUSE AVENUE

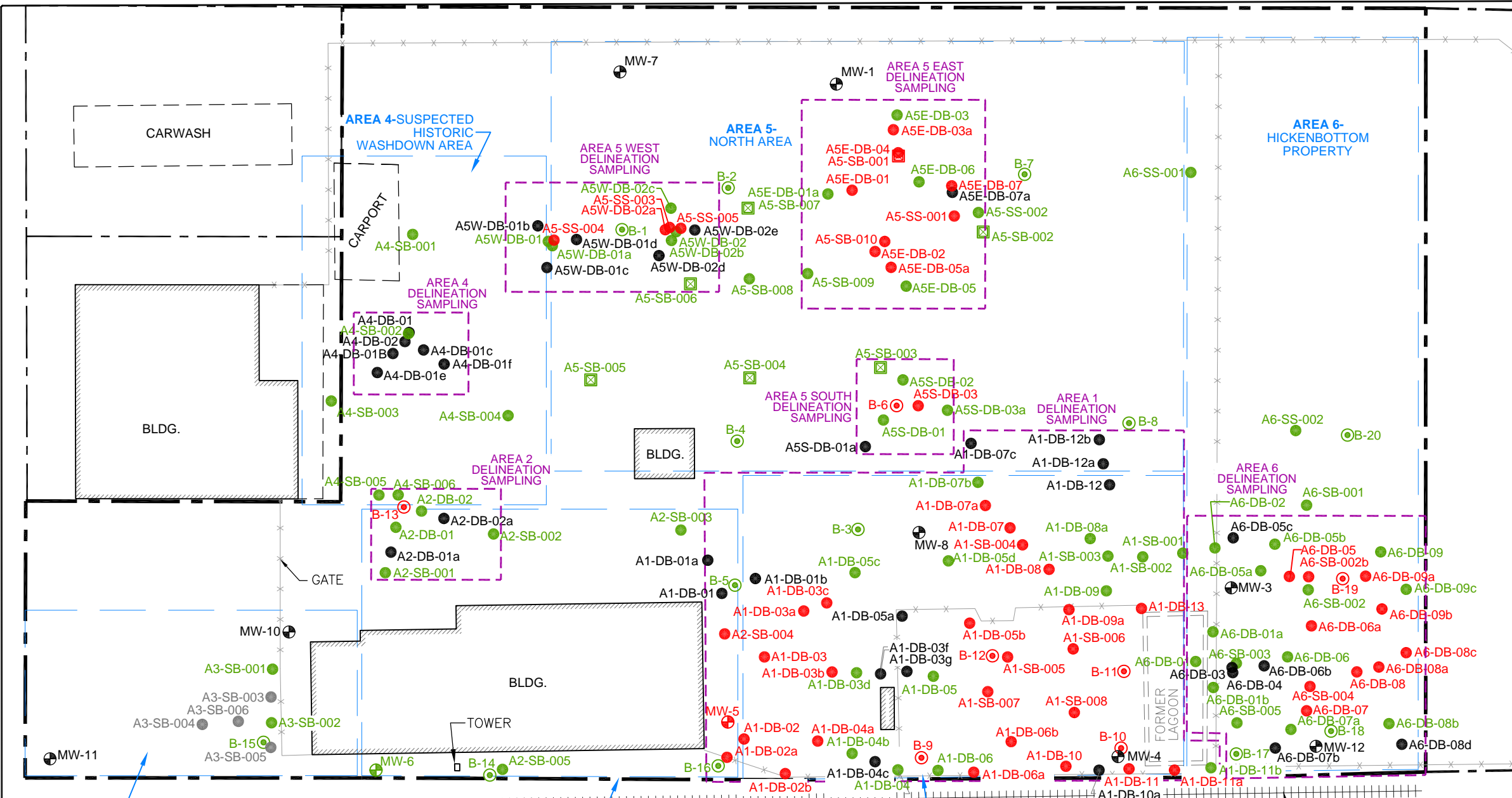
LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- ▨ BUILDING
- - - BUILDING OVERHANG
- ××× CHAIN LINK FENCE
- SOIL BOREHOLE (2013)
- ⊙ SOIL BOREHOLE (2011)
- ⊕ MONITORING WELL
- PHASE I SOIL BOREHOLE
- PHASE II SOIL BOREHOLE
- ⊠ PHASE II COMBINATION VERTICAL PROFILE/SOIL BOREHOLE

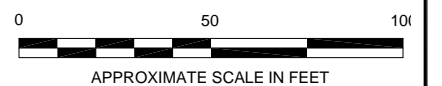
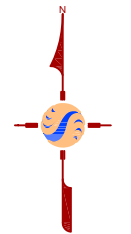
NOTES

- NITRATE CLEANUP LEVEL OF 220 MG/KG.
- BOREHOLE LOCATIONS WITH AVERAGE NITRATE CONCENTRATIONS ABOVE 220 MG/KG AND/OR WHERE THE DEEPEST SAMPLE EXCEEDS 220 MG/KG ARE SHOWN IN RED.
- BOREHOLE LOCATIONS WITH AVERAGE NITRATE CONCENTRATIONS BELOW 220 MG/KG AND WHERE THE DEEPEST SAMPLE IS BELOW 220 MG/KG ARE SHOWN IN GREEN.
- BOREHOLE LOCATIONS NOT ANALYZED FOR NITRATE SHOWN IN BLACK OR GRAY.
- SOIL BOREHOLES A4-SB-003, A5-SS-004, A5-SS-005, A6-SB-001, AND THE FORMER LAGOON ARE APPROXIMATE LOCATIONS


NORTH 1ST STREET



CENTER OF NORTH RAIL FOR RAILROAD SIDE TRACK



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 2321 Club Meridian Drive, Suite E Okemos, Michigan PHONE: (517) 349-9499 FAX: (517) 349-6863	FOR: BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON		SITE PLAN SHOWING EXCEEDANCES OF SITE-SPECIFIC NITRATE CRITERIA		FIGURE: 3
	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13

WAREHOUSE AVENUE

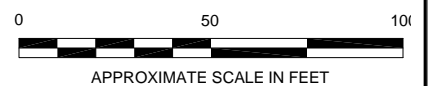
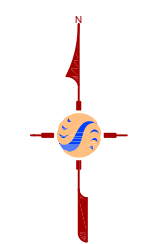
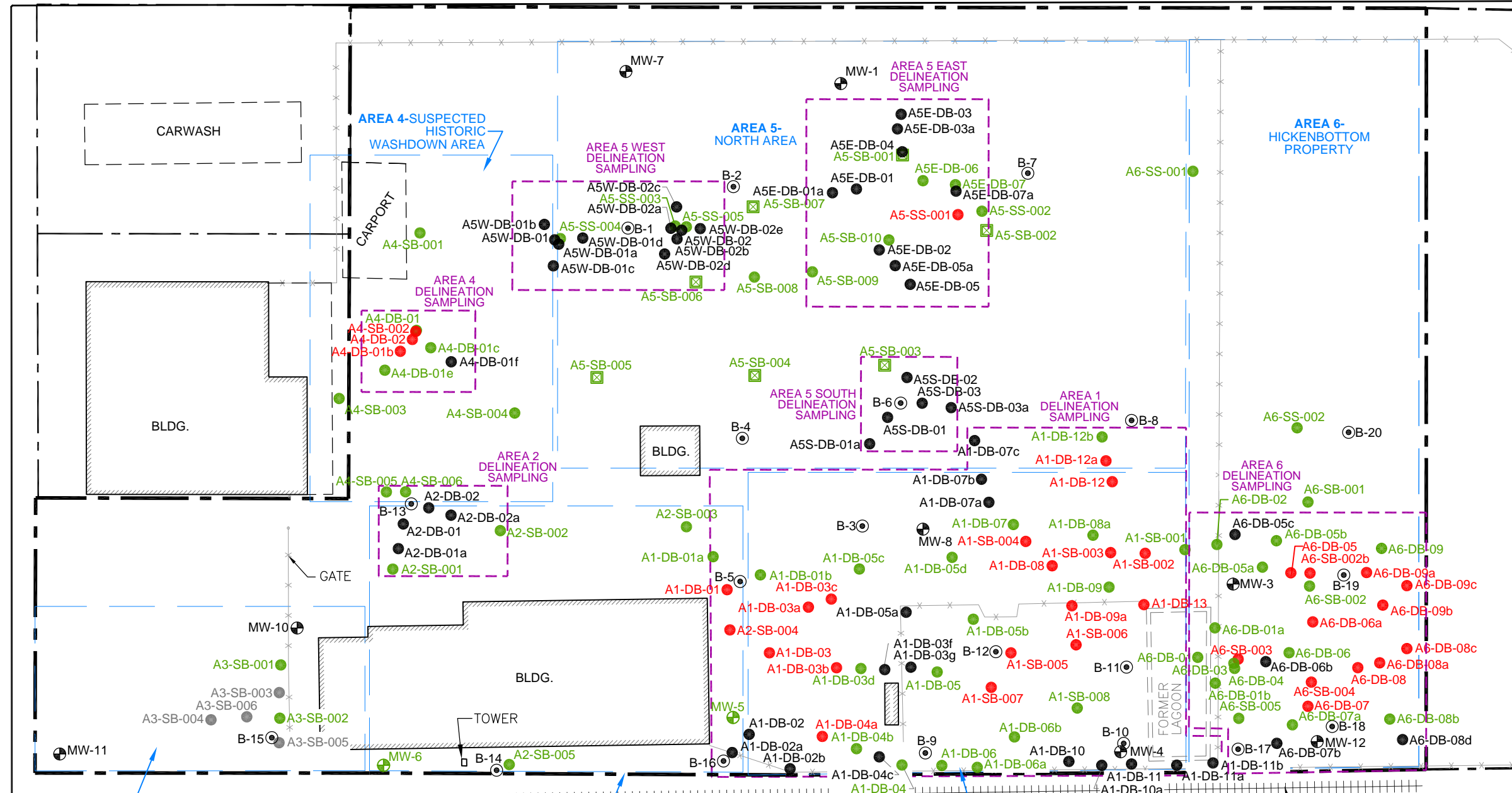
LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- ▨ BUILDING
- - - BUILDING OVERHANG
- x-x- CHAIN LINK FENCE
- SOIL BOREHOLE (2013)
- ⊙ SOIL BOREHOLE (2011)
- ⊕ MONITORING WELL
- PHASE I SOIL BOREHOLE
- PHASE II SOIL BOREHOLE
- ⊠ PHASE II COMBINATION VERTICAL PROFILE/SOIL BOREHOLE


NOTES

- AMMONIA CLEANUP LEVEL OF 385 MG/KG.
- BOREHOLE LOCATIONS WITH AMMONIA CONCENTRATIONS ABOVE CLEANUP LEVEL ARE SHOWN IN RED.
- BOREHOLE LOCATIONS WITH AMMONIA CONCENTRATIONS BELOW CLEANUP LEVEL ARE SHOWN IN GREEN.
- BOREHOLE LOCATIONS NOT ANALYZED FOR AMMONIA SHOWN IN BLACK OR GRAY.
- SOIL BOREHOLES A4-SB-003, A5-SS-004, A5-SS-005, A6-SB-001, AND THE FORMER LAGOON ARE APPROXIMATE LOCATIONS

NORTH 1ST STREET



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 2321 Club Meridian Drive, Suite E Okemos, Michigan PHONE: (517) 349-9499 FAX: (517) 349-6863	FOR: BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON		SITE PLAN SHOWING EXCEEDANCES OF SITE-SPECIFIC AMMONIA CRITERIA		FIGURE: 4
	JOB NUMBER: 213202156/213202157	DRAWN BY: JRO	CHECKED BY: EJB	APPROVED BY: MRK	DATE: 08/12/13

Appendix A
Analytical Laboratory Reports

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

March 20, 2013

Project: Bee Jay Scales Site

Submittal Date: 03/19/2013

Group Number: 1376160

PO Number: 213202156.600.9301

Release Number: BEE JAY SCALES

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
A1-DB-02-1.5' Grab Soil	6986669
A1-DB-02-3.0' Grab Soil	6986670
DUP-01 Grab Soil	6986671
A1-DB-02-4.5' Grab Soil	6986672
A1-DB-02-6.5' Grab Soil	6986673
A1-DB-03-1.5' Grab Soil	6986674
A1-DB-03-3.0' Grab Soil	6986675
A1-DB-03-4.5' Grab Soil	6986676
A1-DB-03-6.5' Grab Soil	6986677
A1-DB-04-1.5' Grab Soil	6986678
A1-DB-04-3.0' Grab Soil	6986679
A1-DB-04-4.5' Grab Soil	6986680
A1-DB-04-6.5' Grab Soil	6986681
A1-DB-05-1.0' Grab Soil	6986682
A1-DB-05-2.5' Grab Soil	6986683
A1-DB-05-4.0' Grab Soil	6986684
A1-DB-05-5.5' Grab Soil	6986685
A1-DB-07-1.0' Grab Soil	6986686
A1-DB-07-2.5' Grab Soil	6986687
A1-DB-07-4.0' Grab Soil	6986688
A1-DB-07-5.5' Grab Soil	6986689
A1-DB-12-1.5' Grab Soil	6986690
DUP-02 Grab Soil	6986691
A1-DB-12-2.5' Grab Soil	6986692
A1-DB-12-4.0' Grab Soil	6986693
A1-DB-12-5.5' Grab Soil	6986694

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC STANTEC International, Inc.
COPY TO
ELECTRONIC Stantec Consulting Services
COPY TO

Attn: Marisa Kaffenberger

Attn: Eric Bassett

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: A1-DB-02-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6986669
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 09:55 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 185	mg/kg 9.1	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 12.9	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/20/2013 09:52	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

Sample Description: A1-DB-02-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6986670
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 10:15 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	533 mg/kg	49.4 mg/kg	50
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/20/2013 11:08	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

Sample Description: DUP-01 Grab Soil
Bee Jay Scales

LLI Sample # SW 6986671
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 10:20 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	548 mg/kg	48.4 mg/kg	50
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/20/2013 11:23	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

Sample Description: A1-DB-02-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6986672
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 10:25 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 387	mg/kg 20.3	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 23.5	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/20/2013 11:38	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

Sample Description: A1-DB-02-6.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6986673
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 10:30 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	72.6 mg/kg	5.2 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/20/2013 10:02	Clinton M Wilson	5
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-03-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986674
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 11:00 by BM

STANTEC International, Inc.

Submitted: 03/19/2013 09:15

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Reported: 03/20/2013 16:45

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 223	mg/kg 9.6	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg 1,470	mg/kg 103	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 17.7	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/20/2013 10:17	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-03-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986675
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 11:05 by BM

STANTEC International, Inc.

Submitted: 03/19/2013 09:15

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Reported: 03/20/2013 16:45

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 375	mg/kg 19.4	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg 1,980	mg/kg 104	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 17.9	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/20/2013 10:33	Clinton M Wilson	20
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-03-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986676
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 11:10 by BM

STANTEC International, Inc.

Submitted: 03/19/2013 09:15

2321 Club Meridian Drive

Reported: 03/20/2013 16:45

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	630 mg/kg	47.3 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	489 mg/kg	101 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/20/2013 10:49	Clinton M Wilson	50
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-03-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986677
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 11:15 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	118 mg/kg	10.8 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	146 J mg/kg	116 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	26.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/20/2013 11:04	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-04-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986678
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 11:40 by BM

STANTEC International, Inc.

Submitted: 03/19/2013 09:15

2321 Club Meridian Drive

Reported: 03/20/2013 16:45

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	32.4 mg/kg	0.91 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	100 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201A	03/19/2013 23:44	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13078078201A	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-04-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986679
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 11:45 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	133 mg/kg	9.8 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	106 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 11:53	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-04-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986680
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 11:55 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	46.5 mg/kg	4.8 mg/kg	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	102 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 11:36	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-04-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986681
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 12:00 by BM

STANTEC International, Inc.

Submitted: 03/19/2013 09:15

2321 Club Meridian Drive

Reported: 03/20/2013 16:45

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	132	10.4	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	113	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	24.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 11:51	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-05-1.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986682
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 12:15 by BM

STANTEC International, Inc.

Submitted: 03/19/2013 09:15

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Reported: 03/20/2013 16:45

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	24.8 mg/kg	0.83 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	97.5 J mg/kg	89.9 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	5.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 01:45	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-05-2.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986683
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 12:20 by BM

STANTEC International, Inc.

Submitted: 03/19/2013 09:15

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	632 mg/kg	49.3 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	122 J mg/kg	107 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 12:07	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-05-4.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986684
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 12:30 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

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Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	94.6 mg/kg	5.0 mg/kg	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	110 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 12:22	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-05-5.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986685
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 12:35 by BM

STANTEC International, Inc.

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Submitted: 03/19/2013 09:15

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Reported: 03/20/2013 16:45

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	37.8 mg/kg	1.0 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	111 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 02:31	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-07-1.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986686
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 13:15 by BM

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Submitted: 03/19/2013 09:15

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	4.6 mg/kg	0.94 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	100 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 02:46	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820004B	03/19/2013 20:13	Scott W Freisher	1

**Sample Description: A1-DB-07-2.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986687
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 13:20 by BM

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Submitted: 03/19/2013 09:15

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	54.4 mg/kg	5.0 mg/kg	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	108 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078202A	03/20/2013 10:51	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13078078202A	03/19/2013 13:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820005B	03/19/2013 19:38	Scott W Freisher	1

**Sample Description: A1-DB-07-4.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986688
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 13:30 by BM

STANTEC International, Inc.

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Submitted: 03/19/2013 09:15

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Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	833 mg/kg	51.9 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	110 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 12:37	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820005B	03/19/2013 19:38	Scott W Freisher	1

**Sample Description: A1-DB-07-5.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6986689
LLI Group # 1376160
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 13:35 by BM

STANTEC International, Inc.

Submitted: 03/19/2013 09:15

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Reported: 03/20/2013 16:45

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	320 mg/kg	20.5 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	329 J mg/kg	111 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13078078201B	03/20/2013 13:27	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13078078201B	03/19/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057301A	03/19/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820005B	03/19/2013 19:38	Scott W Freisher	1

Sample Description: A1-DB-12-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6986690
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 13:40 by BM

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Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	373	94.5	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	10.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057302A	03/19/2013 17:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820005B	03/19/2013 19:38	Scott W Freisher	1

Sample Description: DUP-02 Grab Soil
Bee Jay Scales

LLI Sample # SW 6986691
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 13:45 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	533	95.2	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	10.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057302A	03/19/2013 17:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820005B	03/19/2013 19:38	Scott W Freisher	1

Sample Description: A1-DB-12-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6986692
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 13:50 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	1,230	104	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	17.9	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057302A	03/19/2013 17:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820005B	03/19/2013 19:38	Scott W Freisher	1

Sample Description: A1-DB-12-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6986693
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 13:55 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

Suite E

Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	105	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	19.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057302A	03/19/2013 17:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820005B	03/19/2013 19:38	Scott W Freisher	1

Sample Description: A1-DB-12-5.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6986694
LLI Group # 1376160
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 14:00 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/19/2013 09:15

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Reported: 03/20/2013 16:45

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	107	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	20.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13078057302A	03/19/2013 17:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13078820005B	03/19/2013 19:38	Scott W Freisher	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/20/13 at 04:45 PM

Group Number: 1376160

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13078078201A Nitrate Nitrogen by IC (solid)	Sample number(s): 6986669-6986678 N.D.	0.80	mg/kg	110		90-110		
Batch number: 13078078201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6986679-6986686, 6986688-6986689 N.D.	0.80	mg/kg	110		90-110		
Batch number: 13078078202A Nitrate Nitrogen by IC (solid)	Sample number(s): 6986687 N.D.	0.80	mg/kg	105	100	90-110	4	20
Batch number: 13078057301A Ammonia Nitrogen	Sample number(s): 6986674-6986689 N.D.	17.0	mg/kg	95		89-101		
Batch number: 13078057302A Ammonia Nitrogen	Sample number(s): 6986690-6986694 N.D.	17.0	mg/kg	94		89-101		
Batch number: 13078820004B Moisture	Sample number(s): 6986669-6986686			100		99-101		
Batch number: 13078820005B Moisture	Sample number(s): 6986687-6986694			100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13078078201A Nitrate Nitrogen by IC (solid)	Sample number(s): 6986669-6986678 488 (2)		90-110			UNSPK: 6986669 161	BKG: 6986669 187	15	20
Batch number: 13078078201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6986679-6986686, 6986688-6986689 60 (2)		90-110			UNSPK: 6986679 107	BKG: 6986679 118	10	20
Batch number: 13078057301A Ammonia Nitrogen	Sample number(s): 6986674-6986689 93	91	72-116	1	5	UNSPK: 6986674 1,210	BKG: 6986674 1,180	2 (1)	10
Batch number: 13078057302A Ammonia Nitrogen	Sample number(s): 6986690-6986694 91	91	72-116	0	5	UNSPK: 6986692 1,010	BKG: 6986692 1,000	1 (1)	10
Batch number: 13078820004B	Sample number(s): 6986669-6986686					BKG: P986274			

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/20/13 at 04:45 PM

Group Number: 1376160

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Moisture						33.5	29.4	13	13
Batch number: 13078820005B Moisture				Sample number(s): 6986687-6986694		BKG: P985669 6.0	6.8	13	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1376160 Sample # 698669-94
Instructions on reverse side correspond with circled numbers.

COC #318730

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only					
Client: STANTEC CONSULTING		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> Surface <input type="checkbox"/> NPDES Other:	<input type="checkbox"/> Soil <input checked="" type="checkbox"/> Composite	Total # of Containers AMMONIA NITRATE	Preservation Codes										FSC: _____						
Project Name#: BEE JAY SCALES		PWSID #:															SCR#: _____						
Project Manager: MARISA KAFFENBERGER		P.O. #:															Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other						
Sampler: BOB MCALISTER		Quote #:																					
Name of state where samples were collected: WASHINGTON							3												6				
2 Sample Identification		Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers	AMMONIA	NITRATE											Remarks	
		Date	Time																				
A1-DB-02-1.5'		3/18/13	955	X		X			-	X	X												
A1-DB-02-3.0'			1015							X	X												
DUP-01			1020							X	X												
A1-DB-02-4.5'			1025							X	X												
A1-DB-02-6.5'			1030							X	X												
A1-DB-03-1.5'			1100							X	X												
A1-DB-03-3.0'			1105							X	X												
A1-DB-03-4.5'			1110							X	X												
A1-DB-03-6.5'			1115							X	X												
A1-DB-04-1.5'			1140							X	X												
7 Turnaround Time (TAT) Requested (please circle) Standard Rush 24-HR <small>(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</small>				Relinquished by BOB MCALISTER-STANTEC		Date 3/18/13	Time 1500	Received by FEDEX		Date 3/18/13	Time 1500	Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____ Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____		Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____									
Date results are needed: CONTACT STANTEC PM																							
E-mail address: MARISA.KAFFENBERGER@STANTEC.COM																							
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP																							
				EDD Required? Yes No If yes, format: _____				Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____															
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt 1.6 °C															

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1376160 Sample # 6986669-94
 Instructions on reverse side correspond with circled numbers.

COC #318729

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																																																																																																																																																																																																													
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other: <input type="checkbox"/>	Ground <input type="checkbox"/> Surface <input type="checkbox"/>	Total # of Containers	Preservation Codes								FSC: _____																																																																																																																																																																																																														
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:					AMMONIA NITRATE								SCR#: _____																																																																																																																																																																																																														
Project Manager: <u>MARISA PATTERSON</u>		P.O. #:													Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																																																																																																																																																																																														
Sampler: <u>BOB McALISTER</u>		Quote #:													6 Remarks																																																																																																																																																																																																														
Name of state where samples were collected: <u>WASHINGTON</u>				3 Composite		Grab		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">2 Sample Identification</th> <th colspan="2" style="text-align: center;">Collected</th> <th rowspan="2" style="text-align: center;">Grab</th> <th rowspan="2" style="text-align: center;">Composite</th> <th rowspan="2" style="text-align: center;">Soil <input checked="" type="checkbox"/></th> <th rowspan="2" style="text-align: center;">Water</th> <th rowspan="2" style="text-align: center;">Other:</th> <th rowspan="2" style="text-align: center;">Total # of Containers</th> <th rowspan="2" style="text-align: center;">AMMONIA</th> <th rowspan="2" style="text-align: center;">NITRATE</th> <th colspan="6"></th> </tr> <tr> <th style="width: 15%;">Date</th> <th style="width: 15%;">Time</th> <th colspan="6"></th> </tr> <tr> <td><u>A1-DB-04-3.0'</u></td> <td><u>3/18/13</u></td> <td><u>1145</u></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">1</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><u>A1-DB-04-4.5'</u></td> <td></td> <td><u>1155</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><u>A1-DB-04-6.5'</u></td> <td></td> <td><u>1200</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><u>A1-DB-05-1.0'</u></td> <td></td> <td><u>1215</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><u>A1-DB-05-2.5'</u></td> <td></td> <td><u>1220</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><u>A1-DB-05-4.0'</u></td> <td></td> <td><u>1230</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><u>A1-DB-05-5.5'</u></td> <td></td> <td><u>1235</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><u>A1-DB-07-1.0'</u></td> <td></td> <td><u>1315</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><u>A1-DB-07-2.5'</u></td> <td></td> <td><u>1320</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td><u>A1-DB-07-4.0'</u></td> <td></td> <td><u>1330</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>								2 Sample Identification		Collected		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers	AMMONIA	NITRATE							Date	Time							<u>A1-DB-04-3.0'</u>	<u>3/18/13</u>	<u>1145</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-04-4.5'</u>		<u>1155</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-04-6.5'</u>		<u>1200</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-05-1.0'</u>		<u>1215</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-05-2.5'</u>		<u>1220</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-05-4.0'</u>		<u>1230</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-05-5.5'</u>		<u>1235</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-07-1.0'</u>		<u>1315</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-07-2.5'</u>		<u>1320</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-07-4.0'</u>		<u>1330</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
2 Sample Identification		Collected		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water									Other:	Total # of Containers	AMMONIA	NITRATE																																																																																																																																																																																																										
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<u>A1-DB-07-4.0'</u>		<u>1330</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																																																																																																																																		
7 Turnaround Time (TAT) Requested (please circle) Standard _____ <u>Rush</u> <u>24-HR</u> (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by <u>BOB McALISTER - STANTEC</u>		Date <u>3/18/13</u>	Time <u>1500</u>	Received by <u>FEDEX</u>		Date <u>3/18/13</u>	Time <u>1500</u>	9 Relinquished by Commercial Carrier: UPS _____ FedEx <u>X</u> Other _____ Temperature upon receipt <u>1.6</u> °C																																																																																																																																																																																																																	
Date results are needed: <u>CONTACT STANTEC PM</u>				Relinquished by _____		Date _____	Time _____	Received by _____		Date _____	Time _____																																																																																																																																																																																																																		
E-mail address: <u>MARISA.KLAFFENBERGER@STANTEC.COM</u>				Relinquished by _____		Date _____	Time _____	Received by _____		Date _____	Time _____																																																																																																																																																																																																																		
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by _____		Date _____	Time _____	Received by <u>Deborah Reed</u>		Date <u>3/19/13</u>	Time <u>0915</u>																																																																																																																																																																																																																		

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1376160 Sample # 6986669-94
 Instructions on reverse side correspond with circled numbers.

COC #318736

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only							
Client: STANTEC CONSULTING		Acct. #: _____		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> Surface <input type="checkbox"/> NPDES	<input type="checkbox"/> Other: _____	Total # of Containers AMMONIA NITRATE	Preservation Codes								FSC: _____	SCR#: _____							
Project Name/ #: BEE JAY SCALES		PWSID #: _____													Preservation Codes								
Project Manager: MARISA KAFFENBURGER		P.O. #: _____													H=HCl T=Thiosulfate								
Sampler: ROB MALISTER		Quote #: _____													N=HNO ₃ B=NaOH								
Name of state where samples were collected: WASHINGTON															S=H ₂ SO ₄ O=Other								
2 Sample Identification			3 Collected		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other	Total # of Containers	AMMONIA	NITRATE											
			Date	Time									6 Remarks										
A1-DB-07-5.5'			3/18/13	1335	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
A1-DB-12 1.5'				1340							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
DUP-02				1345							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
A1-DB-12-2.5'				1350							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
A1-DB-12-4.0'				1355							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
A1-DB-12-5.5'				1400							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											

7 Turnaround Time (TAT) Requested (please circle) Standard Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: CONTACT STANTEC PM E-mail address: MARISA.KAFFENBURGER	Relinquished by: <u>Rob Malister</u>	Date: 3/18/13	Time: 1500	Received by: <u>FedEx</u>	Date: 3/18/13	Time: 1500
	Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
	Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
	Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP	Relinquished by: _____	Date: _____	Time: _____	Received by: <u>Nelvana Reed</u>	Date: 3/19/13	Time: 0915
	EDD Required? Yes No		Relinquished by Commercial Carrier:			
	If yes, format: _____		UPS _____ FedEx <input checked="" type="checkbox"/> Other _____			
Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt <u>11.6</u> °C		

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m³	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but \geq IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>$ 25%	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

March 25, 2013

Project: Bee Jay Scales Site

Submittal Date: 03/20/2013

Group Number: 1376601

PO Number: 213202156.600.9301

Release Number: BEE JAY SCALES

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
A6-DB-08-1.5' Grab Soil	6989092
A6-DB-08-3.0' Grab Soil	6989093
A6-DB-08-5.0' Grab Soil	6989094
A6-DB-08-7.0' Grab Soil	6989095
A6-DB-09-1.5' Grab Soil	6989096
A6-DB-09-3.0' Grab Soil	6989097
A6-DB-09-5.0' Grab Soil	6989098
DUP-03 Grab Soil	6989099
A6-DB-09-7.0' Grab Soil	6989100
EB031813 Grab Water	6989101
A4-DB-01-0.5' Grab Soil	6989102
A4-DB-01-2.5' Grab Soil	6989103
A4-DB-02-0.5' Grab Soil	6989104
A4-DB-02-2.5' Grab Soil	6989105
DUP-04 Grab Soil	6989106
A5W-DB-02-0.5' Grab Soil	6989107
A5W-DB-02-2.5' Grab Soil	6989108
A1-DB-01-1.5' Grab Soil	6989109
A1-DB-01-3.0' Grab Soil	6989110
A1-DB-01-4.5' Grab Soil	6989111
A1-DB-01-6.5' Grab Soil	6989112
DUP-05 Grab Soil	6989113
A1-DB-11-1.5' Grab Soil	6989114
A1-DB-11-3.0' Grab Soil	6989115
A1-DB-11-5.0' Grab Soil	6989116
A1-DB-11-7.0' Grab Soil	6989117
A6-DB-01-1.5' Grab Soil	6989118
A6-DB-01-3.0' Grab Soil	6989119
A6-DB-01-4.5' Grab Soil	6989120
A6-DB-01-6.0' Grab Soil	6989121
A6-DB-02-1.0' Grab Soil	6989122

A6-DB-02-2.5' Grab Soil	6989123
A6-DB-02-4.0' Grab Soil	6989124
A6-DB-02-5.5' Grab Soil	6989125
EB031903 Grab Water	6989126

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	STANTEC International, Inc.	Attn: Marisa Kaffenberger
ELECTRONIC COPY TO	Stantec Consulting Services	Attn: Eric Bassett

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

**Sample Description: A6-DB-08-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989092
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 15:20 by BM

STANTEC International, Inc.

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Submitted: 03/20/2013 09:20

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	16.2 mg/kg	1.9 mg/kg	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,230 mg/kg	101 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202A	03/21/2013 02:40	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

**Sample Description: A6-DB-08-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989093
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 15:25 by BM

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Submitted: 03/20/2013 09:20

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 124	mg/kg 20.2	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg 4,260	mg/kg 107	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 20.8	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202A	03/20/2013 20:06	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

**Sample Description: A6-DB-08-5.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989094
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 15:30 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	1,020 mg/kg	50.0 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	107 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202A	03/21/2013 03:56	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

**Sample Description: A6-DB-08-7.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989095
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 15:40 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	36.5 mg/kg	2.0 mg/kg	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	178 J mg/kg	109 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202A	03/21/2013 04:11	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

**Sample Description: A6-DB-09-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989096
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 15:55 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	168 mg/kg	18.4 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	99.4 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202A	03/20/2013 20:52	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

**Sample Description: A6-DB-09-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989097
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 16:00 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	329 mg/kg	18.6 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	99.4 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202A	03/20/2013 21:37	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

**Sample Description: A6-DB-09-5.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989098
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 16:05 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	147 mg/kg	18.6 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	99.5 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202A	03/20/2013 21:52	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

**Sample Description: DUP-03 Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989099
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 16:10 by BM

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	140 mg/kg	18.3 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	99.0 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202A	03/20/2013 22:08	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

**Sample Description: A6-DB-09-7.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989100
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 16:15 by BM

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	34.4 mg/kg	2.2 mg/kg	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	115 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	26.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13079079202A	03/21/2013 09:41	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

**Sample Description: EB031813 Grab Water
Bee Jay Scales**

**LLI Sample # WW 6989101
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/18/2013 16:20 by BM

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Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13079655601A	03/20/2013 16:19	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13084022101A	03/25/2013 14:00	Luz M Groff	1

Sample Description: A4-DB-01-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989102
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 08:55 by BM

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/20/2013 09:20

Reported: 03/25/2013 21:22

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry					
		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	95.9	5
	Reporting limits were raised due to interference from the sample matrix.				
Wet Chemistry					
		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	11.4	0.50	1
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.				

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

Sample Description: A4-DB-01-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989103
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 09:00 by BM

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Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	119 J	99.8	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	14.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

Sample Description: A4-DB-02-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989104
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 08:35 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	1,030	90.0	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	5.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

Sample Description: A4-DB-02-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989105
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 08:45 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	885	92.5	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	8.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

Sample Description: DUP-04 Grab Soil
Bee Jay Scales

LLI Sample # SW 6989106
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 08:50 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	93.0	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	8.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

Sample Description: A5W-DB-02-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989107
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 09:10 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 13.8	mg/kg 1.8	2
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 10.2	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202A	03/21/2013 04:26	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13079079202A	03/20/2013 12:30	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

Sample Description: A5W-DB-02-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989108
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 09:15 by BM

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Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 150	mg/kg 19.1	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 16.2	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202B	03/20/2013 23:23	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13079079202B	03/20/2013 12:30	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

Sample Description: A1-DB-01-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989109
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 09:45 by BM

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Submitted: 03/20/2013 09:20

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	847	96.4	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	11.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

Sample Description: A1-DB-01-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989110
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 09:50 by BM

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Submitted: 03/20/2013 09:20

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	1,060	98.3	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	13.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820006B	03/20/2013 21:58	Scott W Freisher	1

Sample Description: A1-DB-01-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989111
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 09:55 by BM

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	158 J	113	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	24.9	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: A1-DB-01-6.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989112
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 10:00 by BM

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	112	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	24.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: DUP-05 Grab Soil
Bee Jay Scales

LLI Sample # SW 6989113
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 10:05 by BM

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Submitted: 03/20/2013 09:20

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	112	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	23.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057301A	03/20/2013 14:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

**Sample Description: A1-DB-11-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989114
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 10:20 by BM

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	1,490 mg/kg	96.2 mg/kg	100
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202B	03/21/2013 04:42	Christopher D Meeks	100
01352	Deionized Water Extraction	EPA 300.0	1	13079079202B	03/20/2013 12:30	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: A1-DB-11-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989115
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 10:25 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	983 mg/kg	49.4 mg/kg	50
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.3 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202B	03/21/2013 04:57	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13079079202B	03/20/2013 12:30	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: A1-DB-11-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989116
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 10:30 by BM

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	273 mg/kg	20.7 mg/kg	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202B	03/21/2013 01:09	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13079079202B	03/20/2013 12:30	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: A1-DB-11-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989117
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 10:40 by BM

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 147	mg/kg 21.0	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 24.3	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202B	03/21/2013 01:25	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13079079202B	03/20/2013 12:30	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

**Sample Description: A6-DB-01-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989118
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 10:55 by BM

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Submitted: 03/20/2013 09:20

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	2.0 mg/kg	0.84 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	90.5 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	6.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13079079202B	03/21/2013 09:56	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13079079202B	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057302A	03/20/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

**Sample Description: A6-DB-01-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989119
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 11:00 by BM

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	2.6 mg/kg	0.84 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	90.0 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	5.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202B	03/21/2013 05:27	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13079079202B	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057302A	03/20/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

**Sample Description: A6-DB-01-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989120
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 11:10 by BM

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Submitted: 03/20/2013 09:20

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	12.0 mg/kg	1.9 mg/kg	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	102 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202B	03/21/2013 05:42	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13079079202B	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057302A	03/20/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

**Sample Description: A6-DB-01-6.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6989121
LLI Group # 1376601
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 11:20 by BM

STANTEC International, Inc.

Submitted: 03/20/2013 09:20

2321 Club Meridian Drive

Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	3.3 mg/kg	1.1 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	113 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	24.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13079079202B	03/21/2013 05:57	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13079079202B	03/20/2013 12:30	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057302A	03/20/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: A6-DB-02-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989122
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:00 by BM

STANTEC International, Inc.

Submitted: 03/20/2013 09:20

2321 Club Meridian Drive

Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	98.6	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	13.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057302A	03/20/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: A6-DB-02-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989123
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:05 by BM

STANTEC International, Inc.

Submitted: 03/20/2013 09:20

2321 Club Meridian Drive

Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	108	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	21.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057302A	03/20/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: A6-DB-02-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989124
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:15 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/20/2013 09:20

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	106	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	19.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057302A	03/20/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: A6-DB-02-5.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6989125
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:20 by BM

STANTEC International, Inc.

Submitted: 03/20/2013 09:20

2321 Club Meridian Drive

Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	110	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	23.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13079057302A	03/20/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13079820007B	03/20/2013 21:47	Scott W Freisher	1

Sample Description: EB031903 Grab Water
Bee Jay Scales

LLI Sample # WW 6989126
LLI Group # 1376601
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:30 by BM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/20/2013 09:20

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13079655601A	03/20/2013 16:34	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13084022101A	03/25/2013 14:00	Luz M Groff	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/25/13 at 09:22 PM

Group Number: 1376601

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13079079202A Nitrate Nitrogen by IC (solid)	N.D.	0.80	mg/kg	103		90-110		
Batch number: 13079079202B Nitrate Nitrogen by IC (solid)	N.D.	0.80	mg/kg	103		90-110		
Batch number: 13079655601A Nitrate Nitrogen	N.D.	0.050	mg/l	97		90-110		
Batch number: 13079057301A Ammonia Nitrogen	N.D.	17.0	mg/kg	96		89-101		
Batch number: 13079057302A Ammonia Nitrogen	N.D.	17.0	mg/kg	95		89-101		
Batch number: 13084022101A Ammonia Nitrogen	N.D.	0.20	mg/l	96	95	85-105	1	5
Batch number: 13079820006B Moisture					99	99-101		
Batch number: 13079820007B Moisture				100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13079079202A Nitrate Nitrogen by IC (solid)	100		90-110			13.6	13.9	3 (1)	20
Batch number: 13079079202B Nitrate Nitrogen by IC (solid)	106 (2)		90-110			126	146	15 (1)	20
Batch number: 13079655601A Nitrate Nitrogen	98		90-110			1.3	1.4	3 (1)	20
Batch number: 13079057301A									

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/25/13 at 09:22 PM

Group Number: 1376601

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Ammonia Nitrogen	94	97	72-116	1	5	1,030	992	4 (1)	10
Batch number: 13079057302A Ammonia Nitrogen	Sample number(s): 6989118-6989125 UNSPK: 6989125 BKG: 6989125								
	93	94	72-116	1	5	N.D.	N.D.	0 (1)	10
Batch number: 13084022101A Ammonia Nitrogen	Sample number(s): 6989101,6989126 BKG: P989781								
						225	210	7*	6
Batch number: 13079820006B Moisture	Sample number(s): 6989092-6989100,6989102-6989110 BKG: P987806								
						20.4	24.8	19*	13
Batch number: 13079820007B Moisture	Sample number(s): 6989111-6989125 BKG: P988133								
						16.9	16.1	5	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

For Eurofins Lancaster Laboratories use only
 Acct. # 11842 Group # 1376601 Sample # 6989092-126
Instructions on reverse side correspond with circled numbers.

COC #318735

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only	
Client: STANTEC CONSULTING		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> Soil <input checked="" type="checkbox"/>	Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/>	Other: _____	Total # of Containers _____	Preservation Codes								FSC: _____	
Project Name#: BEE JAY SCALES		PWSID #:						1 1 1 S AMMONIA NITRATE NITRATE AMMONIA NITROGEN								SCR#: _____	
Project Manager: MARISA KAFFENBERGER		P.O. #:						AMMONIA NITRATE NITRATE AMMONIA NITROGEN								Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
Sampler: BOB McALISTER		Quote #:														6 Remarks	
Name of state where samples were collected: WASHINGTON																COC # 1 OF 4	
2 Sample Identification		3 Collected		Grab <input checked="" type="checkbox"/> Composite <input type="checkbox"/>	Soil <input checked="" type="checkbox"/> Water <input type="checkbox"/>	Other: _____	Total # of Containers _____	AMMONIA NITRATE NITRATE AMMONIA NITROGEN	Date		Time		Remarks				
A6-DB-08-1.5'		3/18/13	1520						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
A6-DB-08-3.0'			1525														
A6-DB-08-5.0'			1530														
A6-DB-08-7.0'			1540														
A6-DB-09-1.5'			1555														
A6-DB-09-3.0'			1600														
A6-DB-09-5.0'			1605														
A6-DB-09-7.0' DUP-03			1610														
A6-DB-09-7.0'			1615														
EBO31813			1620				3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
7 Turnaround Time (TAT) Requested (please circle) Standard _____ Rush 24 HR _____ (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: CONTACT STANTEC P.M. E-mail address: MARISA.KAFFENBERGER@STANTEC.CO				Relinquished by BOB McALISTER - STANTEC Date 3/14/13 Time 1500 Received by FEDEX Date 3/14/13 Time 1501		Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____											
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by _____ Date _____ Time _____ Received by Pat G Date 3/20/13 Time 0920		Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____											
EDD Required? Yes No If yes, format: _____				Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____		Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)		Temperature upon receipt 1.0 °C									

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1376601 Sample # 6989092-126
Instructions on reverse side correspond with circled numbers.

COC #318728

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only																																																																																																																																																																																																																																			
Client: <u>STANTEL CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other: <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/>	Total # of Containers AMMONIA NITRATE	Preservation Codes										FSC: _____																																																																																																																																																																																																																																					
Project Name#: <u>REE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; height: 100px;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																														SCR#: _____																																																																																																																																																																																																																	
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:				Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other										6 Remarks <u>COC # 2 OF 4</u>																																																																																																																																																																																																																																					
Sampler: <u>BOB MCALISTER</u>		Quote #:																																																																																																																																																																																																																																																			
Name of state where samples were collected: <u>WASHINGTON</u>				3		<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Sample Identification</th> <th style="width: 10%;">Collected Date</th> <th style="width: 10%;">Collected Time</th> <th style="width: 5%;">Grab</th> <th style="width: 5%;">Composite</th> <th style="width: 5%;">Soil <input checked="" type="checkbox"/></th> <th style="width: 5%;">Water</th> <th style="width: 5%;">Other:</th> <th style="width: 5%;">Total # of Containers</th> <th style="width: 5%;">AMMONIA</th> <th style="width: 5%;">NITRATE</th> <th style="width: 5%;"> </th> <th style="width: 5%;"> </th> <th style="width: 5%;"> </th> <th style="width: 5%;"> </th> <th style="width: 5%;"> </th> <th style="width: 5%;"> </th> <th style="width: 5%;"> </th> <th style="width: 5%;"> </th> <th style="width: 5%;"> </th> </tr> </thead> <tbody> <tr><td>A4-DB-01-0.5'</td><td>3/19/13</td><td>855</td><td>X</td><td></td><td>X</td><td></td><td></td><td>1</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>A4-DB-01-2.5'</td><td></td><td>900</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>A4-DB-02-0.5'</td><td></td><td>835</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>A4-DB-02-2.5'</td><td></td><td>845</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>#3^{RM} DUP-04</td><td></td><td>850</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>A5W-DB-02-0.5'</td><td></td><td>910</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>A5W-DB-02-2.5'</td><td></td><td>915</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>A1-DB-01-1.5'</td><td></td><td>945</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>A1-DB-01-3.0'</td><td></td><td>950</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>A1-DB-01-4.5'</td><td></td><td>955</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers	AMMONIA	NITRATE										A4-DB-01-0.5'	3/19/13	855	X		X			1	X												A4-DB-01-2.5'		900							X												A4-DB-02-0.5'		835							X												A4-DB-02-2.5'		845							X												#3^{RM} DUP-04		850							X												A5W-DB-02-0.5'		910								X											A5W-DB-02-2.5'		915								X											A1-DB-01-1.5'		945							X												A1-DB-01-3.0'		950							X												A1-DB-01-4.5'		955							X											
Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil <input checked="" type="checkbox"/>											Water	Other:	Total # of Containers	AMMONIA	NITRATE																																																																																																																																																																																																																																	
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7 Turnaround Time (TAT) Requested (please circle) Standard <u>Rush</u> <u>24-HR</u> <small>(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</small>				Relinquished by <u>Bob McAlister - Stantel</u> Date <u>3/19/13</u> Time <u>1500</u>				Received by <u>FED EX</u> Date <u>3/19/13</u> Time <u>1500</u>				9																																																																																																																																																																																																																																									
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E-mail address: <u>MARISA.KAFFENBERGER@STANTEL.COM</u>				Relinquished by _____				Received by _____				Date _____ Time _____																																																																																																																																																																																																																																									
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Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1376601 Sample # 6989092-126
Instructions on reverse side correspond with circled numbers.

COC #318727

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only			
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/>	Ground <input type="checkbox"/> NPDES <input type="checkbox"/>	Surface <input type="checkbox"/>	Other: _____	Total # of Containers	Preservation Codes										FSC: _____		
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:							AMMONIA NITRATE										SCR#: _____		
Project Manager: <u>MARISA RAFFENBERGER</u>		P.O. #:																	Preservation Codes		
Sampler: <u>BOB MCALISTER</u>		Quote #:																	H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other		
Name of state where samples were collected: <u>WASHINGTON</u>				3 Composite												6 Remarks					
2 Sample Identification		Collected		Grab <input type="checkbox"/>	Composite <input type="checkbox"/>	Soil <input checked="" type="checkbox"/>	Water <input type="checkbox"/>	Other: _____	Total # of Containers	AMMONIA	NITRATE									COC #3 OF 4	
Date	Time	Grab	Composite									Soil	Water	Other	Total # of Containers	AMMONIA	NITRATE				
<u>A1-DB-01-6.5'</u>	<u>3/19/13</u>	<u>1000</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>DUP-05</u>		<u>1005</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>A1-DB-11-1.5'</u>		<u>1020</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>A1-DB-11-3.0'</u>		<u>1025</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>A1-DB-11-5.0'</u>		<u>1030</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>A1-DB-11-7.0'</u>		<u>1040</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>A6-DB-01-1.5'</u>		<u>1055</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>A6-DB-01-3.0'</u>		<u>1100</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>A6-DB-01-4.5'</u>		<u>1110</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>A6-DB-01-6.0'</u>		<u>1120</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>-</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										

7 Turnaround Time (TAT) Requested (please circle)				Relinquished by: <u>Bob McAlister</u>		Date: <u>3/19/13</u>		Time: <u>1500</u>		Received by: <u>FEDEX</u>		Date: <u>3/19/13</u>		Time: <u>1500</u>	
Standard <u>(Rush) 24-HR</u>				Relinquished by:		Date:		Time:		Received by:		Date:		Time:	
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by:		Date:		Time:		Received by:		Date:		Time:	
Date results are needed: <u>CONTACT STANTEC PM</u>				Relinquished by:		Date:		Time:		Received by:		Date:		Time:	
E-mail address: <u>MARISA.RAFFENBERGER@STANTEC.COM</u>				Relinquished by:		Date:		Time:		Received by:		Date:		Time:	
8 Data Package Options (circle if required)				Relinquished by:		Date:		Time:		Received by: <u>Pat Gh</u>		Date: <u>3/20/13</u>		Time: <u>0920</u>	
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		EDD Required? Yes No				Relinquished by Commercial Carrier:							
Type III (Reduced non-CLP)		TX TRRP-13		If yes, format: _____				UPS _____ FedEx <u>X</u> Other _____							
Type IV (CLP SOW)		MA MCP CT RCP		Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt <u>1.0</u> °C							
				(If yes, indicate QC sample and submit triplicate sample volume.)											

Rec'd revised COC 3/20 per M. Haffenberg.

UMM 3/20

PAGE 05/85

BW GRAPEVINE INN

5098374547

03/19/2013 18:21

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1376001 Sample # 6989092-126
Instructions on reverse side correspond with circled numbers.

COC #318737

1 Client Information				4 Matrix				5 Analysis Requested				For Lab Use Only	
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/>		Ground <input type="checkbox"/>		Surface <input type="checkbox"/>		Preservation Codes		FSC:	
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:		Potable <input type="checkbox"/>		NPDES <input type="checkbox"/>		AMMONIA		NITRATE		SCR#:	
Project Manager: <u>MARISA HAEFFENBERGER</u>		P.O. #:		Water <input type="checkbox"/>		Other:		NITRATE NITROGEN		AMMONIA NITROGEN		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:		Soil <input checked="" type="checkbox"/>		Total # of Containers		AMMONIA		NITRATE		6 Remarks COC #4 of 4	
Name of state where samples were collected:		3		Grab <input type="checkbox"/>		Composite <input checked="" type="checkbox"/>		AMMONIA		NITRATE		NITRATE - HOLD, NIT ₃ - RUSH	
2 Sample Identification		Collected		Grab		Composite		AMMONIA		NITRATE		NITRATE - HOLD, NIT ₃ - RUSH	
		Date	Time									NITRATE - HOLD, NIT ₃ - RUSH	
<u>AG-DB-02-1.0'</u>		<u>3/19/13</u>	<u>1300</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		NITRATE - HOLD, NIT ₃ - RUSH	
<u>AG-DB-02-2.5'</u>			<u>1305</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		NITRATE - HOLD, NIT ₃ - RUSH	
<u>AG-DB-02-4.0'</u>			<u>1315</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		NITRATE - HOLD, NIT ₃ - RUSH	
<u>AG-DB-02-5.5'</u>			<u>1320</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		NITRATE - HOLD, NIT ₃ - RUSH	
<u>EB031913</u>			<u>1330</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		STANDARD TAT	
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by		Date	Time	Received by		Date	Time	8	
Standard				Relinquished by		Date	Time	Received by		Date	Time		
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Rush <u>24-HR</u>				Relinquished by		Date	Time	Received by		Date	Time		
Date results are needed: <u>CONTACT STANTEC PM</u>				Relinquished by		Date	Time	Received by		Date	Time		
E-mail address: <u>MARISA.HAEFFENBERGER@STANTEC.COM</u>				Relinquished by		Date	Time	Received by		Date	Time		
8 Data Package Options (circle # required)				Relinquished by		Date	Time	Received by		Date	Time		
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		Relinquished by		Date	Time	Received by		Date	Time		
Type III (Reduced non-CLP)		TX TRRP-13		Relinquished by		Date	Time	Received by		Date	Time		
Type IV (CLP SOW)		MA MCP CT RCP		Relinquished by		Date	Time	Received by		Date	Time		
EDD Required? Yes No.				Relinquished by Commercial Carrier:		Date		Time		Date		Time	
If yes, format:				LPS		FedEx <input checked="" type="checkbox"/>		Other		Temperature upon receipt		<u>1.0</u> °C	
Site-Specific QC (MS/MSD/Dup)? Yes No				Relinquished by Commercial Carrier:		Date		Time		Date		Time	
(If yes, indicate QC sample and submit triplicate sample volume.)				LPS		FedEx <input checked="" type="checkbox"/>		Other		Temperature upon receipt		<u>1.0</u> °C	

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only.
 Group # 1376601 Sample # 6989092-126
Instructions on reverse side correspond with circled numbers.

COC #318737

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																											
Client: STANTEC CONSULTING		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:		Preservation Codes								FSC: _____																													
Project Name#: BEE JAY SCALES		PWSID #:				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">/</td><td style="width: 10%;">/</td><td style="width: 10%;">/</td><td style="width: 10%;">S</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="text-align: center;">AMMONIA</td><td style="text-align: center;">NITRATE</td><td style="text-align: center;">NITRATE NITROGEN</td><td style="text-align: center;">AMMONIA NITROGEN</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>								/	/	/	S											AMMONIA	NITRATE	NITRATE NITROGEN	AMMONIA NITROGEN											SCR#: _____	
/	/	/	S																																								
AMMONIA	NITRATE	NITRATE NITROGEN	AMMONIA NITROGEN																																								
Project Manager: MARISA KAFFENBERGER		P.O. #:		Total # of Containers AMMONIA NITRATE NITRATE NITROGEN AMMONIA NITROGEN										Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																													
Sampler: ERIC BASSETT/ BOB MCALISTER		Quote #:																																									
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2 Sample Identification		Collected																																									
		Date	Time																																								
A6-DB-02-1.0'		3/19/13	1300	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																						
A6-DB-02-2.5'		↓	1305	↓	↓																																						
A6-DB-02-4.0'		↓	1315	↓	↓																																						
A6-DB-02-5.5'		↓	1320	↓	↓																																						
EB031913		↓	1330	↓	↓									STANDARD TAT																													
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____ Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____ Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____ Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____ Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____												9																											
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Date results are needed: <u>CONTACT STANTEC PM</u>																																											
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

March 25, 2013

Project: Bee Jay Scales Site

Submittal Date: 03/21/2013

Group Number: 1376900

PO Number: 213202156.600.9301

Release Number: BEE JAY SCALES

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
A6-DB-03-0.5' Grab Soil	6990582
A6-DB-03-2.5' Grab Soil	6990583
A6-DB-04-0.5' Grab Soil	6990584
A6-DB-04-2.5' Grab Soil	6990585
A6-DB-05-1.0' Grab Soil	6990586
A6-DB-05-2.5' Grab Soil	6990587
A6-DB-05-4.0' Grab Soil	6990588
A6-DB-05-5.5' Grab Soil	6990589
DUP-06 Grab Soil	6990590
A1-DB-06-1.5' Grab Soil	6990591
A1-DB-06-3.0' Grab Soil	6990592
A1-DB-06-4.5' Grab Soil	6990593
A1-DB-06-6.5' Grab Soil	6990594
A1-DB-10-1.5' Grab Soil	6990595
A1-DB-10-3.0' Grab Soil	6990596
A1-DB-10-5.0' Grab Soil	6990597
DUP-07 Grab Soil	6990598
A1-DB-10-7.0' Grab Soil	6990599
A5W-DB-01-0.5' Grab Soil	6990600
A5W-DB-01-2.5' Grab Soil	6990601
A5E-DB-05-2.0' Grab Soil	6990602
A5E-DB-05-4.0' Grab Soil	6990603
A5E-DB-05-6.0' Grab Soil	6990604
A5E-DB-05-8.0' Grab Soil	6990605
A5E-DB-02-2.0' Grab Soil	6990606
A5E-DB-02-4.0' Grab Soil	6990607
A5E-DB-02-6.0' Grab Soil	6990608
A5E-DB-02-8.5' Grab Soil	6990609
A5E-DB-07-2.0' Grab Soil	6990610
A5E-DB-07-4.0' Grab Soil	6990611
A5E-DB-07-6.0' Grab Soil	6990612

A5E-DB-07-8.5' Grab Soil	6990613
A5E-DB-01-2.0' Grab Soil	6990614
A5E-DB-01-4.5' Grab Soil	6990615
DUP-08 Grab Soil	6990616
A5E-DB-01-7.0' Grab Soil	6990617
A5E-DB-01-9.5' Grab Soil	6990618
EB032013 Grab Water	6990619
A5E-DB-03-2.5' Grab Soil	6990620
A5E-DB-03-5.0' Grab Soil	6990621
DUP-09 Grab Soil	6990622
A5E-DB-03-7.5' Grab Soil	6990623
A5E-DB-03-10.0' Grab Soil	6990624


The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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STANTEC International, Inc.
Stantec Consulting Services

Attn: Marisa Kaffenberger
Attn: Eric Bassett

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: A6-DB-03-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990582
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:50 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	97.8	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	13.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A6-DB-03-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990583
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:55 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	325 J	109	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	22.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A6-DB-04-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990584
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 14:00 by EB

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Suite E

Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	101	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	15.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A6-DB-04-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990585
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 14:10 by EB

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Submitted: 03/21/2013 09:00

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	376	103	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	17.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

**Sample Description: A6-DB-05-1.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990586
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 14:20 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	168 mg/kg	9.4 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	2,000 mg/kg	99.9 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/21/2013 23:50	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

**Sample Description: A6-DB-05-2.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990587
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 14:25 by EB

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Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	165 mg/kg	9.0 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,860 mg/kg	95.3 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/22/2013 00:35	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

**Sample Description: A6-DB-05-4.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990588
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 14:30 by EB

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Submitted: 03/21/2013 09:00

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	615 mg/kg	23.8 mg/kg	25
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,210 mg/kg	101 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/22/2013 06:56	Christopher D Meeks	25
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

**Sample Description: A6-DB-05-5.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990589
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 14:35 by EB

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Submitted: 03/21/2013 09:00

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Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	61.2 mg/kg	10.2 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	282 J mg/kg	111 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/22/2013 01:06	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: DUP-06 Grab Soil
Bee Jay Scales

LLI Sample # SW 6990590
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 14:05 by EB

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Submitted: 03/21/2013 09:00

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Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	101	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	15.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

**Sample Description: A1-DB-06-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990591
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 16:20 by EB

STANTEC International, Inc.

Submitted: 03/21/2013 09:00

2321 Club Meridian Drive

Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	130 mg/kg	9.1 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	97.9 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/22/2013 01:52	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

**Sample Description: A1-DB-06-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990592
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 16:25 by EB

STANTEC International, Inc.

Submitted: 03/21/2013 09:00

2321 Club Meridian Drive

Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	474 mg/kg	20.6 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	110 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/22/2013 07:11	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

**Sample Description: A1-DB-06-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990593
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 16:30 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	145 mg/kg	10 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	106 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/22/2013 02:22	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

**Sample Description: A1-DB-06-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990594
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 16:35 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	84.7 mg/kg	10.9 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	117 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	27.3 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/22/2013 02:37	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

Sample Description: A1-DB-10-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990595
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 16:45 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	452 mg/kg	18.3 mg/kg	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/22/2013 07:56	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

Sample Description: A1-DB-10-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990596
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 16:50 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	2,800 mg/kg	109 mg/kg	100
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	27.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202A	03/22/2013 08:12	Christopher D Meeks	100
01352	Deionized Water Extraction	EPA 300.0	1	13080080202A	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

Sample Description: A1-DB-10-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990597
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 16:55 by EB

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Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	608 mg/kg	20.7 mg/kg	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 08:27	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

Sample Description: DUP-07 Grab Soil
Bee Jay Scales

LLI Sample # SW 6990598
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 17:00 by EB

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Suite E

Reported: 03/25/2013 21:22

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	561 mg/kg	20.8 mg/kg	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 09:12	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

Sample Description: A1-DB-10-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990599
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 17:05 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/21/2013 09:00

Reported: 03/25/2013 21:22

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 160	mg/kg 10.5	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 25.1	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 04:54	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820005B	03/21/2013 20:00	Scott W Freisher	1

Sample Description: A5W-DB-01-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990600
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 08:40 by EB

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Submitted: 03/21/2013 09:00

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Suite E

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	104 mg/kg	8.5 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	6.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 05:09	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A5W-DB-01-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990601
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 08:45 by EB

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Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	55.1 mg/kg	9.1 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 05:24	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A5E-DB-05-2.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990602
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 08:45 by EB

STANTEC International, Inc.

Submitted: 03/21/2013 09:00

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Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 165	mg/kg 9.2	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 14.5	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 05:40	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A5E-DB-05-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990603
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 09:00 by EB

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Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 87.7	mg/kg 9.9	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 19.2	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 05:55	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A5E-DB-05-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990604
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 09:05 by EB

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Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	56.0 mg/kg	11.2 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	29.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 06:10	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A5E-DB-05-8.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990605
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 09:10 by EB

STANTEC International, Inc.

Submitted: 03/21/2013 09:00

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Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 31.5	mg/kg 5.5	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 27.3	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 09:28	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A5E-DB-02-2.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990606
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 09:30 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/21/2013 09:00

Reported: 03/25/2013 21:22

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	197 mg/kg	9.2 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080202B	03/22/2013 06:40	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080202B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-02-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990607
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 09:35 by EB

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Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	392 mg/kg	18.2 mg/kg	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203A	03/22/2013 07:23	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-02-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990608
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 09:40 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 262	mg/kg 9.8	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 19.2	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203A	03/22/2013 01:50	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-02-8.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990609
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 09:45 by EB

STANTEC International, Inc.

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Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	114 mg/kg	10.9 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	27.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203A	03/22/2013 02:05	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

**Sample Description: A5E-DB-07-2.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990610
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 10:00 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	50.1 mg/kg	8.8 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	95.5 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	11.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203A	03/22/2013 02:50	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-07-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990611
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 10:05 by EB

STANTEC International, Inc.

Submitted: 03/21/2013 09:00

2321 Club Meridian Drive

Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	39.3 mg/kg	9.7 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	105 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203A	03/22/2013 03:06	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-07-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990612
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 10:10 by EB

STANTEC International, Inc.

Submitted: 03/21/2013 09:00

2321 Club Meridian Drive

Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	153 mg/kg	9.6 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	104 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203A	03/22/2013 03:21	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

**Sample Description: A5E-DB-07-8.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6990613
LLI Group # 1376900
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 10:15 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	244 mg/kg	10.1 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	107 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203A	03/22/2013 03:36	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13080057301A	03/21/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-01-2.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990614
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 10:30 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 82.9	mg/kg 9.3	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 14.7	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203A	03/22/2013 03:51	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-01-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990615
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 10:35 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	1,490 mg/kg	89.8 mg/kg	100
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	12.3 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203A	03/22/2013 08:18	Christopher D Meeks	100
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: DUP-08 Grab Soil
Bee Jay Scales

LLI Sample # SW 6990616
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 10:40 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 1,520	mg/kg 90.7	100
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 12.8	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203B	03/22/2013 09:03	Christopher D Meeks	100
01352	Deionized Water Extraction	EPA 300.0	1	13080080203A	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-01-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990617
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 10:45 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/21/2013 09:00

Reported: 03/25/2013 21:22

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 31.3	mg/kg 5.2	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 23.5	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203B	03/22/2013 09:19	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13080080203B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-01-9.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990618
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 10:50 by EB

STANTEC International, Inc.

Submitted: 03/21/2013 09:00

2321 Club Meridian Drive

Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	9.3 mg/kg	1.0 mg/kg	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203B	03/22/2013 09:49	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13080080203B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: EB032013 Grab Water
Bee Jay Scales

LLI Sample # WW 6990619
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 11:00 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13080655601A	03/21/2013 20:01	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13084022101A	03/25/2013 14:00	Luz M Groff	1

Sample Description: A5E-DB-03-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990620
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 12:20 by EB

STANTEC International, Inc.

Submitted: 03/21/2013 09:00

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Reported: 03/25/2013 21:22

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 145	mg/kg 9.0	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 11.8	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203B	03/22/2013 06:07	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A5E-DB-03-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990621
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 12:50 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/21/2013 09:00

Reported: 03/25/2013 21:22

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 180	mg/kg 9.4	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 16.5	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203B	03/22/2013 06:23	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: DUP-09 Grab Soil
Bee Jay Scales

LLI Sample # SW 6990622
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 12:55 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	188 mg/kg	9.4 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203B	03/22/2013 06:38	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820006B	03/21/2013 22:43	Scott W Freisher	1

Sample Description: A5E-DB-03-7.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990623
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 13:00 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/21/2013 09:00

Reported: 03/25/2013 21:22

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	69.7 mg/kg	10.4 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	24.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203B	03/22/2013 06:53	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13080080203B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Sample Description: A5E-DB-03-10.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6990624
LLI Group # 1376900
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 13:05 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/21/2013 09:00

Suite E

Reported: 03/25/2013 21:22

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 7.7	mg/kg 1.0	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 23.6	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13080080203B	03/22/2013 10:04	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13080080203B	03/21/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13080820004B	03/21/2013 18:54	Scott W Freisher	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/25/13 at 09:22 PM

Group Number: 1376900

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13080080202A Nitrate Nitrogen by IC (solid)	Sample number(s): 6990586-6990589, 6990591-6990596 N.D.	0.80	mg/kg	107		90-110		
Batch number: 13080080202B Nitrate Nitrogen by IC (solid)	Sample number(s): 6990597-6990606 N.D.	0.80	mg/kg	107		90-110		
Batch number: 13080080203A Nitrate Nitrogen by IC (solid)	Sample number(s): 6990607-6990615 N.D.	0.80	mg/kg	107		90-110		
Batch number: 13080080203B Nitrate Nitrogen by IC (solid)	Sample number(s): 6990616-6990618, 6990620-6990624 N.D.	0.80	mg/kg	107		90-110		
Batch number: 13080655601A Nitrate Nitrogen	Sample number(s): 6990619 N.D.	0.050	mg/l	100		90-110		
Batch number: 13080057301A Ammonia Nitrogen	Sample number(s): 6990582-6990594, 6990610-6990613 N.D.	17.0	mg/kg	94		89-101		
Batch number: 13084022101A Ammonia Nitrogen	Sample number(s): 6990619 N.D.	0.20	mg/l	96	95	85-105	1	5
Batch number: 13080820004B Moisture	Sample number(s): 6990582-6990589, 6990600-6990605, 6990620-6990621, 6990623-6990624			100		99-101		
Batch number: 13080820005B Moisture	Sample number(s): 6990590-6990599			100		99-101		
Batch number: 13080820006B Moisture	Sample number(s): 6990606-6990618, 6990622			99		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13080080202A Nitrate Nitrogen by IC (solid)	Sample number(s): 6990586-6990589, 6990591-6990596 -268 (2)		90-110			143	110	26*	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/25/13 at 09:22 PM

Group Number: 1376900

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Batch number: 13080080202B Nitrate Nitrogen by IC (solid)	Sample number(s): 6990597-6990606 287 (2)		90-110			UNSPK: 6990597 468	BKG: 6990597 452	4	20
Batch number: 13080080203A Nitrate Nitrogen by IC (solid)	Sample number(s): 6990607-6990615 61 (2)		90-110			UNSPK: 6990607 338	BKG: 6990607 347	3	20
Batch number: 13080080203B Nitrate Nitrogen by IC (solid)	Sample number(s): 6990616-6990618, 6990620-6990624 163*		90-110			UNSPK: 6990617 23.9	BKG: 6990617 24.8	3 (1)	20
Batch number: 13080655601A Nitrate Nitrogen	Sample number(s): 6990619 96		90-110			UNSPK: P990657 0.44 J	BKG: P990657 0.45 J	3 (1)	20
Batch number: 13080057301A Ammonia Nitrogen	Sample number(s): 6990582-6990594, 6990610-6990613 96	96	72-116	1	5	N.D.	N.D.	0 (1)	10
Batch number: 13084022101A Ammonia Nitrogen	Sample number(s): 6990619 225					BKG: P989781 225		7*	6
Batch number: 13080820004B Moisture	Sample number(s): 6990582-6990589, 6990600-6990605, 6990620-6990621, 6990623-6990624 17.8					BKG: P987806 17.8		2	13
Batch number: 13080820005B Moisture	Sample number(s): 6990590-6990599 23.5					BKG: 6990598 23.5		1	13
Batch number: 13080820006B Moisture	Sample number(s): 6990606-6990618, 6990622 16.7					BKG: 6990622 16.7		5	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1376900 Sample # 6990582-24
 Instructions on reverse side correspond with circled numbers.

COC #318731

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																																																																																																																																	
Client: STANTEC CONSULTING		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Other: <input type="checkbox"/>	Total # of Containers AMMONIA NITRATE	Preservation Codes								FSC: _____																																																																																																																																			
Project Name#: BEE JAY SCALES		PWSID #:				<table border="1" style="width: 100%; height: 100px;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																																																																																																												SCR#: _____																															
Project Manager: MARISA RAFFENBERGER		P.O. #:		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other								6 Remarks COC # 1 of 6 ALL 24-HR TAT EXCEPT DUP-06 & A7-DB06-1.5' 24-HR TAT STANDARD TAT 3-DAY TAT																																																																																																																																					
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:																																																																																																																																															
Name of state where samples were collected: WASHINGTON				3		<table border="1" style="width: 100%; height: 100%;"> <tr> <th style="text-align: center;">2 Sample Identification</th> <th colspan="2" style="text-align: center;">Collected</th> <th style="text-align: center;">Grab</th> <th style="text-align: center;">Composite</th> <th style="text-align: center;">Soil</th> <th style="text-align: center;">Water</th> <th style="text-align: center;">Other</th> <th style="text-align: center;">Total # of Containers</th> <th style="text-align: center;">AMMONIA</th> <th style="text-align: center;">NITRATE</th> </tr> <tr> <td></td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Time</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>A6-DB-03-0.5'</td> <td style="text-align: center;">3/19/13</td> <td style="text-align: center;">1350</td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td style="text-align: center;">1</td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>A6-DB-03-2.5'</td> <td></td> <td style="text-align: center;">1355</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>A6-DB-04-0.5'</td> <td></td> <td style="text-align: center;">1400</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>A6-DB-04-2.5'</td> <td></td> <td style="text-align: center;">1410</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>A6-DB-05-1.0'</td> <td></td> <td style="text-align: center;">1420</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>A6-DB-05-2.5'</td> <td></td> <td style="text-align: center;">1425</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>A6-DB-05-4.0'</td> <td></td> <td style="text-align: center;">1430</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>A6-DB-05-5.5'</td> <td></td> <td style="text-align: center;">1435</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>DUP-06</td> <td></td> <td style="text-align: center;">1405</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>A1-DB-06-1.5'</td> <td></td> <td style="text-align: center;">1620</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> </table>								2 Sample Identification	Collected		Grab	Composite	Soil	Water	Other	Total # of Containers	AMMONIA	NITRATE		Date	Time									A6-DB-03-0.5'	3/19/13	1350	X		X			1	X		A6-DB-03-2.5'		1355							X		A6-DB-04-0.5'		1400							X		A6-DB-04-2.5'		1410							X		A6-DB-05-1.0'		1420							X		A6-DB-05-2.5'		1425							X		A6-DB-05-4.0'		1430							X		A6-DB-05-5.5'		1435							X		DUP-06		1405							X		A1-DB-06-1.5'		1620							X	
2 Sample Identification	Collected		Grab	Composite	Soil									Water	Other	Total # of Containers	AMMONIA	NITRATE																																																																																																																															
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A1-DB-06-1.5'		1620							X																																																																																																																																								
7 Turnaround Time (TAT) Requested (please circle) Standard _____ Rush 24 HR (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC PM</u> E-mail address: <u>MARISA.RAFFENBERGER@STANTEC.COM</u>				Relinquished by <u>[Signature]</u> BOB MCALISTER - STANTEC Date: <u>3/20/13</u> Time: <u>1500</u>		Received by <u>FED EX</u> Date: <u>3/20/13</u> Time: <u>1500</u>		9																																																																																																																																									
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by _____ Date: _____ Time: _____		Received by _____ Date: _____ Time: _____		Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____ Temperature upon receipt <u>1.3-1.6 °C</u>																																																																																																																																									
				Relinquished by _____ Date: _____ Time: _____		Received by _____ Date: _____ Time: _____																																																																																																																																											
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				Relinquished by _____ Date: _____ Time: _____		Received by <u>[Signature]</u> Date: <u>3/21/13</u> Time: <u>0900</u>																																																																																																																																											
				EDD Required? Yes No If yes, format: _____																																																																																																																																													
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)																																																																																																																																													

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 Group # 1376900 Sample # 6990582-24
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

COC #318734

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																											
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: <input type="checkbox"/>	Total # of Containers	Preservation Codes								FSC: _____																													
Project Name/ #: <u>BEE JAY SCALES</u>		PWSID #:				AMMONIA NITRATE								SCR#: _____																													
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:												Preservation Codes																													
Sampler: <u>ERIC BASSETT/ BOB MCALISTER</u>		Quote #:												H=HCl T=Thiosulfate																													
Name of state where samples were collected: <u>WASHINGTON</u>				3 Composite		6 Remarks										N=HNO ₃ B=NaOH																											
2 Sample Identification		Collected		Grab <input type="checkbox"/>	Composite <input type="checkbox"/>	SOIL <input checked="" type="checkbox"/>										7 Turnaround Time (TAT) Requested (please circle)		Standard <u>3-DAY</u> <u>Rush</u> <input checked="" type="checkbox"/>		Date <u>3/20/13</u> Time <u>1500</u>		Received by <u>FED EX</u>		Date <u>3/20/13</u> Time <u>1500</u>		9																	
		Date																										Time		Relinquished by <u>BOB MCALISTER - STANTEC</u>		Date		Time		Received by		Date		Time			
A1-DB-06-3.0'		3/19/13 1625		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	AMMONIA NITRATE										8 Data Package Options (circle if required)		Type I (Validation/non-CLP) Type VI (Raw Data Only)		Date results are needed: <u>CONTACT STANTEC PM</u>		Date		Time		Received by		Date		Time													
A1-DB-06-4.5'		1630		<input type="checkbox"/>	<input type="checkbox"/>																											Type III (Reduced non-CLP) TX TRRP-13		Date		Time		Received by		Date		Time	
A1-DB-06-6.5'		1635		<input type="checkbox"/>	<input type="checkbox"/>																																						
A1-DB-10-1.5'		1645		<input type="checkbox"/>	<input type="checkbox"/>																											EDD Required? Yes No		Date		Time		Received by		Date		Time	
A1-DB-10-3.0'		1650		<input type="checkbox"/>	<input type="checkbox"/>																																						
A1-DB-10-5.0'		1655		<input type="checkbox"/>	<input type="checkbox"/>			Site-Specific QC (MS/MSD/Dup)? Yes No		Date		Time		Received by																		Date		Time									
DUP-07		1700		<input type="checkbox"/>	<input type="checkbox"/>																															(If yes, indicate QC sample and submit triplicate sample volume.)		Date		Time		Received by	
A1-DB-10-7.0'		1705		<input type="checkbox"/>	<input type="checkbox"/>			Temperature upon receipt <u>13-1.6 °C</u>		Date		Time		Received by																		Date		Time									
ASW-DB-01-0.5'		3/20/13 840		<input type="checkbox"/>	<input type="checkbox"/>	Relinquished by <u>Commercial Carrier:</u>										Date		Time		Received by		Date		Time																			
ASW-DB-01-2.5'		845		<input type="checkbox"/>	<input type="checkbox"/>			UPS <u>FedEx</u> Other _____		Date		Time		Received by												Date		Time															

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1376900 Sample # 6990582-24
Instructions on reverse side correspond with circled numbers.

COC #318732

1 Client Information				4 Matrix				5 Analysis Requested				For Lab Use Only				
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Total # of Containers	Preservation Codes				FSC: _____						
Project Name/#: <u>BEE JAY SALES</u>		PWSID #:				AMMONIA NITRATE				SCR#: _____						
Project Manager: <u>MARISA RAFFENBERGER</u>		P.O. #:														
Sampler: <u>ERIC BASSETT/ BOB MCALISTER</u>		Quote #:														
Name of state where samples were collected: <u>WASHINGTON</u>				3						6						
2 Sample Identification		Collected		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers					Remarks		
Date	Time															
<u>ASE-DB-05-2.0'</u>	<u>3/20/13</u>	<u>900</u>	<u>845</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			1	<input checked="" type="checkbox"/>						<u>24-HR TAT</u>
<u>ASE-DB-05-4.0'</u>		<u>900</u>								<input checked="" type="checkbox"/>						<u>24-HR TAT</u>
<u>ASE-DB-05-6.0'</u>		<u>905</u>								<input checked="" type="checkbox"/>						<u>24-HR TAT</u>
<u>ASE-DB-05-8.0'</u>		<u>910</u>								<input checked="" type="checkbox"/>						<u>24-HR-TAT</u>
<u>ASE-DB-02-2.0'</u>		<u>930</u>								<input checked="" type="checkbox"/>						<u>3-DAY TAT</u>
<u>ASE-DB-02-4.0'</u>		<u>935</u>								<input checked="" type="checkbox"/>						
<u>ASE-DB-02-6.0'</u>		<u>940</u>								<input checked="" type="checkbox"/>						
<u>ASE-DB-02-8.5'</u>		<u>945</u>								<input checked="" type="checkbox"/>						
<u>ASE-DB-07-2.0'</u>		<u>1000</u>								<input checked="" type="checkbox"/>						
<u>ASE-DB-07-4.0'</u>		<u>1005</u>								<input checked="" type="checkbox"/>						

7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENTS</u> Rush <small>(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</small>						Relinquished by <u>BOB MCALISTER - STANTEC</u> Date <u>3/20/13</u> Time <u>1500</u>		Received by <u>FED EX</u> Date <u>3/20/13</u> Time <u>1500</u>		9			
Date results are needed: <u>CONTACT STANTEC PM</u>						Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____					
E-mail address: <u>MARISA.RAFFENBERGER@STANTEC.COM</u>						Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____					
8 Data Package Options (circle if required)						Relinquished by _____ Date _____ Time _____		Received by <u>Debrah Nieland</u> Date <u>3/21/13</u> Time <u>0900</u>					
Type I (Validation/non-CLP) Type VI (Raw Data Only)						EDD Required? Yes No If yes, format: _____						Relinquished by Commercial Carrier: UPS _____ FedEx <u> </u> Other _____	
Type III (Reduced non-CLP) TX TRRP-13						Site-Specific QC (MS/MSD/Dup)? Yes No <small>(If yes, indicate QC sample and submit triplicate sample volume.)</small>						Temperature upon receipt <u>13-1.6 °C</u>	
Type IV (CLP SOW) MA MCP CT RCP													

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1376900 Sample # 6990582-24
Instructions on reverse side correspond with circled numbers.

COC #318733A

1 Client Information			4 Matrix			5 Analysis Requested					For Lab Use Only																					
Client: <u>STANTEC CONSULTING</u>		Acct. #:	Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other: _____ Total # of Containers: _____			Preservation Codes					FSC: _____																					
Project Name#: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 10%;">1</td><td style="width: 10%;">1</td><td style="width: 10%;">1</td><td style="width: 10%;">S</td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td> </tr> <tr> <td>AMMONIA</td><td>NITRATE</td><td>NITRATE NITROGEN</td><td>AMMONIA NITROGEN</td><td colspan="6">HOLD FOR POSSIBLE ANALYSIS PER PM</td> </tr> </table>					1	1	1	S							AMMONIA	NITRATE	NITRATE NITROGEN	AMMONIA NITROGEN	HOLD FOR POSSIBLE ANALYSIS PER PM						SCR#: _____	
1	1	1									S																					
AMMONIA	NITRATE	NITRATE NITROGEN									AMMONIA NITROGEN	HOLD FOR POSSIBLE ANALYSIS PER PM																				
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:	Preservation Codes		H=HCl		T=Thiosulfate																									
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:	N=NHNO ₃		B=NaOH		S=H ₂ SO ₄		O=Other																							
Name of state where samples were collected: <u>WASHINGTON</u>			3 Composite <input type="checkbox"/> Grab <input checked="" type="checkbox"/> Soil <input checked="" type="checkbox"/>			6 Remarks <div style="font-size: 1.5em; text-align: center;">COC #4 OF 6</div>					7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENT</u> Rush _____ <small>(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</small>																					
2 Sample Identification		Collected											Relinquished by <u>BOB MCALISTER - STANTEC</u> Date <u>3/20/13</u> Time <u>1500</u> Received by <u>FEDEX</u> Date <u>3/20/13</u> Time <u>1500</u>																			
Date	Time	Grab	Composite	Soil	Water	Other:	Total # of Containers	AMMONIA	NITRATE	NITRATE NITROGEN	AMMONIA NITROGEN	HOLD FOR POSSIBLE ANALYSIS PER PM																				
<u>ASE-DB-07-6.0'</u>	<u>3/20/13 1010</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>ASE-DB-07-8.5'</u>	<u>1015</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>ASE-DB-01-2.0'</u>	<u>1030</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>ASE-DB-01-4.5'</u>	<u>1035</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>ASE-DB-01-DUP-08</u>	<u>1040</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>ASE-DB-01-7.0'</u>	<u>1045</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>ASE-DB-01-9.5'</u>	<u>1050</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																							
<u>EB032013</u>	<u>1100</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		3			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																					
<u>ASE-DB-07A-2.0'</u>	<u>1125</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			1					<input checked="" type="checkbox"/>																				
<u>ASE-DB-07A-4.0'</u>	<u>1130</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			1					<input checked="" type="checkbox"/>																				

7 Turnaround Time (TAT) Requested (please circle)
 Standard SEE COMMENT Rush _____
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: CONTACT STANTEC PM
 E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

Relinquished by <u>BOB MCALISTER - STANTEC</u>	Date <u>3/20/13</u>	Time <u>1500</u>	Received by <u>FEDEX</u>	Date <u>3/20/13</u>	Time <u>1500</u>
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by <u>Deborah Neslund</u>	Date <u>3/21/13</u>	Time <u>0900</u>

EDD Required? Yes No
 If yes, format: _____
 Relinquished by Commercial Carrier:
 UPS FedEx Other _____
 Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)
 Temperature upon receipt 1.3-1.6 °C

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1376900 Sample # 6990582-24
Instructions on reverse side correspond with circled numbers.

COC #318733 B

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																																																																																																																																																																								
Client: STANTEC CONSULTING		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other:		Preservation Codes								FSC: _____																																																																																																																																																																										
Project Name#: BEE JAY SCALES		PWSID #:				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;">1</td><td style="width: 10%;">1</td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td></tr> <tr><td colspan="10" style="text-align: center; vertical-align: middle;">AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM</td></tr> </table>								1	1									AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM										SCR#: _____																																																																																																																																																						
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Project Manager: MARISA KAFFENBERGER		P.O. #:		Total # of Containers AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																																																																																																																																																																		
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:																																																																																																																																																																																						
Name of state where samples were collected: WASHINGTON				3 Composite		<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">2 Sample Identification</th> <th colspan="2" style="text-align: center;">Collected</th> <th rowspan="2" style="text-align: center;">Grab</th> <th rowspan="2" style="text-align: center;">Composite</th> <th rowspan="2" style="text-align: center;">Soil</th> <th rowspan="2" style="text-align: center;">Water</th> <th rowspan="2" style="text-align: center;">Other:</th> <th rowspan="2" style="text-align: center;">Total # of Containers</th> <th rowspan="2" style="text-align: center;">AMMONIA</th> <th rowspan="2" style="text-align: center;">NITRATE</th> <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM</th> <th colspan="2" style="text-align: center;">6 Remarks</th> </tr> <tr> <th style="text-align: center;">Date</th> <th style="text-align: center;">Time</th> <th style="text-align: center;">Date</th> <th style="text-align: center;">Time</th> <th colspan="2"></th> </tr> <tr> <td>ASE-DB-07A-6.0'</td> <td>3/20/13</td> <td>1135</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td style="text-align: center;">-</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ASE-DB-07A-8.5'</td> <td></td> <td>1140</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ASE-DB-01A-2.0'</td> <td></td> <td>1150</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ASE-DB-01A-4.5'</td> <td></td> <td>1155</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ASE-DB-01A-6.0'</td> <td></td> <td>1200</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ASE-DB-01A-9.5'</td> <td></td> <td>1205</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ASE-DB-03-2.5'</td> <td></td> <td>1220</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>ASE-DB-03-5.0'</td> <td></td> <td>1250</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">*24-HR TAT*</td> </tr> <tr> <td>DUP-09</td> <td></td> <td>1255</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">*24-HR TAT*</td> </tr> <tr> <td>ASE-DB-03-7.5'</td> <td></td> <td>1300</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">STANDARD TAT</td> </tr> </table>								2 Sample Identification		Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM	6 Remarks		Date	Time	Date	Time			ASE-DB-07A-6.0'	3/20/13	1135		X		X			-						ASE-DB-07A-8.5'		1140													ASE-DB-01A-2.0'		1150													ASE-DB-01A-4.5'		1155													ASE-DB-01A-6.0'		1200													ASE-DB-01A-9.5'		1205													ASE-DB-03-2.5'		1220													ASE-DB-03-5.0'		1250												*24-HR TAT*	DUP-09		1255												*24-HR TAT*	ASE-DB-03-7.5'		1300												STANDARD TAT
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7 Turnaround Time (TAT) Requested (please circle)
 Standard SEE COMMENTS Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: CONTACT STANTEC PA

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

Relinquished by: <u>BOB MCALISTER - STANTEC</u>	Date: <u>3/20/13</u>	Time: <u>1500</u>	Received by: <u>FED EX</u>	Date: <u>3/20/13</u>	Time: <u>1500</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
EDD Required? Yes No If yes, format:			Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____		
Site-Specific QC (MS/MSD/Dup)? Yes No <small>(If yes, indicate QC sample and submit triplicate sample volume.)</small>			Temperature upon receipt <u>1.3-1.6 °C</u>		

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1376900 Sample # 6990582-24
Instructions on reverse side correspond with circled numbers.

COC #318733

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only	
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> Soil <input checked="" type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Total # of Containers	Preservation Codes								FSC: _____			
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				AMMONIA NITRATE								SCR#: _____			
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:												Preservation Codes			
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:												H=HCl T=Thiosulfate			
Name of state where samples were collected: <u>WASHINGTON</u>				3 Composite										6 Remarks			
2 Sample Identification		Collected												COC #6 OF 6			
		Date	Time									Grab	Soil			Water	Other:
<u>ASE-DB-03-10.0</u>		<u>3/20/13</u>	<u>1305</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											<u>24-HR TAT</u>	
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by <u>BOB MCALISTER - STANTEC</u>		Date <u>3/20/13</u>	Time <u>1500</u>	Received by <u>FED EX</u>		Date <u>3/20/13</u>	Time <u>1500</u>	9					
Standard <u>Rush 24HR</u> <small>(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</small>				Relinquished by		Date	Time	Received by		Date	Time						
Date results are needed: <u>CONTACT STANTEC PA</u>				Relinquished by		Date	Time	Received by		Date	Time						
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by		Date	Time	Received by		Date	Time						
				Relinquished by		Date	Time	Received by <u>Deborah Neslund</u>		Date <u>3/21/13</u>	Time <u>0900</u>						
8 Data Package Options (circle if required)				EDD Required? Yes No				Relinquished by Commercial Carrier:				Temperature upon receipt <u>1.3-1.6 °C</u>					
Type I (Validation/non-CLP)	Type VI (Raw Data Only)	If yes, format: _____				UPS _____ FedEx _____ Other _____											
Type III (Reduced non-CLP)	TX TRRP-13	Site-Specific QC (MS/MSD/Dup)? Yes No															
Type IV (CLP SOW)	MA MCP CT RCP	(If yes, indicate QC sample and submit triplicate sample volume.)															

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m³	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

March 26, 2013

Project: Bee Jay Scales Site

Submittal Date: 03/22/2013

Group Number: 1377303

PO Number: 213202156.600.9301

Release Number: BEE JAY SCALES

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
A6-DB-06-1.5' Grab Soil	6992659
A6-DB-06-3.0' Grab Soil	6992660
A6-DB-06-4.5' Grab Soil	6992661
A6-DB-06-6.5' Grab Soil	6992662
A6-DB-07-1.5' Grab Soil	6992663
A6-DB-07-3.0' Grab Soil	6992664
A6-DB-07-5.0' Grab Soil	6992665
A6-DB-07-7.0' Grab Soil	6992666
A2-DB-01-1.5' Grab Soil	6992667
A2-DB-01-3.0' Grab Soil	6992668
A2-DB-01-4.5' Grab Soil	6992669
A2-DB-01-6.0' Grab Soil	6992670
A2-DB-02-1.5' Grab Soil	6992671
A2-DB-02-3.0' Grab Soil	6992672
DUP-11 Grab Soil	6992673
A2-DB-02-4.5' Grab Soil	6992674
A2-DB-02-6.0' Grab Soil	6992675
EB032113 Grab Water	6992676
A1-DB-09-1.5' Grab Soil	6992677
A1-DB-09-3.0' Grab Soil	6992678
A1-DB-09-4.5' Grab Soil	6992679
A1-DB-09-6.0' Grab Soil	6992680
A1-DB-08-2.0' Grab Soil	6992681
A1-DB-08-3.0' Grab Soil	6992682
A1-DB-08-4.0' Grab Soil	6992683
DUP-12 Grab Soil	6992684
A1-DB-08-5.5' Grab Soil	6992685

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC STANTEC International, Inc.
COPY TO
ELECTRONIC Stantec Consulting Services
COPY TO

Attn: Marisa Kaffenberger

Attn: Eric Bassett

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

**Sample Description: A6-DB-06-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992659
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 15:30 by EB

STANTEC International, Inc.

Submitted: 03/22/2013 09:15

2321 Club Meridian Drive

Reported: 03/26/2013 09:38

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	11.3 mg/kg	0.95 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	101 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13081081202A	03/23/2013 12:55	Joseph E McKenzie	1
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

**Sample Description: A6-DB-06-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992660
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 15:35 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/22/2013 09:15

Suite E

Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	360 mg/kg	10.2 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	109 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202A	03/22/2013 22:39	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

**Sample Description: A6-DB-06-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992661
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 15:40 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/22/2013 09:15

Suite E

Reported: 03/26/2013 09:38

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	216 mg/kg	9.4 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	101 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202A	03/22/2013 22:54	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

**Sample Description: A6-DB-06-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992662
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 15:45 by EB

STANTEC International, Inc.

Submitted: 03/22/2013 09:15

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Reported: 03/26/2013 09:38

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	10.1 mg/kg	0.99 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	107 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13081081202A	03/23/2013 13:41	Joseph E McKenzie	1
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

**Sample Description: A6-DB-07-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992663
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 16:50 by EB

STANTEC International, Inc.

Submitted: 03/22/2013 09:15

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	67.3 mg/kg	9.3 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	101 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202A	03/22/2013 23:24	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

**Sample Description: A6-DB-07-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992664
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 16:55 by EB

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	159 mg/kg	9.0 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	96.8 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	12.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202A	03/22/2013 23:39	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

**Sample Description: A6-DB-07-5.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992665
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 17:00 by EB

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Submitted: 03/22/2013 09:15

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	582 mg/kg	19.9 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	107 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202A	03/23/2013 13:56	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

**Sample Description: A6-DB-07-7.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992666
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 17:05 by EB

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Reported: 03/26/2013 09:38

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	150 mg/kg	10.4 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	494 mg/kg	111 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202A	03/23/2013 00:10	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

Sample Description: A2-DB-01-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6992667
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 08:35 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	75.7 mg/kg	8.9 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202A	03/23/2013 00:25	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

Sample Description: A2-DB-01-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6992668
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 08:40 by EB

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Suite E

Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 394	mg/kg 19.4	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 18.7	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202A	03/23/2013 10:08	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13081081202A	03/22/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

Sample Description: A2-DB-01-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6992669
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 08:45 by EB

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Reported: 03/26/2013 09:38

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 142	mg/kg 10	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 20.3	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202B	03/23/2013 01:26	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

Sample Description: A2-DB-01-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6992670
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 08:50 by EB

STANTEC International, Inc.

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Submitted: 03/22/2013 09:15

Suite E

Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 11.8	mg/kg 0.99	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 19.3	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13081081202B	03/23/2013 10:23	Joseph E McKenzie	1
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

Sample Description: A2-DB-02-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6992671
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 09:05 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/22/2013 09:15

Suite E

Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	198 mg/kg	8.7 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	7.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202B	03/23/2013 02:27	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

Sample Description: A2-DB-02-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6992672
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 09:10 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/22/2013 09:15

Reported: 03/26/2013 09:38

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 375	mg/kg 19.4	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 19.2	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202B	03/23/2013 10:38	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

**Sample Description: DUP-11 Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992673
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 09:15 by EB

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Reported: 03/26/2013 09:38

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 392	mg/kg 19.7	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 19.1	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202B	03/23/2013 10:54	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

Sample Description: A2-DB-02-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6992674
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 09:20 by EB

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Reported: 03/26/2013 09:38

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	135 mg/kg	9.8 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081202B	03/23/2013 03:12	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

Sample Description: A2-DB-02-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6992675
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 09:25 by EB

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Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	6.0 mg/kg	0.98 mg/kg	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13081081202B	03/23/2013 11:09	Joseph E McKenzie	1
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

Sample Description: **EB032113 Grab Water**
Bee Jay Scales

LLI Sample # **WW 6992676**
LLI Group # **1377303**
Account # **11842**

Project Name: **Bee Jay Scales Site**

Collected: 03/21/2013 10:10 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/22/2013 09:15

Suite E

Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13081655901A	03/22/2013 18:20	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13084022101A	03/25/2013 14:00	Luz M Groff	1

**Sample Description: A1-DB-09-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992677
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 11:40 by EB

STANTEC International, Inc.

Submitted: 03/22/2013 09:15

2321 Club Meridian Drive

Reported: 03/26/2013 09:38

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	11.5 mg/kg	0.95 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	103 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13081081202B	03/23/2013 11:24	Joseph E McKenzie	1
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820004B	03/22/2013 20:59	Scott W Freisher	1

**Sample Description: A1-DB-09-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992678
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 11:45 by EB

STANTEC International, Inc.

Submitted: 03/22/2013 09:15

2321 Club Meridian Drive

Reported: 03/26/2013 09:38

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	28.2 mg/kg	1.1 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	114 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	25.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13081081202B	03/23/2013 11:39	Joseph E McKenzie	1
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820005B	03/22/2013 19:08	Scott W Freisher	1

**Sample Description: A1-DB-09-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992679
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 11:50 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/22/2013 09:15

Suite E

Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	19.7 mg/kg	1.0 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	109 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.3 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13081081202B	03/23/2013 11:54	Joseph E McKenzie	1
01352	Deionized Water Extraction	EPA 300.0	1	13081081202B	03/22/2013 12:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820005B	03/22/2013 19:08	Scott W Freisher	1

**Sample Description: A1-DB-09-6.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992680
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 11:55 by EB

STANTEC International, Inc.

Submitted: 03/22/2013 09:15

2321 Club Meridian Drive

Reported: 03/26/2013 09:38

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	44.1 mg/kg	9.9 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	162 J mg/kg	106 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081203A	03/22/2013 21:45	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081203A	03/22/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820005B	03/22/2013 19:08	Scott W Freisher	1

**Sample Description: A1-DB-08-2.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992681
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 12:05 by EB

STANTEC International, Inc.

Submitted: 03/22/2013 09:15

2321 Club Meridian Drive

Reported: 03/26/2013 09:38

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	17.5 mg/kg	1.1 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	114 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	25.3 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13081081203A	03/23/2013 11:09	Joseph E McKenzie	1
01352	Deionized Water Extraction	EPA 300.0	1	13081081203A	03/22/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820005B	03/22/2013 19:08	Scott W Freisher	1

**Sample Description: A1-DB-08-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992682
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 12:10 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/22/2013 09:15

Suite E

Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	64.6 mg/kg	10.4 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	111 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081203A	03/22/2013 22:46	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081203A	03/22/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820005B	03/22/2013 19:08	Scott W Freisher	1

Sample Description: A1-DB-08-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6992683
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 12:15 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/22/2013 09:15

Suite E

Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	89.9 mg/kg	10.3 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	110 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081203A	03/22/2013 23:01	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081203A	03/22/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820005B	03/22/2013 19:08	Scott W Freisher	1

Sample Description: DUP-12 Grab Soil
Bee Jay Scales

LLI Sample # SW 6992684
LLI Group # 1377303
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 12:20 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/22/2013 09:15

Suite E

Reported: 03/26/2013 09:38

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	73.1	10.3	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	110	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081203A	03/22/2013 23:46	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13081081203A	03/22/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820005B	03/22/2013 19:08	Scott W Freisher	1

**Sample Description: A1-DB-08-5.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6992685
LLI Group # 1377303
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 12:25 by EB

STANTEC International, Inc.

Submitted: 03/22/2013 09:15

2321 Club Meridian Drive

Reported: 03/26/2013 09:38

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 868	mg/kg 26.0	25
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg 672	mg/kg 112	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 24.1	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13081081203A	03/23/2013 11:24	Joseph E McKenzie	25
01352	Deionized Water Extraction	EPA 300.0	1	13081081203A	03/22/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13081057301A	03/22/2013 15:30	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13081820005B	03/22/2013 19:08	Scott W Freisher	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/26/13 at 09:38 AM

Group Number: 1377303

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13081081202A Nitrate Nitrogen by IC (solid)	Sample number(s): 6992659-6992668 N.D.	0.80	mg/kg	103		90-110		
Batch number: 13081081202B Nitrate Nitrogen by IC (solid)	Sample number(s): 6992669-6992675, 6992677-6992679 N.D.	0.80	mg/kg	103		90-110		
Batch number: 13081081203A Nitrate Nitrogen by IC (solid)	Sample number(s): 6992680-6992685 N.D.	0.80	mg/kg	110		90-110		
Batch number: 13081655901A Nitrate Nitrogen	Sample number(s): 6992676 N.D.	0.050	mg/l	101		90-110		
Batch number: 13081057301A Ammonia Nitrogen	Sample number(s): 6992659-6992666, 6992677-6992685 N.D.	17.0	mg/kg	95		89-101		
Batch number: 13084022101A Ammonia Nitrogen	Sample number(s): 6992676 N.D.	0.20	mg/l	96	95	85-105	1	5
Batch number: 13081820004B Moisture	Sample number(s): 6992659-6992675, 6992677 100					99-101		
Batch number: 13081820005B Moisture	Sample number(s): 6992678-6992685 100					99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13081081202A Nitrate Nitrogen by IC (solid)	Sample number(s): 6992659-6992668 96		90-110	UNSPK: 6992659		9.5	BKG: 6992659 8.7	9	20
Batch number: 13081081202B Nitrate Nitrogen by IC (solid)	Sample number(s): 6992669-6992675, 6992677-6992679 355 (2)		90-110	UNSPK: 6992669		114	BKG: 6992669 135	17	20
Batch number: 13081081203A Nitrate Nitrogen by IC (solid)	Sample number(s): 6992680-6992685 181*		90-110	UNSPK: 6992680		35.4	BKG: 6992680 41.7	16 (1)	20
Batch number: 13081655901A	Sample number(s): 6992676			UNSPK: P992799			BKG: P992799		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/26/13 at 09:38 AM

Group Number: 1377303

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Nitrate Nitrogen	98		90-110			0.66	0.73	10 (1)	20
Batch number: 13081057301A Ammonia Nitrogen	96	94	72-116	2	5	N.D.	N.D.	0 (1)	10
Batch number: 13084022101A Ammonia Nitrogen						225	210	7*	6
Batch number: 13081820004B Moisture						74.2	74.4	0	13
Batch number: 13081820005B Moisture						7.8	8.1	4	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1377303 Sample # 6992659-85
Instructions on reverse side correspond with circled numbers.

COC #318738D

1 Client Information				4 Matrix				5 Analysis Requested				For Lab Use Only			
Client: <u>STATEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other:		Preservation Codes				FSC: _____					
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER P.M.				SCR#: _____					
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:													
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:													
Name of state where samples were collected: <u>WASHINGTON</u>															
2 Sample Identification		3 Collected		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers					6 Remarks	
		Date	Time												
<u>A6-DB-06-1.5'</u>		<u>3/20/13</u>	<u>1530</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			3-DAY TAT	
<u>A6-DB-06-3.0'</u>			<u>1535</u>						-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			↓	
<u>A6-DB-06-4.5'</u>			<u>1540</u>						-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			↓	
<u>A6-DB-06-6.5'</u>			<u>1545</u>						-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			↓	
<u>A6-DB-06a-1.5'</u>			<u>1620</u>						-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			↓	
<u>A6-DB-06a-3.0'</u>			<u>1630</u>						-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			↓	
<u>A6-DB-06a-4.5'</u>			<u>1635</u>						-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			↓	
<u>A6-DB-06a-6.5'</u>			<u>1640</u>						-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			↓	
<u>A6-DB-06b-1.5'</u>			<u>1555</u>						-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			↓	
<u>A6-DB-06b-3.0'</u>			<u>1600</u>						-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			↓	

7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENTS</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STATEC PA</u> E-mail address: <u>MARISA.KAFFENBERGER@STATEC.COM</u>	Relinquished by <u>[Signature]</u>	Date <u>3/20/13</u>	Time <u>1500</u>	Received by <u>FED EX</u>	Date <u>3/21/13</u>	Time <u>1500</u>
	Relinquished by	Date	Time	Received by	Date	Time
	Relinquished by	Date	Time	Received by	Date	Time
	Relinquished by	Date	Time	Received by	Date	Time
	Relinquished by	Date	Time	Received by <u>[Signature]</u>	Date <u>3-22-13</u>	Time <u>915</u>

8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP	EDD Required? Yes No If yes, format: _____	Relinquished by Commercial Carrier: UPS FedEx <input checked="" type="checkbox"/> Other _____
	Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)	
	Temperature upon receipt <u>22-29°C</u>	

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377303 Sample # 6942659-85
Instructions on reverse side correspond with circled numbers.

COC #318733 E

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only						
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/>	Soil <input checked="" type="checkbox"/>	Other:	Total # of Containers	Preservation Codes										FSC: _____						
Project Name#: <u>BEE JAY SCALES</u>		PWSID #:						AMMONIA										SCR#: _____						
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:						NITRATE										Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other						
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:						HOLD FOR POSSIBLE ANALYSIS PER PM																
Name of state where samples were collected: <u>WASHINGTON</u>				3 Composite												6 Remarks								
2 Sample Identification		Collected		Grab <th rowspan="2" style="text-align: center;">Composite <th rowspan="2" style="text-align: center;">Soil <th rowspan="2" style="text-align: center;">Water <th rowspan="2" style="text-align: center;">Other: <th rowspan="2" style="text-align: center;">Total # of Containers <th rowspan="2" style="text-align: center;">AMMONIA <th rowspan="2" style="text-align: center;">NITRATE <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM <th colspan="10"></th> <th colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">COC # 2 OF 5</th> </th></th></th></th></th></th></th></th>	Composite <th rowspan="2" style="text-align: center;">Soil <th rowspan="2" style="text-align: center;">Water <th rowspan="2" style="text-align: center;">Other: <th rowspan="2" style="text-align: center;">Total # of Containers <th rowspan="2" style="text-align: center;">AMMONIA <th rowspan="2" style="text-align: center;">NITRATE <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM <th colspan="10"></th> <th colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">COC # 2 OF 5</th> </th></th></th></th></th></th></th>	Soil <th rowspan="2" style="text-align: center;">Water <th rowspan="2" style="text-align: center;">Other: <th rowspan="2" style="text-align: center;">Total # of Containers <th rowspan="2" style="text-align: center;">AMMONIA <th rowspan="2" style="text-align: center;">NITRATE <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM <th colspan="10"></th> <th colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">COC # 2 OF 5</th> </th></th></th></th></th></th>	Water <th rowspan="2" style="text-align: center;">Other: <th rowspan="2" style="text-align: center;">Total # of Containers <th rowspan="2" style="text-align: center;">AMMONIA <th rowspan="2" style="text-align: center;">NITRATE <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM <th colspan="10"></th> <th colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">COC # 2 OF 5</th> </th></th></th></th></th>	Other: <th rowspan="2" style="text-align: center;">Total # of Containers <th rowspan="2" style="text-align: center;">AMMONIA <th rowspan="2" style="text-align: center;">NITRATE <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM <th colspan="10"></th> <th colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">COC # 2 OF 5</th> </th></th></th></th>	Total # of Containers <th rowspan="2" style="text-align: center;">AMMONIA <th rowspan="2" style="text-align: center;">NITRATE <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM <th colspan="10"></th> <th colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">COC # 2 OF 5</th> </th></th></th>	AMMONIA <th rowspan="2" style="text-align: center;">NITRATE <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM <th colspan="10"></th> <th colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">COC # 2 OF 5</th> </th></th>	NITRATE <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM <th colspan="10"></th> <th colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">COC # 2 OF 5</th> </th>	HOLD FOR POSSIBLE ANALYSIS PER PM <th colspan="10"></th> <th colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">COC # 2 OF 5</th>											COC # 2 OF 5	
		Date	Time																					
<u>A6-DB-066-4.5'</u>		<u>3/20/13</u>	<u>1605</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			-															
<u>A6-DB-066-6.5' 6.5'</u>			<u>1610</u>																					
<u>DUP-10</u>			<u>1625</u>																					
<u>A6-DB-07-1.5'</u>			<u>1650</u>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>A6-DB-07-3.0'</u>			<u>1655</u>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>A6-DB-07-5.0'</u>			<u>1700</u>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>A6-DB-07-7.0'</u>			<u>1705</u>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>AZ-DB-01-1.5'</u>		<u>3/21/13</u>	<u>835</u>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>AZ-DB-01-3.0'</u>			<u>840</u>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>AZ-DB-01-4.5'</u>			<u>845</u>							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													

7 Turnaround Time (TAT) Requested (please circle)

Standard (SEE COMMENTS) Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: CONTACT STANTEC PM

E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

Relinquished by: <u>BOB MCALISTER - STANTEC</u>	Date: <u>3/21/13</u>	Time: <u>1500</u>	Received by: <u>FED EX</u>	Date: <u>3/21/13</u>	Time: <u>1500</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: _____

UPS FedEx Other _____

Temperature upon receipt 22-29 °C

Environmental Analysis Request/Chain of Custody



**Lancaster
Laboratories**

Acct. # 11842

For Eurofins Lancaster Laboratories use only
Group # 1377303 Sample # 6992659-85
Instructions on reverse side correspond with circled numbers.

COC #318733 (F)

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only		
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers	Preservation Codes										FSC: _____	
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:							AMMONIA NITRATE HOLD FOR FOSJOLE ANALYSIS PER PH										SCR#: _____	
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:																		
Sampler: <u>ERIC BASSETT/ BOB MCALISTER</u>		Quote #:																		
Name of state where samples were collected: <u>WASHINGTON</u>				3 Composite												6 Remarks				
2 Sample Identification		Collected		Grab	Composite															
		Date	Time																	
<u>A2-DB-01-6.0'</u>		<u>3/21/13</u>	<u>850</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											3-DAY TAT				
<u>A2-DB-02-1.5'</u>			<u>905</u>																	
<u>A2-DB-02-3.0'</u>			<u>910</u>																	
<u>DUP-11</u>			<u>915</u>																	
<u>A2-DB-02-4.5'</u>			<u>920</u>																	
<u>A2-DB-02-6.0'</u>			<u>925</u>																	
<u>A2-DB-02a-1.5'</u>			<u>930</u>																	
<u>A2-DB-02a-3.0'</u>			<u>935</u>																	
<u>A2-DB-02a-4.5'</u>			<u>940</u>																	
<u>A2-DB-02a-6.0'</u>			<u>945</u>																	

7 Turnaround Time (TAT) Requested (please circle)				Relinquished by: <u>[Signature]</u>		Date: <u>3/24/13</u>		Time: <u>1500</u>		Received by: <u>FED Ex</u>		Date: <u>3/21/13</u>		Time: <u>1500</u>	
Standard <u>SEE COMMENTS</u> Rush				Relinquished by: <u>BOB MCALISTER-STANTEC</u>		Date:		Time:		Received by:		Date:		Time:	
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by:		Date:		Time:		Received by:		Date:		Time:	
Date results are needed: <u>CONTACT STANTEC P.M</u>				Relinquished by:		Date:		Time:		Received by:		Date:		Time:	
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by:		Date:		Time:		Received by:		Date:		Time:	
8 Data Package Options (circle if required)				Relinquished by:		Date:		Time:		Received by: <u>[Signature]</u>		Date: <u>3-22-13</u>		Time: <u>915</u>	
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		EDD Required? Yes No				Relinquished by Commercial Carrier:							
Type III (Reduced non-CLP)		TX TRRP-13		If yes, format: _____				UPS _____ FedEx <u>X</u> Other _____							
Type IV (CLP SOW)		MA MCP CT RCP		Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt: <u>22-2.9°C</u>							
				(If yes, indicate QC sample and submit triplicate sample volume.)											

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1377303 Sample # 6992659-85
Instructions on reverse side correspond with circled numbers.

COC #318733 6

1 Client Information				4 Matrix				5 Analysis Requested					For Lab Use Only																					
Client: <u>STANTEC CONSULTING</u>		Acct. #: _____		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Total # of Containers AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM NITRATE NITROGEN AMMONIA NITROGEN	Preservation Codes					FSC: _____		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																					
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #: _____				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td></tr> <tr><td style="text-align: center;">/</td><td style="text-align: center;">/</td><td style="text-align: center;">/</td><td style="text-align: center;">/</td><td style="text-align: center;">S</td><td></td><td></td><td></td><td></td><td></td></tr> </table>																	/	/	/	/	S						SCR#: _____	
/	/	/	/			S																												
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #: _____		Composite <input type="checkbox"/> Grab <input checked="" type="checkbox"/>		<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td></tr> <tr><td style="text-align: center;">/</td><td style="text-align: center;">/</td><td style="text-align: center;">/</td><td style="text-align: center;">/</td><td style="text-align: center;">S</td><td></td><td></td><td></td><td></td><td></td></tr> </table>															/	/	/	/	S						6 Remarks <u>COC # 4 of 5</u>			
/	/	/	/	S																														
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #: _____		Soil <input checked="" type="checkbox"/>		AMMONIA NITROGEN AMMONIA NITROGEN					STANDARD TAT 3-DAY TAT																							
Name of state where samples were collected: <u>WASHINGTON</u>													Water <input type="checkbox"/> NPDES <input type="checkbox"/>		AMMONIA NITROGEN AMMONIA NITROGEN					STANDARD TAT 3-DAY TAT														
2 Sample Identification		3 Collected		Other: _____		AMMONIA NITROGEN AMMONIA NITROGEN					STANDARD TAT 3-DAY TAT																							
		Date	Time										Grab <input checked="" type="checkbox"/> Composite <input type="checkbox"/>		AMMONIA NITROGEN AMMONIA NITROGEN					STANDARD TAT 3-DAY TAT														
<u>A2-DB-01a-1.5'</u>		<u>3/21/13</u>	<u>950</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>A2-DB-01a-3.0'</u>			<u>955</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<u>A2-DB-01a-4.5'</u>			<u>1000</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<u>A2-DB-01a-6.0'</u>			<u>1005</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<u>EB032113</u>			<u>1010</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<u>A1-DB-09-1.5'</u>			<u>1140</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<u>A1-DB-09-3.0'</u>			<u>1145</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<u>A1-DB-09-4.5'</u>			<u>1150</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<u>A1-DB-09-6.0'</u>			<u>1155</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			
<u>A1-DB-08-2.0'</u>			<u>1205</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																			

7 Turnaround Time (TAT) Requested (please circle)
 Standard SEE COMMENTS Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: CONTACT STANTEC PM
 E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

Relinquished by: <u>BOB MCALISTER - STANTEC</u>	Date: <u>3/21/13</u>	Time: <u>1500</u>	Received by: <u>FEDEx</u>	Date: <u>3/21/13</u>	Time: <u>1500</u>
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

EDD Required? Yes No
 If yes, format: _____
 Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)
 Relinquished by Commercial Carrier:
 UPS _____ FedEx Other _____
 Temperature upon receipt: 22-29°C

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377303 Sample # 6992659-85
Instructions on reverse side correspond with circled numbers.

COC #318733H

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																																																																																																										
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> Soil <input checked="" type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:	Total # of Containers AMMONIA NITRATE	Preservation Codes								FSC: _____																																																																																																												
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																																						SCR#: _____																																																																														
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:		Composite <input type="checkbox"/> Grab <input checked="" type="checkbox"/>		<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																												Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																																																																								
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:		Remarks <u>COC #5 OF 5</u>		<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																												Name of state where samples were collected: <u>WASHINGTON</u>																																																																																								
2 Sample Identification		Collected		<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <th>Date</th> <th>Time</th> <th>Grab</th> <th>Composite</th> <th>Soil</th> <th>Water</th> <th>Other</th> <th>Total # of Containers</th> <th>AMMONIA</th> <th>NITRATE</th> <th> </th> <th> </th> <th> </th> <th> </th> <th> </th> <th> </th> <th> </th> <th> </th> <th> </th> <th> </th> </tr> <tr> <td><u>3/21/13</u></td> <td><u>1210</u></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><u>1</u></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td><u> </u></td> <td><u>1215</u></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><u> </u></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td><u>DUP-12</u></td> <td><u>1220</u></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><u> </u></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td><u>A1-DB-08-5.5'</u></td> <td><u>1225</u></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><u> </u></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>								Date	Time	Grab	Composite	Soil	Water	Other	Total # of Containers	AMMONIA	NITRATE											<u>3/21/13</u>	<u>1210</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>1</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												<u> </u>	<u>1215</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													<u>DUP-12</u>	<u>1220</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													<u>A1-DB-08-5.5'</u>	<u>1225</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													3 Turnaround Time (TAT) Requested (please circle) Standard <u>(SEE COMMENTS)</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC PM</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>		7 Relinquished by <u>BOB MCALISTER - STANTEC</u> Date: <u>3/21/13</u> Time: <u>1500</u> Received by: <u>FED Ex</u> Date: <u>3/21/13</u> Time: <u>1500</u>	
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8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP		EDD Required? Yes No If yes, format: _____ Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)		Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____ Temperature upon receipt: <u>22.24</u> °C																																																																																																																						

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

March 29, 2013

Project: Bee Jay Scales Site

Submittal Date: 03/23/2013

Group Number: 1377593

PO Number: 213202156.600.9301

Release Number: BEE JAY SCALES

State of Sample Origin: WA


<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
A1-DB-13-1.0' Grab Soil	6994578
A1-DB-13-2.5' Grab Soil	6994579
A1-DB-13-4.0' Grab Soil	6994580
A1-DB-13-5.5' Grab Soil	6994581
A5E-DB-04-2.0' Grab Soil	6994582
A5E-DB-04-4.5' Grab Soil	6994583
A5E-DB-04-7.0' Grab Soil	6994584
A5E-DB-04-9.5' Grab Soil	6994585
DUP-13 Grab Soil	6994586
A5E-DB-06-2.0' Grab Soil	6994587
A5E-DB-06-4.0' Grab Soil	6994588
A5E-DB-06-6.5' Grab Soil	6994589
A5E-DB-06-9.0' Grab Soil	6994590
A1-DB-11a-1.5' Grab Soil	6994591
A1-DB-11a-3.0' Grab Soil	6994592
A1-DB-11a-5.0' Grab Soil	6994593
A1-DB-11a-7.0' Grab Soil	6994594
A6-DB-01b-1.5' Grab Soil	6994595
A6-DB-01b-3.0' Grab Soil	6994596
DUP-15 Grab Soil	6994597
A6-DB-01b-4.5' Grab Soil	6994598
A6-DB-01b-6.0' Grab Soil	6994599
A6-DB-01a-1.5' Grab Soil	6994600
A6-DB-01a-3.0' Grab Soil	6994601
A6-DB-01a-4.5' Grab Soil	6994602
A6-DB-01a-6.0' Grab Soil	6994603
A1-DB-02b-1.5' Grab Soil	6994604
A1-DB-02b-3.0' Grab Soil	6994605
A1-DB-02b-4.5' Grab Soil	6994606
A1-DB-02b-6.5' Grab Soil	6994607
A1-DB-02a-1.5' Grab Soil	6994608

A1-DB-02a-3.0' Grab Soil	6994609
DUP-16 Grab Soil	6994610
A1-DB-02a-4.5' Grab Soil	6994611
A1-DB-02a-6.5' Grab Soil	6994612
EB032213 Grab Water	6994613

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	STANTEC International, Inc.	Attn: Marisa Kaffenberger
ELECTRONIC COPY TO	Stantec Consulting Services	Attn: Eric Bassett

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

**Sample Description: A1-DB-13-1.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994578
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 14:35 by EB

STANTEC International, Inc.

Submitted: 03/23/2013 09:30

2321 Club Meridian Drive

Reported: 03/29/2013 10:08

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	1,010 mg/kg	47.6 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	103 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/26/2013 14:07	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

**Sample Description: A1-DB-13-2.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994579
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 14:40 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/23/2013 09:30

Suite E

Reported: 03/29/2013 10:08

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 817	mg/kg 49.8	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	106	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 20.0	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/26/2013 14:53	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

**Sample Description: A1-DB-13-4.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994580
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 14:45 by EB

STANTEC International, Inc.

Submitted: 03/23/2013 09:30

2321 Club Meridian Drive

Reported: 03/29/2013 10:08

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	301	10.1	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	301 J	108	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/25/2013 17:44	Joseph E McKenzie	10
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

**Sample Description: A1-DB-13-5.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994581
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 14:50 by EB

STANTEC International, Inc.

Submitted: 03/23/2013 09:30

2321 Club Meridian Drive

Reported: 03/29/2013 10:08

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	59.9 mg/kg	9.6 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	911 mg/kg	104 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/25/2013 17:59	Joseph E McKenzie	10
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

Sample Description: A5E-DB-04-2.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994582
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 15:35 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/23/2013 09:30

Reported: 03/29/2013 10:08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 8.3	mg/kg 0.92	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 13.5	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/26/2013 15:08	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

Sample Description: A5E-DB-04-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994583
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 15:45 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/23/2013 09:30

Suite E

Reported: 03/29/2013 10:08

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 25.3	mg/kg 1.8	2
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 13.6	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/26/2013 15:23	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

Sample Description: A5E-DB-04-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994584
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 15:50 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	126 mg/kg	4.9 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/26/2013 15:38	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

Sample Description: A5E-DB-04-9.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994585
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 15:55 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	451 mg/kg	21.5 mg/kg	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	26.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/26/2013 15:53	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

Sample Description: DUP-13 Grab Soil
Bee Jay Scales

LLI Sample # SW 6994586
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 15:40 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	7.9 mg/kg	0.92 mg/kg	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/26/2013 16:39	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

**Sample Description: A5E-DB-06-2.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994587
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 16:00 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	41.6 mg/kg	1.9 mg/kg	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	102 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201A	03/26/2013 16:54	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13084084201A	03/25/2013 07:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

Sample Description: A5E-DB-06-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994588
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 16:05 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	39.3 mg/kg	1.9 mg/kg	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	101 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201B	03/26/2013 17:09	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13084084201B	03/25/2013 07:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

**Sample Description: A5E-DB-06-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994589
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 16:10 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	214 mg/kg	10.0 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	108 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201B	03/26/2013 17:55	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13084084201B	03/25/2013 07:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

**Sample Description: A5E-DB-06-9.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994590
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	7.9	1.0	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	107	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201B	03/26/2013 18:10	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13084084201B	03/25/2013 07:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13084820001B	03/25/2013 18:55	Scott W Freisher	1

Sample Description: A1-DB-11a-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994591
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	643 mg/kg	45.2 mg/kg	50
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	11.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201B	03/26/2013 18:25	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13084084201B	03/25/2013 07:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

Sample Description: A1-DB-11a-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994592
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 09:25 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 384	mg/kg 19.3	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 18.0	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084201B	03/26/2013 18:40	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13084084201B	03/25/2013 07:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

Sample Description: A1-DB-11a-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994593
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

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Submitted: 03/23/2013 09:30

Reported: 03/29/2013 10:08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 28.7	mg/kg 2.0	2
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 19.1	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/26/2013 11:47	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

Sample Description: A1-DB-11a-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994594
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 215	mg/kg 10.5	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 24.8	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/26/2013 12:33	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

**Sample Description: A6-DB-01b-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994595
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	14.1 mg/kg	0.89 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	95.6 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	11.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/26/2013 12:48	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

**Sample Description: A6-DB-01b-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994596
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 09:50 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	36.1	2.0	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	106	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/26/2013 13:03	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

Sample Description: DUP-15 Grab Soil
Bee Jay Scales

LLI Sample # SW 6994597
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 09:55 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	34.6 mg/kg	2.0 mg/kg	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	105 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/26/2013 13:18	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

**Sample Description: A6-DB-01b-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994598
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 10:00 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	23.7	1.9	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	102	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/26/2013 13:34	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

**Sample Description: A6-DB-01b-6.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994599
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 10:05 by EB

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Submitted: 03/23/2013 09:30

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Reported: 03/29/2013 10:08

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	27.6 mg/kg	4.9 mg/kg	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	106 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/27/2013 11:25	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

**Sample Description: A6-DB-01a-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994600
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 10:10 by EB

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Submitted: 03/23/2013 09:30

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	19.7 mg/kg	1.8 mg/kg	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	95.1 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/27/2013 11:40	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

**Sample Description: A6-DB-01a-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994601
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 10:15 by EB

STANTEC International, Inc.

Submitted: 03/23/2013 09:30

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	17.8 mg/kg	0.97 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	105 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/27/2013 11:56	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

**Sample Description: A6-DB-01a-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994602
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 10:20 by EB

STANTEC International, Inc.

Submitted: 03/23/2013 09:30

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	8.2 mg/kg	0.95 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	102 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202A	03/27/2013 12:11	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13084084202A	03/25/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

**Sample Description: A6-DB-01a-6.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6994603
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 10:25 by EB

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Reported: 03/29/2013 10:08

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	43.6 mg/kg	5.0 mg/kg	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	105 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/26/2013 14:19	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13083057301A	03/24/2013 10:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13087820005A	03/28/2013 19:23	Scott W Freisher	1

Sample Description: A1-DB-02b-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994604
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 10:50 by EB

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Reported: 03/29/2013 10:08

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 89.3	mg/kg 4.8	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 18.1	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/26/2013 15:05	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820005B	03/28/2013 19:23	Scott W Freisher	1

Sample Description: A1-DB-02b-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994605
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 10:55 by EB

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Reported: 03/29/2013 10:08

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	182 mg/kg	10.1 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/26/2013 15:20	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820005B	03/28/2013 19:23	Scott W Freisher	1

Sample Description: A1-DB-02b-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994606
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 11:00 by EB

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Reported: 03/29/2013 10:08

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 429	mg/kg 20.7	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 23.0	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/27/2013 12:26	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820005B	03/28/2013 19:23	Scott W Freisher	1

Sample Description: A1-DB-02b-6.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994607
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 11:05 by EB

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Submitted: 03/23/2013 09:30

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	453 mg/kg	20.7 mg/kg	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/27/2013 12:41	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820005B	03/28/2013 19:23	Scott W Freisher	1

Sample Description: A1-DB-02a-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994608
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 11:10 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	61.6 mg/kg	4.7 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/26/2013 15:35	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820005B	03/28/2013 19:23	Scott W Freisher	1

Sample Description: A1-DB-02a-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994609
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 11:15 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 172	mg/kg 10	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 21.2	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/26/2013 15:50	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820005B	03/28/2013 19:23	Scott W Freisher	1

Sample Description: DUP-16 Grab Soil
Bee Jay Scales

LLI Sample # SW 6994610
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 11:20 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 169	mg/kg 10.1	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 21.7	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/26/2013 16:06	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820006A	03/28/2013 18:57	Scott W Freisher	1

Sample Description: A1-DB-02a-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994611
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 11:25 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 187	mg/kg 10.4	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 24.3	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/26/2013 16:21	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820006A	03/28/2013 18:57	Scott W Freisher	1

Sample Description: A1-DB-02a-6.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6994612
LLI Group # 1377593
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 11:30 by EB

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Reported: 03/29/2013 10:08

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 223	mg/kg 10.5	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 24.8	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13084084202B	03/26/2013 16:36	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13084084202B	03/25/2013 13:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13087820006A	03/28/2013 18:57	Scott W Freisher	1

**Sample Description: EB032213 Grab Water
Bee Jay Scales**

**LLI Sample # WW 6994613
LLI Group # 1377593
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 13:00 by EB

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Reported: 03/29/2013 10:08

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13082987901A	03/24/2013 00:46	Joseph E McKenzie	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13084022101A	03/25/2013 14:00	Luz M Groff	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/29/13 at 10:08 AM

Group Number: 1377593

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13082987901A Nitrate Nitrogen	Sample number(s): 6994613 N.D.	0.050	mg/l	105		90-110		
Batch number: 13084084201A Nitrate Nitrogen by IC (solid)	Sample number(s): 6994578-6994587 N.D.	0.80	mg/kg	106		90-110		
Batch number: 13084084201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6994588-6994592 N.D.	0.80	mg/kg	106		90-110		
Batch number: 13084084202A Nitrate Nitrogen by IC (solid)	Sample number(s): 6994593-6994602 N.D.	0.80	mg/kg	104		90-110		
Batch number: 13084084202B Nitrate Nitrogen by IC (solid)	Sample number(s): 6994603-6994612 N.D.	0.80	mg/kg	104		90-110		
Batch number: 13083057301A Ammonia Nitrogen	Sample number(s): 6994578-6994581, 6994587-6994590, 6994595-6994603 N.D.	17.0	mg/kg	95		89-101		
Batch number: 13084022101A Ammonia Nitrogen	Sample number(s): 6994613 N.D.	0.20	mg/l	96	95	85-105	1	5
Batch number: 13084820001B Moisture	Sample number(s): 6994578-6994585, 6994587-6994590 100					99-101		
Batch number: 13087820005A Moisture	Sample number(s): 6994586, 6994591-6994603 100					99-101		
Batch number: 13087820005B Moisture	Sample number(s): 6994604-6994609 100					99-101		
Batch number: 13087820006A Moisture	Sample number(s): 6994610-6994612 100					99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13082987901A									
	Sample number(s): 6994613 UNSPK: P994731 BKG: P994731								

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 03/29/13 at 10:08 AM

Group Number: 1377593

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Nitrate Nitrogen	125*		90-110			N.D.	N.D.	0 (1)	20
Batch number: 13084084201A Nitrate Nitrogen by IC (solid)	-320 (2)		90-110			UNSPK: 6994578 841	BKG: 6994578 771	9	20
Batch number: 13084084201B Nitrate Nitrogen by IC (solid)	98		90-110			UNSPK: 6994588 33.2	BKG: 6994588 34.2	3	20
Batch number: 13084084202A Nitrate Nitrogen by IC (solid)	116*		90-110			UNSPK: 6994593 23.2	BKG: 6994593 22.7	2	20
Batch number: 13084084202B Nitrate Nitrogen by IC (solid)	58*		90-110			UNSPK: 6994603 35.2	BKG: 6994603 40.0	13 (1)	20
Batch number: 13083057301A Ammonia Nitrogen	93	94	72-116	1	5	N.D.	N.D.	0 (1)	10
Batch number: 13084022101A Ammonia Nitrogen						UNSPK: 6994613 225	BKG: P989781 210	7*	6
Batch number: 13084820001B Moisture						UNSPK: 6994578-6994585, 6994587-6994590 20.9	BKG: P989949 24.7	17*	13
Batch number: 13087820005A Moisture						UNSPK: 6994586, 6994591-6994603 19.2	BKG: 6994603 19.3	0	13
Batch number: 13087820005B Moisture						UNSPK: 6994604-6994609 18.1	BKG: 6994604 17.2	5	13
Batch number: 13087820006A Moisture						UNSPK: 6994610-6994612 21.7	BKG: 6994610 21.3	2	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only.
Group # 1377593 Sample # 6994578-613
Instructions on reverse side correspond with circled numbers.

COC #318733T

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																																																																																																																																					
Client: <u>STANTEC CONSULTING</u>		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:	Total # of Containers	Preservation Codes								FSC: _____		SCR#: _____																																																																																																																																					
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">/</td><td style="width: 5%;">/</td><td style="width: 5%;">/</td><td style="width: 5%;">/</td><td style="width: 5%;">/</td><td style="width: 5%;">/</td><td style="width: 5%;">/</td><td style="width: 5%;">/</td><td style="width: 5%;">/</td><td style="width: 5%;">/</td> </tr> <tr> <td style="text-align: center;">AMMONIA</td><td style="text-align: center;">NITRATE</td><td style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>								/	/	/	/	/	/	/	/	/	/	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM								Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other		6 Remarks <div style="font-size: 2em; text-align: center;">COC # 1 OF 6</div>																																																																																																																	
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Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:																																																																																																																																																			
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:																																																																																																																																																			
Name of state where samples were collected: <u>WASHINGTON</u>				3		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Grab</th> <th style="width: 10%;">Composite</th> <th style="width: 10%;">Soil</th> <th style="width: 10%;">Water</th> <th style="width: 10%;">Other</th> <th style="width: 10%;">AMMONIA</th> <th style="width: 10%;">NITRATE</th> <th style="width: 10%;">HOLD FOR POSSIBLE ANALYSIS PER PM</th> <th style="width: 10%;">/</th> <th style="width: 10%;">/</th> <th style="width: 10%;">/</th> <th style="width: 10%;">/</th> <th style="width: 10%;">/</th> <th style="width: 10%;">/</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td><td></td><td style="text-align: center;"><input checked="" type="checkbox"/></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		Grab	Composite	Soil	Water	Other	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM	/	/	/	/	/	/	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																																																																																																																												3-DAY TAT ↓	
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Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377593 Sample # 6994578-613
Instructions on reverse side correspond with circled numbers.

COC #318733 (5)

1 Client Information			4 Matrix				5 Analysis Requested						For Lab Use Only																																																																		
Client: <u>STANTEC CONSULTING</u>		Acct. #:	<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other:		Total # of Containers	Preservation Codes						FSC: _____																																																																			
Project Name#: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">1</td><td style="width: 10%;">1</td><td style="width: 10%;">1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="12" style="text-align: center; vertical-align: middle;"> AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM </td> </tr> </table>						1	1	1										AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM												SCR#: _____																																											
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Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:	<input type="checkbox"/> Soil <input checked="" type="checkbox"/> Composite									Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																																																			
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:																																																																													
Name of state where samples were collected: <u>WASHINGTON</u>					Total # of Containers							6 Remarks COC #2 OF 6 3-DAY TAT ↓ STANDARD TAT 3 DAY TAT																																																																			
2 Sample Identification		3 Collected		Total # of Containers																																																																											
		Date	Time																			Total # of Containers																																																									
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<u>A1-DB-08a-5.5'</u>			<u>1515</u>																												1																																																
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<u>A5E-DB-04-4.5'</u>			<u>1545</u>																												1																																																
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<u>A5E-DB-04-9.5'</u>			<u>1555</u>																												1																																																
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7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENTS</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC PM</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by <u>[Signature]</u> <u>BOB MCALISTER - STANTEC</u> Date <u>3/22/13</u> Time <u>1500</u>																				Received by <u>[Signature]</u> <u>FED EX</u> Date <u>3/22/13</u> Time <u>1500</u>		9 Date Time <u>3/23/13</u> <u>0930</u>																																																					
				Relinquished by _____ Date _____ Time _____																				Received by _____ Date _____ Time _____																																																							
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				Relinquished by _____ Date _____ Time _____																				Received by _____ Date _____ Time _____																																																							
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				EDD Required? Yes No If yes, format: _____																				Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____		Temperature upon receipt <u>16-18</u> °C																																																					
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)																																																																											

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377593 Sample # 6994579-613
Instructions on reverse side correspond with circled numbers.

COC #318733 K

1 Client Information			4 Matrix				5 Analysis Requested							For Lab Use Only									
Client: <u>STANTEC CONSULTING</u>		Acct. #:	Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:	Soil <input checked="" type="checkbox"/>	Total # of Containers AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM	Preservation Codes							FSC: _____										
Project Name#: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; height: 100px;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																SCR#: _____	
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:											Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other										
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:	6 Remarks COC #3 OF 6																				
Name of state where samples were collected: <u>WASHINGTON</u>			3 Composite																				
2 Sample Identification		Collected		Grab	Composite																		
		Date	Time																				
<u>ASE-DB-06-9.0'</u>		<u>3/21/13</u>	<u>1615</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								3-DAY TAT							
<u>A1-DB-06a-1.5'</u>			<u>1640</u>																				
<u>A1-DB-06a-3.0'</u>			<u>1645</u>																				
<u>A2-DB-06a-4.5'</u>			<u>1650</u>																				
<u>A1-DB-06a-6.5'</u>			<u>1655</u>																				
<u>A1-DB-06b-1.5'</u>			<u>1700</u>																				
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<u>A1-DB-06b-4.5'</u>			<u>1710</u>																				
<u>A1-DB-06b-6.5'</u>			<u>1715</u>																				
<u>A1-DB-10a-1.5'</u>		<u>3/22/13</u>	<u>840</u>																				
7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENT</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC PM</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by <u>BOB MCALISTER-STANTEC</u> Date <u>3/22/13</u> Time <u>1500</u>		Received by <u>FED EX</u> Date <u>3/22/13</u> Time <u>1500</u>																	
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____																	
				Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____																	
				Relinquished by _____ Date _____ Time _____		Received by _____ Date <u>3/22/13</u> Time <u>8PM</u>																	
				EDD Required? Yes No If yes, format: _____		Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____									Temperature upon receipt <u>66-78</u> °C								
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)																			

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377593 Sample # 6994578-613
Instructions on reverse side correspond with circled numbers.

COC #318733 (L)

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only				
Client: STATEC CONSULTING		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other:	Total # of Containers	Preservation Codes								FSC: _____						
Project Name/#: BEE JAY SCALES		PWSID #:				AMMONIA								SCR#: _____						
Project Manager: MARISA KAFFENBERGER		P.O. #:				NITRATE								Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other						
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:				HOLD FOR POSSIBLE ANALYSIS PER PM								6 Remarks COC #4 OF 6 STANDARD TAT						
Name of state where samples were collected: WASHINGTON				3																
2 Sample Identification			Collected		Grab	Composite	Soil	Water	Other	Total # of Containers										
		Date	Time																	
A1-DB-10a-3.0'		3/22/13	845	X		X				-										
A1-DB-10a-5.0'			850																	
DUP-14			855																	
A1-DB-10a-7.0'			900																	
A1-DB-11a-1.5'			915																	
A1-DB-11a-3.0'			925																	
A1-DB-11a-5.0'			930																	
A1-DB-11a-7.0'			935																	
A6-DB-01b-1.5'			945																	
A6-DB-01b-3.0'			950																	
7 Turnaround Time (TAT) Requested (please circle) Standard (SEE COMMENTS) Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STATEC PM</u> E-mail address: <u>MARISA.KAFFENBERGER@STATEC.COM</u>				Relinquished by: BOB MCALISTER - STATEC		Date: 3/22/13	Time: 1500	Received by: FED EX		Date: 3/22/13	Time: 1500	9 Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____ Temperature upon receipt <u>16-1.2</u> °C								
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:									
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:									
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:									
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:									
8 Data Package Options (circle if required)				EDD Required? Yes No If yes, format: _____																
Type I (Validation/non-CLP)		Type VI (Raw Data Only)																		
Type III (Reduced non-CLP)		TX TRRP-13																		
Type IV (CLP SOW)		MA MCP CT RCP																		

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 Group # 1371593 Sample # 6994578-613
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

COC #318733 (M)

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only			
Client: STANTEC CONSULTING		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other:	<input checked="" type="checkbox"/> Soil	Total # of Containers AMMONIA NITRATE	Preservation Codes										FSC: _____				
Project Name/ #: BEE JAY SCALES		PWSID #:															SCR#: _____				
Project Manager: MARISA KAFFENBERGER		P.O. #:															Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other				
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:															6 Remarks COC #5 OF 6				
Name of state where samples were collected: WASHINGTON				3 Composite																	
2 Sample Identification			Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers	AMMONIA	NITRATE									STANDARD TAT
		Date	Time																		
DUP-15		3/22/13	955	X		X				1	X	X									
A6-DB-016-4.5'			1000							1	X	X									
A6-DB-016-6.0'			1005							1	X	X									
A6-DB-01a-1.5'			1010							1	X	X									
A6-DB-01a-3.0'			1015							1	X	X									
A6-DB-01a-4.5'			1020							1	X	X									
A6-DB-01a-6.0'			1025							1	X	X									
A1-DB-02b-1.5'			1050							1	X	X									
A1-DB-02b-3.0'			1055							1	X	X									
A1-DB-02b-4.5'			1100							1	X	X									
7 Turnaround Time (TAT) Requested (please circle) Standard Standard Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by: <u>BOB MCALISTER - STANTEC</u>		Date: <u>3/22/13</u>	Time: <u>1500</u>	Received by: <u>FED EX</u>		Date: <u>3/22/13</u>	Time: <u>1500</u>	9 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)									
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:										
Date results are needed: <u>CONTACT STANTEC PM</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by:		Date:	Time:	Received by:		Date:	Time:										
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:										
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by:		Date:	Time:	Received by:		Date:	Time:										
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:										
				EDD Required? Yes No If yes, format: _____				Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____													
				Site-Specific QC (MS/MSD/Dup)? Yes No (if yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt <u>16.63</u> °C													

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377593 Sample # 6994578-613
Instructions on reverse side correspond with circled numbers.

COC #318733 N

1 Client Information				4 Matrix				5 Analysis Requested												For Lab Use Only				
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Total # of Containers AMMONIA NITRATE AMMONIA NITROGEN NITRATE NITROGEN	Preservation Codes												FSC: _____	SCR#: _____					
Project Name/ #: <u>BEE JAY SCALES</u>		PWSID #:				H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other												6 Remarks <div style="font-size: 24px; text-align: center;">COC # 6 OF 6</div>						
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:				AMMONIA NITRATE AMMONIA NITROGEN NITRATE NITROGEN																		
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:				AMMONIA NITRATE AMMONIA NITROGEN NITRATE NITROGEN																		
Name of state where samples were collected: <u>WASHINGTON</u>				3																				
2 Sample Identification			Collected		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers														
			Date	Time																				
<u>A1-DB-02b-6.5'</u>			<u>3/22/13</u>	<u>1105</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			1													STANDARD TAT	
<u>A2-DB-02a-1.5'</u>				<u>1110</u>						1														
<u>A1-DB-02a-3.0'</u>				<u>1115</u>						1														
<u>WP-16</u>				<u>1120</u>						1														
<u>A1-DB-02a-4.5'</u>				<u>1125</u>						1														
<u>A1-DB-02a-6.5'</u>				<u>1130</u>						1														
<u>ERO32213</u>				<u>1300</u>			<input checked="" type="checkbox"/>			3														

7 Turnaround Time (TAT) Requested (please circle) <div style="text-align: center; border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">Standard</div> Rush <small>(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</small>				Relinquished by: <u>BOB MCALISTER - STANTEC</u>		Date: <u>3/22/13</u>	Time: <u>1500</u>	Received by: <u>FED EX</u>	Date: <u>3/22/13</u>	Time: <u>1500</u>	9
Date results are needed: <u>CONTACT STANTEC PM</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by:		Date:	Time:	Received by:	Date:	Time:	
				Relinquished by:		Date:	Time:	Received by:	Date:	Time:	
				Relinquished by:		Date:	Time:	Received by:	Date:	Time:	
				Relinquished by:		Date:	Time:	Received by:	Date:	Time:	
8 Data Package Options (circle if required)				Relinquished by:		Date:	Time:	Received by:	Date:	Time:	
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		Relinquished by:		Date:	Time:	Received by:	Date:	Time:	
Type III (Reduced non-CLP)		TX TRRP-13		Relinquished by:		Date:	Time:	Received by:	Date:	Time:	
Type IV (CLP SOW)		MA MCP CT RCP		Relinquished by:		Date:	Time:	Received by:	Date:	Time:	
				EDD Required? Yes No If yes, format: _____		Relinquished by Commercial Carrier: UPS FedEx <input checked="" type="checkbox"/> Other _____					
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)		Temperature upon receipt <u>10-18</u> °C					

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but \geq IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>$ 25%	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

April 01, 2013

Project: Bee Jay Scales Site

Submittal Date: 03/26/2013

Group Number: 1377974

PO Number: 213202156.600.9301

Release Number: BEE JAY SCALES

State of Sample Origin: WA


<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
A1-DB-03a-1.5' Grab Soil	6996262
A1-DB-03a-3.0' Grab Soil	6996263
A1-DB-03a-4.5' Grab Soil	6996264
A1-DB-03a-6.5' Grab Soil	6996265
A1-DB-05d-1.0' Grab Soil	6996266
A1-DB-05d-2.5' Grab Soil	6996267
A1-DB-05d-4.0' Grab Soil	6996268
A1-DB-05d-5.5' Grab Soil	6996269
DUP-18 Grab Soil	6996270
A5S-DB-01-1.5' Grab Soil	6996271
A5S-DB-01-3.0' Grab Soil	6996272
A5S-DB-01-4.5' Grab Soil	6996273
A5S-DB-01-6.5' Grab Soil	6996274
DUP-19 Grab Soil	6996275
A5S-DB-02-1.5' Grab Soil	6996276
A5S-DB-02-3.0' Grab Soil	6996277
A5S-DB-02-4.5' Grab Soil	6996278
A5S-DB-02-6.5' Grab Soil	6996279
A5S-DB-03-1.5' Grab Soil	6996280
A5S-DB-03-3.0' Grab Soil	6996281
DUP-20 Grab Soil	6996282
A5S-DB-03-4.5' Grab Soil	6996283
A5S-DB-03-6.5' Grab Soil	6996284
A5E-DB-05a-2.0' Grab Soil	6996285
A5E-DB-05a-4.0' Grab Soil	6996286
A5E-DB-05a-6.0' Grab Soil	6996287
A5E-DB-05a-8.0' Grab Soil	6996288
A5E-DB-03a-2.5' Grab Soil	6996289
A5E-DB-03a-5.0' Grab Soil	6996290
DUP-22 Grab Soil	6996291
A5E-DB-03a-7.5' Grab Soil	6996292

A5E-DB-03a-10.0' Grab Soil	6996293
EB032313 Grab Water	6996294
A1-DB-12a-1.0' Grab Soil	6996295
A1-DB-12a-2.5' Grab Soil	6996296
DUP-23 Grab Soil	6996297
A1-DB-12a-4.0' Grab Soil	6996298
A1-DB-07a-1.0' Grab Soil	6996299
A1-DB-07a-2.5' Grab Soil	6996300
A1-DB-07a-4.0' Grab Soil	6996301
DUP-24 Grab Soil	6996302
A1-DB-07a-5.5' Grab Soil	6996303
A1-DB-01b-1.5' Grab Soil	6996304
A1-DB-01b-3.0' Grab Soil	6996305
DUP-25 Grab Soil	6996306
A1-DB-01b-4.5' Grab Soil	6996307
A4-DB-01b-0.5' Grab Soil	6996308
A4-DB-01b-2.5' Grab Soil	6996309
A4-DB-01c-0.5' Grab Soil	6996310
DUP-26 Grab Soil	6996311
A4-DB-01c-2.5' Grab Soil	6996312
EB032513 Grab Water	6996313

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC	STANTEC International, Inc.	Attn: Marisa Kaffenberger
COPY TO		
ELECTRONIC	Stantec Consulting Services	Attn: Eric Bassett
COPY TO		

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

**Sample Description: A1-DB-03a-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6996262
LLI Group # 1377974
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 13:35 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

2321 Club Meridian Drive

Reported: 04/01/2013 10:33

Suite E

Okemos MI 48864

3A15-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	164 mg/kg	9.2 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,390 mg/kg	99.2 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.3 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/28/2013 13:06	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

**Sample Description: A1-DB-03a-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6996263
LLI Group # 1377974
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 13:40 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

2321 Club Meridian Drive

Reported: 04/01/2013 10:33

Suite E

Okemos MI 48864

-3A30

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 617	mg/kg 48.0	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg 1,090	mg/kg 103	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 17.1	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/29/2013 07:47	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A1-DB-03a-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996264
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 13:45 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

2321 Club Meridian Drive

Reported: 04/01/2013 10:33

Suite E

Okemos MI 48864

-3A45

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	606 mg/kg	49.2 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	630 mg/kg	105 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.3 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/29/2013 08:03	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

**Sample Description: A1-DB-03a-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6996265
LLI Group # 1377974
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 13:50 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

2321 Club Meridian Drive

Reported: 04/01/2013 10:33

Suite E

Okemos MI 48864

-3A65

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	256 mg/kg	9.9 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	107 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/28/2013 14:22	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A1-DB-05d-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996266
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 16:05 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

2321 Club Meridian Drive

Reported: 04/01/2013 10:33

Suite E

Okemos MI 48864

-5D10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	5.4 mg/kg	0.91 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	96.8 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	12.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/29/2013 08:18	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A1-DB-05d-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996267
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 16:10 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

2321 Club Meridian Drive

Reported: 04/01/2013 10:33

Suite E

Okemos MI 48864

-5D25

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	10.7 mg/kg	0.96 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	103 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/29/2013 08:33	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A1-DB-05d-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996268
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 16:15 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

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-5D40

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	16.0 mg/kg	1.0 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	110 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/29/2013 08:48	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

**Sample Description: A1-DB-05d-5.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6996269
LLI Group # 1377974
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 16:20 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

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-5D55

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	110 mg/kg	9.9 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	105 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/28/2013 15:53	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

**Sample Description: DUP-18 Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6996270
LLI Group # 1377974
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 16:25 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

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DUP18

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 117	mg/kg 10	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	107	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 20.9	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/28/2013 16:08	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-01-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996271
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 09:40 by ER

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Submitted: 03/26/2013 09:30

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	154 mg/kg	8.9 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201A	03/28/2013 16:23	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201A	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-01-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996272
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 09:45 by ER

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Reported: 04/01/2013 10:33

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130--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	178 mg/kg	9.9 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/28/2013 16:38	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-01-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996273
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 09:50 by ER

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Reported: 04/01/2013 10:33

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	91.0 mg/kg	9.6 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/28/2013 17:24	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-01-6.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996274
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 09:55 by ER

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Submitted: 03/26/2013 09:30

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	66.8 mg/kg	10.7 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	25.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/28/2013 17:39	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: DUP-19 Grab Soil
Bee Jay Scales

LLI Sample # SW 6996275
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:00 by ER

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Reported: 04/01/2013 10:33

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DUP19

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	59.6 mg/kg	10.3 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/28/2013 17:54	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-02-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996276
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:05 by ER

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Submitted: 03/26/2013 09:30

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Reported: 04/01/2013 10:33

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215--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 2.2	mg/kg 0.89	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 11.0	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/29/2013 09:16	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-02-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996277
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:10 by ER

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Submitted: 03/26/2013 09:30

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Reported: 04/01/2013 10:33

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230--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	4.4 mg/kg	0.97 mg/kg	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/29/2013 10:01	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-02-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996278
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:15 by ER

STANTEC International, Inc.

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Submitted: 03/26/2013 09:30

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Reported: 04/01/2013 10:33

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245--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	3.1	0.98	1
The holding time was not met. Sample was analyzed 1 minute past the 48 hour holding time.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/29/2013 10:16	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-02-6.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996279
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:20 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

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265--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 219	mg/kg 10.2	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 22.2	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/28/2013 19:25	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-03-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996280
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:25 by ER

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Submitted: 03/26/2013 09:30

Suite E

Reported: 04/01/2013 10:33

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315--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 284	mg/kg 8.8	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 10.4	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/28/2013 19:40	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820001B	03/27/2013 22:09	Scott W Freisher	1

Sample Description: A5S-DB-03-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996281
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:30 by ER

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Reported: 04/01/2013 10:33

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330--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 291	mg/kg 9.1	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 13.3	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086201B	03/28/2013 19:55	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086201B	03/27/2013 06:30	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

**Sample Description: DUP-20 Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6996282
LLI Group # 1377974
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:35 by ER

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2321 Club Meridian Drive

Submitted: 03/26/2013 09:30

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Reported: 04/01/2013 10:33

Okemos MI 48864

DUP20

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 286	mg/kg 9.1	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 12.7	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202A	03/28/2013 06:13	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: A5S-DB-03-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996283
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:40 by ER

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345--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry			EPA 300.0	mg/kg	
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	175	9.7	10
Wet Chemistry			SM 2540 G-1997	%	
00111	Moisture	n.a.	17.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202A	03/28/2013 04:57	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: A5S-DB-03-6.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996284
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:45 by ER

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365--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 212	mg/kg 11.2	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 28.4	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202A	03/28/2013 06:28	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: A5E-DB-05a-2.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996285
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 11:45 by ER

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520--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 345	mg/kg 17.9	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 11.1	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202A	03/28/2013 15:41	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006A	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A5E-DB-05a-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996286
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 11:50 by ER

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540--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	682 mg/kg	46.1 mg/kg	50
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202A	03/28/2013 15:56	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006A	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A5E-DB-05a-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996287
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 11:50 by ER

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560--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	365 mg/kg	10.4 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202A	03/28/2013 07:14	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006A	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A5E-DB-05a-8.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996288
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 12:00 by ER

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580--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 17.7	mg/kg 0.98	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 18.7	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13086086202A	03/28/2013 16:42	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006A	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A5E-DB-03a-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996289
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 12:05 by ER

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325--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	101 mg/kg	8.9 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202A	03/28/2013 07:44	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006A	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A5E-DB-03a-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996290
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

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350--

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 116	mg/kg 9.3	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 15.4	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202A	03/28/2013 07:59	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006A	03/29/2013 19:11	Scott W Freisher	1

**Sample Description: DUP-22 Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6996291
LLI Group # 1377974
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 12:15 by ER

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DP22-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	111 mg/kg	9.3 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202A	03/28/2013 08:45	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202A	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006A	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A5E-DB-03a-7.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996292
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 12:20 by ER

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3A75-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 32.8	mg/kg 2.0	2
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 22.7	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13086086202B	03/28/2013 16:57	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13086086202B	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006A	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A5E-DB-03a-10.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996293
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 12:25 by ER

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Submitted: 03/26/2013 09:30

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3A10-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 297	mg/kg 11.3	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 29.1	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202B	03/28/2013 09:59	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202B	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006A	03/29/2013 19:11	Scott W Freisher	1

Sample Description: **EB032313 Grab Water**
Bee Jay Scales

LLI Sample # **WW 6996294**
LLI Group # **1377974**
Account # **11842**

Project Name: **Bee Jay Scales Site**

Collected: 03/23/2013 12:45 by ER

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EB323

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
	EPA 300.0		mg/l	mg/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	0.050	1
	The holding time was not met. The sample was submitted to the laboratory outside of the holding time.				
	SM 4500-NH3 B/C modified-1997		mg/l	mg/l	
00221	Ammonia Nitrogen	7664-41-7	N.D.	0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13085655901B	03/27/2013 06:17	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087022101A	03/28/2013 09:00	Yolunder Y Bunch	1

Sample Description: A1-DB-12a-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996295
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 08:50 by ER

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12A10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	155 J	91.1	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	6.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: A1-DB-12a-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996296
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 08:55 by ER

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12A25

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	1,250	97.7	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	13.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: DUP-23 Grab Soil
Bee Jay Scales

LLI Sample # SW 6996297
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 09:00 by ER

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FD23-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry			SM 4500-NH3 B/C modified-1997	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	1,240	97.7	5
Wet Chemistry			SM 2540 G-1997	%	
00111	Moisture	n.a.	13.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A1-DB-12a-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996298
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 09:05 by ER

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12A40

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	105	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	19.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: A1-DB-07a-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996299
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

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7A10-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 84.9	mg/kg 9.1	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 13.0	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202B	03/28/2013 10:14	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202B	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A1-DB-07a-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996300
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 09:35 by ER

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/26/2013 09:30

Suite E

Reported: 04/01/2013 10:33

Okemos MI 48864

7A25-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry			EPA 300.0	mg/kg	
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	629	50.1	50
Wet Chemistry			SM 2540 G-1997	%	
00111	Moisture	n.a.	20.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202B	03/28/2013 17:27	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13086086202B	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A1-DB-07a-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996301
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 09:40 by ER

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/26/2013 09:30

Reported: 04/01/2013 10:33

7A40-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	738 mg/kg	51.5 mg/kg	50
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202B	03/28/2013 17:42	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13086086202B	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

**Sample Description: DUP-24 Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6996302
LLI Group # 1377974
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 09:45 by ER

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/26/2013 09:30

Reported: 04/01/2013 10:33

DP24-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	717 mg/kg	50.9 mg/kg	50
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202B	03/28/2013 17:58	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13086086202B	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A1-DB-07a-5.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996303
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 09:50 by ER

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/26/2013 09:30

Suite E

Reported: 04/01/2013 10:33

Okemos MI 48864

7A55-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry			EPA 300.0	mg/kg	
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	208	9.9	10
Wet Chemistry			SM 2540 G-1997	%	
00111	Moisture	n.a.	20.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13086086202B	03/28/2013 11:15	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13086086202B	03/27/2013 10:25	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A1-DB-01b-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996304
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 10:05 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

2321 Club Meridian Drive

Reported: 04/01/2013 10:33

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1B15-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	188 J	98.5	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	13.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A1-DB-01b-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996305
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 10:10 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

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Reported: 04/01/2013 10:33

Suite E

Okemos MI 48864

1B30-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	330	100	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	15.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

Sample Description: DUP-25 Grab Soil
Bee Jay Scales

LLI Sample # SW 6996306
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 10:15 by ER

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/26/2013 09:30

Suite E

Reported: 04/01/2013 10:33

Okemos MI 48864

FD25-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	670	99.4	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	14.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A1-DB-01b-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996307
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 10:20 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

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Reported: 04/01/2013 10:33

Suite E

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1B45-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	111	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	23.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820006B	03/29/2013 19:11	Scott W Freisher	1

Sample Description: A4-DB-01b-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996308
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 11:05 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

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Reported: 04/01/2013 10:33

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1B05-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	940	94.8	5
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	10.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: A4-DB-01b-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996309
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 11:10 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

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Reported: 04/01/2013 10:33

Suite E

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1B25-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	224 J	99.8	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	14.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: A4-DB-01c-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996310
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 11:25 by ER

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/26/2013 09:30

Reported: 04/01/2013 10:33

1C05-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	92.4	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	8.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: DUP-26 Grab Soil
Bee Jay Scales

LLI Sample # SW 6996311
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 11:30 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

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Reported: 04/01/2013 10:33

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Okemos MI 48864

FD26-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	92.6	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	8.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: A4-DB-01c-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6996312
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 11:35 by ER

STANTEC International, Inc.

Submitted: 03/26/2013 09:30

2321 Club Meridian Drive

Reported: 04/01/2013 10:33

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Okemos MI 48864

1C25-

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	95.7	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	11.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13085057301A	03/26/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13086820002B	03/27/2013 21:25	Scott W Freisher	1

Sample Description: EB032513 Grab Water
Bee Jay Scales

LLI Sample # WW 6996313
LLI Group # 1377974
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 12:00 by ER

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/26/2013 09:30

Reported: 04/01/2013 10:33

EB325

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13085655901B	03/27/2013 06:32	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087022101A	03/28/2013 09:00	Yolunder Y Bunch	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 04/01/13 at 10:33 AM

Group Number: 1377974

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13085655901B Nitrate Nitrogen	Sample number(s): 6996294,6996313 N.D.	0.050	mg/l	103		90-110		
Batch number: 13086086201A Nitrate Nitrogen by IC (solid)	Sample number(s): 6996262-6996271 N.D.	0.80	mg/kg	103		90-110		
Batch number: 13086086201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6996272-6996281 N.D.	0.80	mg/kg	103		90-110		
Batch number: 13086086202A Nitrate Nitrogen by IC (solid)	Sample number(s): 6996282-6996291 N.D.	0.80	mg/kg	105		90-110		
Batch number: 13086086202B Nitrate Nitrogen by IC (solid)	Sample number(s): 6996292-6996293,6996299-6996303 N.D.	0.80	mg/kg	105		90-110		
Batch number: 13085057301A Ammonia Nitrogen	Sample number(s): 6996262-6996269,6996295-6996296,6996298,6996307-6996308,6996310-6996312 N.D.	17.0	mg/kg	94		89-101		
Batch number: 13086057301A Ammonia Nitrogen	Sample number(s): 6996270,6996297,6996304-6996306,6996309 N.D.	17.0	mg/kg	96		89-101		
Batch number: 13087022101A Ammonia Nitrogen	Sample number(s): 6996294,6996313 N.D.	0.20	mg/l	94	95	85-105	1	5
Batch number: 13086820001B Moisture	Sample number(s): 6996262-6996280 N.D.			100		99-101		
Batch number: 13086820002B Moisture	Sample number(s): 6996281-6996284,6996295-6996296,6996298,6996308-6996312 N.D.			100		99-101		
Batch number: 13088820006A Moisture	Sample number(s): 6996285-6996293 N.D.			100		99-101		
Batch number: 13088820006B Moisture	Sample number(s): 6996297,6996299-6996307 N.D.			100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 04/01/13 at 10:33 AM

Group Number: 1377974

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13085655901B Nitrate Nitrogen	92		90-110			UNSPK: P995697 N.D.	BKG: P995697 N.D.	0 (1)	20
Batch number: 13086086201A Nitrate Nitrogen by IC (solid)	64 (2)		90-110			UNSPK: 6996262 140	BKG: 6996262 144	2	20
Batch number: 13086086201B Nitrate Nitrogen by IC (solid)	101 (2)		90-110			UNSPK: 6996272 144	BKG: 6996272 143	1	20
Batch number: 13086086202A Nitrate Nitrogen by IC (solid)	51 (2)		90-110			UNSPK: 6996283 145	BKG: 6996283 143	1	20
Batch number: 13086086202B Nitrate Nitrogen by IC (solid)	136*		90-110			UNSPK: 6996299-6996303 25.3	BKG: 6996292 22.2	13	20
Batch number: 13085057301A Ammonia Nitrogen	97	98	72-116	0	5	UNSPK: 6996262 1,190	BKG: 6996262 1,310	10 (1)	10
Batch number: 13086057301A Ammonia Nitrogen	84	87	72-116	3	5	UNSPK: 6996270 N.D.	BKG: 6996270 N.D.	0 (1)	10
Batch number: 13087022101A Ammonia Nitrogen						UNSPK: 6996294,6996313 345	BKG: P996672 375	8*	6
Batch number: 13086820001B Moisture						UNSPK: 6996262-6996280 22.6	BKG: 6996275 22.5	1	13
Batch number: 13086820002B Moisture						UNSPK: 6996281-6996284,6996295-6996296,6996298,6996308-6996312 P993944	BKG: 6996275 10.3	14*	13
Batch number: 13088820006A Moisture						UNSPK: 6996285-6996293 14.0	BKG: 6996286 13.8	1	13
Batch number: 13088820006B Moisture						UNSPK: 6996297,6996299-6996307 23.1	BKG: 6996307 23.1	0	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377974 Sample # 629629 6996262-313
Instructions on reverse side correspond with circled numbers
 CML 3/26/13 (1)

COC #3187330

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only							
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Total # of Containers	Preservation Codes										FSC: _____									
Project Name#: <u>BEE JAY SCALES</u>		PWSID #:				AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PA										SCR#: _____									
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:														Preservation Codes									
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:														H=HCl T=Thiosulfate									
Name of state where samples were collected: <u>WASHINGTON</u>				3 Composite												6 Remarks									
2 Sample Identification		Collected		Grab												COC # 1 OF 9 3-DAY TAT ↓ SRM									
		Date	Time																						
<u>A1-DB-03a-1.5'</u>		<u>3/22/13</u>	<u>1335</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																				
<u>A1-DB-03a-3.0'</u>			<u>1340</u>																						
<u>A1-DB-03a-4.5'</u>			<u>1345</u>																						
<u>A1-DB-03a-6.5'</u>			<u>1350</u>																						
<u>A1-DB-03b-1.5'</u>			<u>1310</u>																						
<u>A1-DB-03b-3.0'</u>			<u>1315</u>																						
<u>A1-DB-03b-4.5'</u>			<u>1320</u>																						
<u>A1-DB-03b-6.5'</u>			<u>1325</u>																						
<u>A1-DB-04a-1.5'</u>			<u>1410</u>																						
<u>DUP-17</u>			<u>1415</u>																						
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by <u>Bob McAlister</u>			Date	Time	Received by <u>FED EX</u>			Date	Time												
Standard <u>SEE COMMENTS</u> Rush				Date					Date																
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				<u>3/25/13</u>			<u>1500</u>	<u>3/25/13</u>			<u>1500</u>														
Date results are needed: <u>CONTACT STANTEC PM</u>				Relinquished by			Date	Time	Received by			Date	Time												
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by			Date	Time	Received by			Date	Time												
8 Data Package Options (circle if required)				Relinquished by			Date	Time	Received by <u>Casper</u>			Date	Time												
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		Relinquished by			Date	Time	Relinquished by Commercial Carrier:			Date	Time												
Type III (Reduced non-CLP)		TX TRRP-13		Relinquished by			Date	Time	UPS _____ FedEx <input checked="" type="checkbox"/> Other _____																
Type IV (CLP SOW)		MA MCP CT RCP		EDD Required? Yes No			Site-Specific QC (MS/MSD/Dup)? Yes No			Temperature upon receipt <u>1.7-1.8 °C</u>															
				If yes, format: _____			(If yes, indicate QC sample and submit triplicate sample volume.)																		

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 137774 Sample # 6946262-313
Instructions on reverse side correspond with circled numbers.

COC #318733 (P)

1 Client Information				3			4 Matrix		5 Analysis Requested										6																																																		
Client: STANTEC CONSULTING		Acct. #:		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers	Preservation Codes										Remarks																																																	
Project Name/#: BEE JAY SCALES		PWSID #:								<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <td colspan="10"></td> <td colspan="2" style="text-align: center;">AMMONIA</td> <td colspan="2" style="text-align: center;">NITRATE</td> <td colspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM</td> </tr> <tr> <td colspan="10"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="10"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> </table>																				AMMONIA		NITRATE		HOLD FOR POSSIBLE ANALYSIS PER PM																																		FSC: _____	
																				AMMONIA		NITRATE		HOLD FOR POSSIBLE ANALYSIS PER PM																																													
Project Manager: MARISA KAFFENBERGER		P.O. #:		Sediment <input type="checkbox"/>		Ground <input type="checkbox"/>		Surface <input type="checkbox"/>		NPDES <input type="checkbox"/>		Other: _____		SCR#: _____		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																																					
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:		Potable <input type="checkbox"/>		Water		Other: _____		AMMONIA		NITRATE		HOLD FOR POSSIBLE ANALYSIS PER PM																																																							
Name of state where samples were collected: WASHINGTON				Date		Time		Grab		Composite		Soil <input checked="" type="checkbox"/>		Water				Other: _____		Total # of Containers																																																	
2 Sample Identification				Date		Time		Grab		Composite		Soil <input checked="" type="checkbox"/>		Water		Other: _____		Total # of Containers																																																			
A1-DB-04a - 3.0'				3/22/13		1420		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																																																											
A1-DB-04a - 4.5'						1425																																																															
A1-DB-04a - 6.5'						1430																																																															
A1-DB-05a - 1.0'						1445																																																															
A1-DB-05a - 2.5'						1450																																																															
A1-DB-05a - 4.0'						1500																																																															
A1-DB-05a - 5.5'						1505																																																															
A1-DB-05b - 1.0'						1515																																																															
A1-DB-05b - 2.5'						1520																																																															
A1-DB-05b - 4.0'						1525																																																															
7 Turnaround Time (TAT) Requested (please circle)				Standard				Rush				Relinquished by <u><i>[Signature]</i></u>		Date <u>3/25/13</u>		Time <u>1500</u>		Received by <u>FED Ex</u>		Date <u>3/25/13</u>		Time <u>1500</u>																																															
												Relinquished by		Date		Time		Received by		Date		Time																																															
												Relinquished by		Date		Time		Received by		Date		Time																																															
Date results are needed: <u>CONTACT STANTEC PM</u>												Relinquished by		Date		Time		Received by		Date		Time																																															
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>												Relinquished by		Date		Time		Received by <u><i>[Signature]</i></u>		Date <u>3/26/13</u>		Time <u>0930</u>																																															
8 Data Package Options (circle if required)				Type I (Validation/non-CLP)				Type VI (Raw Data Only)				EDD Required? Yes No				Relinquished by Commercial Carrier:																																																					
				Type III (Reduced non-CLP)				TX TRRP-13				If yes, format: _____				UPS _____ FedEx <input checked="" type="checkbox"/> Other _____																																																					
				Type IV (CLP SOW)				MA MCP CT RCP				Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt <u>17.8</u> °C																																																					
												(If yes, indicate QC sample and submit triplicate sample volume.)																																																									

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377974 Sample # 6996262-313
Instructions on reverse side correspond with circled numbers.

COC #318733

1 Client Information			4 Matrix			6 Analysis Requested			For Lab Use Only	
Client: STANTEC CONSULTING			<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:			Preservation Codes AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM			FSC: _____	
Project Name#: BEE JAY SCALES			Total # of Containers						SCR#: _____	
Project Manager: MARISA KAFFENBERGER									Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
Sampler: ERIC BASSETT / BOB MCALISTER			3 Grab <input type="checkbox"/> Composite <input type="checkbox"/> Soil <input checked="" type="checkbox"/>						5 Remarks COC # 3 OF 9	
Name of state where samples were collected: WASHINGTON										
2 Sample Identification		Collected								
Date	Time	Grab	Composite							
A1-DB-055-5.5'	2/22/13	1530	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
A1-DB-052-1.0'		1540								
A1-DB-052-2.5'		1545								
A1-DB-052-4.0'		1550								
A1-DB-052-5.5'		1555								
A1-DB-054-1.0'		1605								3-DAY TAT
A1-DB-054-2.5'		1610								
A1-DB-054-4.0'		1615								
A1-DB-054-5.5'		1620								
DUP-18		1625								STANDARD TAT
7 Turnaround Time (TAT) Requested (please circle) Standard SEE COMMENTS (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC PM</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by: <u>BOB MCALISTER - STANTEC</u> Date: <u>2/25/13</u> Time: <u>1520</u>		Received by: <u>FED EX</u> Date: <u>2/25/13</u> Time: <u>1500</u>				
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				EDD Required? Yes No If yes, format: _____ Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)		Relinquished by Commercial Carrier: UPS FedEx Other _____ Temperature upon receipt _____ °C				

03/26/2013 07:24 5098374647 BW GRAPEVINE INN PAGE 04/10

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 137774 Sample # 6976262-313
Instructions on reverse side correspond with circled numbers.

COC #318733

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																																																																																																																																																																																																										
Client: <u>STATEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other: <input type="checkbox"/> Total # of Containers:	Ground <input type="checkbox"/> Surface <input type="checkbox"/>	Preservation Codes								FSC: _____																																																																																																																																																																																																												
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				AMMONIA <input type="checkbox"/> NITRATE <input type="checkbox"/> HOLD FOR POSSIBLE ANALYSIS PER PM								SCR#: _____																																																																																																																																																																																																												
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:												Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																																																																																																																																																																																												
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:												6 Remarks <u>COC # 3 OF 9</u>																																																																																																																																																																																																												
Name of state where samples were collected: <u>WASHINGTON</u>				3		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">2 Sample Identification</th> <th colspan="2" style="text-align: center;">Collected</th> <th rowspan="2" style="text-align: center;">Grab</th> <th rowspan="2" style="text-align: center;">Composite</th> <th rowspan="2" style="text-align: center;">Soil <input checked="" type="checkbox"/></th> <th rowspan="2" style="text-align: center;">Water</th> <th rowspan="2" style="text-align: center;">Other:</th> <th rowspan="2" style="text-align: center;">Total # of Containers</th> <th rowspan="2" style="text-align: center;">AMMONIA</th> <th rowspan="2" style="text-align: center;">NITRATE</th> <th rowspan="2" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM</th> <th colspan="5"></th> </tr> <tr> <th style="text-align: center;">Date</th> <th style="text-align: center;">Time</th> <th colspan="5"></th> </tr> <tr> <td><u>A1-DB-05b-5.5'</u></td> <td><u>3/22/13</u></td> <td><u>1530</u></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>A1-DB-05c-1.0'</u></td> <td></td> <td><u>1540</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>A1-DB-05c-2.5'</u></td> <td></td> <td><u>1545</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>A1-DB-05c-4.0'</u></td> <td></td> <td><u>1550</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>A1-DB-05c-5.5'</u></td> <td></td> <td><u>1555</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>A1-DB-05d-1.0'</u></td> <td></td> <td><u>1605</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>3-DAY TAT</u></td> </tr> <tr> <td><u>A1-DB-05d-2.5'</u></td> <td></td> <td><u>1610</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>A1-DB-05d-4.0'</u></td> <td></td> <td><u>1615</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>A1-DB-05d-5.5'</u></td> <td></td> <td><u>1620</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>DUP-18</u></td> <td></td> <td><u>1625</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>STANDARD TAT</u></td> </tr> </table>								2 Sample Identification		Collected		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM						Date	Time						<u>A1-DB-05b-5.5'</u>	<u>3/22/13</u>	<u>1530</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														<u>A1-DB-05c-1.0'</u>		<u>1540</u>																<u>A1-DB-05c-2.5'</u>		<u>1545</u>																<u>A1-DB-05c-4.0'</u>		<u>1550</u>																<u>A1-DB-05c-5.5'</u>		<u>1555</u>																<u>A1-DB-05d-1.0'</u>		<u>1605</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<u>3-DAY TAT</u>	<u>A1-DB-05d-2.5'</u>		<u>1610</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-05d-4.0'</u>		<u>1615</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>A1-DB-05d-5.5'</u>		<u>1620</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<u>DUP-18</u>		<u>1625</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<u>STANDARD TAT</u>
2 Sample Identification		Collected		Grab	Composite									Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers										AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM																																																																																																																																																																																													
Date	Time																																																																																																																																																																																																																									
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<u>A1-DB-05c-1.0'</u>		<u>1540</u>																																																																																																																																																																																																																								
<u>A1-DB-05c-2.5'</u>		<u>1545</u>																																																																																																																																																																																																																								
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<u>A1-DB-05d-2.5'</u>		<u>1610</u>																<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																																																																																																																							
<u>A1-DB-05d-4.0'</u>		<u>1615</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																																																																																																																															
<u>A1-DB-05d-5.5'</u>		<u>1620</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																																																																																																																															
<u>DUP-18</u>		<u>1625</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<u>STANDARD TAT</u>																																																																																																																																																																																																									
7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENT</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by <u>BOB MCALISTER - STATEC</u> Date <u>3/25/13</u> Time <u>1520</u>		Received by <u>FED EX</u> Date <u>3/25/13</u> Time <u>1500</u>		8																																																																																																																																																																																																																		
Date results are needed: <u>CONTACT STATEC PM</u>				Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____																																																																																																																																																																																																																				
E-mail address: <u>MARISA.KAFFENBERGER@STATEC.COM</u>				Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____																																																																																																																																																																																																																				
8 Data Package Options (circle if required)				Relinquished by _____ Date _____ Time _____		Received by <u>CCisher</u> Date <u>3/24/13</u> Time <u>0930</u>																																																																																																																																																																																																																				
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		EDD Required? Yes No If yes, format: _____				Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____																																																																																																																																																																																																																		
Type III (Reduced non-CLP)		TX TRRP-13		Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt <u>1.7-1.8 °C</u>																																																																																																																																																																																																																		
Type IV (CLP SOW)		MA MCP CT RCP																																																																																																																																																																																																																								

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 137974 Sample # 6296262-313
Instructions on reverse side correspond with circled numbers.

COC #318733 (R)

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																																																																																																				
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other:	Ground <input type="checkbox"/> Surface <input type="checkbox"/>	Total # of Containers AMMONIA NITRATE	Preservation Codes								FSC: _____																																																																																																					
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:					<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																																																																																																												SCR#: _____	
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:		Composite <input checked="" type="checkbox"/>		Soil <input checked="" type="checkbox"/>		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other								6 Remarks COC # 4 OF 9 3-DAY TAT ↓ STANDARD TAT ↓ 3-DAY TAT																																																																																																				
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:																																																																																																																		
Name of state where samples were collected: <u>WASHINGTON</u>				Grab <input checked="" type="checkbox"/>		Composite <input checked="" type="checkbox"/>		AMMONIA NITRATE																																																																																																												
2 Sample Identification		Collected																																																																																																																		
		Date	Time																																																																																																																	
<u>A55-DB-01-1.5'</u>		<u>3/27/13</u>	<u>940</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											<u>3-DAY TAT</u>																																																																																																				
<u>A55-DB-01-3.0'</u>			<u>945</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											↓ STANDARD TAT ↓ 3-DAY TAT																																																																																																				
<u>A55-DB-01-4.5'</u>			<u>950</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																															
<u>A55-DB-01-6.5'</u>			<u>955</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																															
<u>DUP-19</u>			<u>1000</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																															
<u>A55-DB-02-1.5'</u>			<u>1005</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																															
<u>A55-DB-02-3.0'</u>			<u>1010</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																															
<u>A55-DB-02-4.5'</u>			<u>1015</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																															
<u>A55-DB-02-6.5'</u>			<u>1020</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																															
<u>A55-DB-03-1.5'</u>			<u>1025</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																																																																															

7 Turnaround Time (TAT) Requested (please circle)
 Standard (SEE COMMENTS) Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: CONTACT STANTEC PM

E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

Relinquished by: <u>[Signature]</u>	Date: <u>3/25/13</u>	Time: <u>1500</u>	Received by: <u>FED Ex</u>	Date: <u>3/25/13</u>	Time: <u>1500</u>	9 ↓ ↓ ↓ ↓ ↓
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	
EDD Required? Yes No			Relinquished by Commercial Carrier:			
If yes, format: _____			UPS _____ FedEx <input checked="" type="checkbox"/> Other _____			
Site-Specific QC (MS/MSD/Dup)? Yes No			Temperature upon receipt <u>17-1.8 °C</u>			
(If yes, indicate QC sample and submit triplicate sample volume.)						

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 Group # 1377974 Sample # 6976262-313
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

COC #318733^S

1 Client Information				4 Matrix				5 Analysis Requested												For Lab Use Only																																			
Client: STANTEC CONSULTING		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Total # of Containers	Preservation Codes												FSC: _____																																					
Project Name#: BEE JAY SCALES		PWSID #:				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td><td style="width: 5%;">1</td><td style="width: 5%;">1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="18" style="text-align: center;">AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM</td> </tr> </table>												1	1	1																AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM																		SCR#: _____	
1	1	1																																																					
AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM																																																							
Project Manager: MARISA KAFFENBERGER		P.O. #:														Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																							
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:														6 Remarks COC # 50F9																																							
Name of state where samples were collected: WASHINGTON																																																							
2 Sample Identification		3 Collected		Grab	Composite																																																		
		Date	Time															Date	Time																																				
ASS-DB-03-3.0'		3/23/13	1030	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																		
DUP-20			1035																																																				
ASS-DB-03-4.5'			1040																																																				
ASS-DB-03-6.5'			1045																																																				
ASS-DB-03a-1.5'			1050																																																				
ASS-DB-03a-3.0'			1100																																																				
ASS-DB-03a-4.5'			1105																																																				
ASS-DB-03a-6.5'			1110																																																				
ASS-DB-01a-1.5'			1120																																																				
ASS-DB-01a-3.0'			1125																																																				
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by: BOB MCALISTER - STANTEC			Date: 3/25/13	Time: 1500	Received by: FED EX			Date: 3/25/13	Time: 1500	9																																									
Standard: SEE COMMENTS Rush				Relinquished by: _____			Date: _____	Time: _____	Received by: _____			Date: _____	Time: _____																																										
Date results are needed: CONTACT STANTEC PM				Relinquished by: _____			Date: _____	Time: _____	Received by: _____			Date: _____	Time: _____																																										
E-mail address: MARISA.KAFFENBERGER@STANTEC.COM				Relinquished by: _____			Date: _____	Time: _____	Received by: _____			Date: _____	Time: _____																																										
8 Data Package Options (circle if required)				Relinquished by: _____			Date: _____	Time: _____	Received by: _____			Date: 3/26/13	Time: 0930																																										
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		EDD Required? Yes No						Relinquished by Commercial Carrier:																																													
Type III (Reduced non-CLP)		TX TRRP-13		If yes, format: _____						UPS _____ FedEx <input checked="" type="checkbox"/> Other _____																																													
Type IV (CLP SOW)		MA MCP CT RCP		Site-Specific QC (MS/MSD/Dup)? Yes No						Temperature upon receipt: 1.7-1.8 °C																																													
						(If yes, indicate QC sample and submit triplicate sample volume.)																																																	

Environmental Analysis Request/Chain of Custody



**Lancaster
Laboratories**

Acct. # 11842 For Eurofins Lancaster Laboratories use only Group # 137774 Sample # 6996262-313
Instructions on reverse side correspond with circled numbers.

COC #318733T

1 Client Information				4 Matrix			5 Analysis Requested							For Lab Use Only					
Client: <u>STANTEC CONSULTING</u>		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:	Total # of Containers	Preservation Codes							FSC: _____						
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				AMMONIA							SCR#: _____						
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:				NITRATE							Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other						
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:		HOLD FOR POSSIBLE ANALYSIS PER PA							6 Remarks <u>COG #6 OF 9</u> <u>STANDARD TAT</u>								
Name of state where samples were collected: <u>WASHINGTON</u>				3	Grab	Composite	Soil	Water	Other:	Total # of Containers			AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PA	Date	Time	Received by	Date
2 Sample Identification		Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PA	Date	Time	Received by	Date	Time	8	
<u>A55-DB-01a-4.5'</u>		<u>3/23/13</u>	<u>1130</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
<u>DUP-21</u>			<u>1135</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
<u>A55-DB-01a-6.5'</u>			<u>1140</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
<u>A5E-DB-05a-2.0'</u>			<u>1145</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
<u>A5E-DB-05a-4.0'</u>			<u>1150</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
<u>A5E-DB-05a-6.0'</u>			<u>1150</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
<u>A5E-DB-05a-8.0'</u>			<u>1200</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
<u>A5E-DB-03a-2.5' 2.5'</u>			<u>1205</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
<u>A5E-DB-03a-4.5' 5.0'</u>			<u>1210</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
<u>DUP-22</u>			<u>1215</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
7 Turnaround Time (TAT) Requested (please circle) Standard (<u>SEE COMMENTS</u>) Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC PA</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by: <u>[Signature]</u>			Date: <u>3/25/13</u>		Time: <u>1500</u>		Received by: <u>FED EX</u>		Date: <u>3/25/13</u>		Time: <u>1500</u>		8		
				Relinquished by:			Date:		Time:		Received by:		Date:		Time:				
				Relinquished by:			Date:		Time:		Received by:		Date:		Time:				
				Relinquished by:			Date:		Time:		Received by:		Date:		Time:				
				Relinquished by:			Date:		Time:		Received by: <u>[Signature]</u>		Date: <u>3/26/13</u>		Time: <u>0930</u>				
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				EDD Required? Yes No						Relinquished by Commercial Carrier:									
				If yes, format: _____						UPS FedEx <input checked="" type="checkbox"/> Other _____									
				Site-Specific QC (MS/MSD/Dup)? Yes No						Temperature upon receipt <u>1.7-1.8 °C</u>									
(If yes, indicate QC sample and submit triplicate sample volume.)																			

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 1842 For Eurofins Lancaster Laboratories use only
 Group # 1377974 Sample # 6996262-313
Instructions on reverse side correspond with circled numbers.

COC #318733 (U)

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only					
Client: STANTEC CONSULTING		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other:	Total # of Containers	Preservation Codes										FSC: _____							
Project Name#: BEE TAY SCALES		PWSID #:				AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PA										SCR#: _____							
Project Manager: MARISA KAFFENBERGER		P.O. #:														Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other							
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:														(6) Remarks COC # 7 OF 9							
Name of state where samples were collected: WASHINGTON				3 Composite																			
2 Sample Identification			Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers													
		Date	Time																				
ASE-DB-03a-7.5'		3/23/13	1220	X		X				1	X	X											STANDARD TAT
ASE-DB-03a-10.0'			1225			X				1	X	X											↓
EB032313			1245				X	X		3	X	X											↓
A2-DB-12a-1.0'		3/25/13	850			X				1	X	X											3-DAY TAT
A1-DB-12a-2.5'			855			X				1	X	X											↓
DUP-23			900			X				1	X	X											STANDARD TAT
A1-DB-12a-4.0'			905			X				1	X	X											3-DAY TAT
A1-DB-12b-1.0'			910			X				1	X	X											↓
A2-DB-12b-2.5'			915			X				1	X	X											↓
A2-DB-12b-4.0'			920			X				1	X	X											↓
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by: <u>BOB MCALISTER - STANTEC</u>		Date:	Time:	Received by: <u>FED EX</u>		Date:	Time:					(8)							
Standard <u>SEE COMMENTS</u> Rush						3/25/13	1500			3/25/13	1500												
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by:		Date:	Time:	Received by:		Date:	Time:												
Date results are needed: <u>CONTACT STANTEC PA</u>				Relinquished by:		Date:	Time:	Received by:		Date:	Time:												
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by:		Date:	Time:	Received by:		Date:	Time:												
8 Data Package Options (circle if required)				Relinquished by:		Date:	Time:	Received by: <u>C. Fisher</u>		Date:	Time:												
Type I (Validation/non-CLP)		Type VI (Raw Data Only)								3/26/13		0930											
Type III (Reduced non-CLP)		TX TRRP-13																					
Type IV (CLP SOW)		MA MCP CT RCP																					
				EDD Required? Yes No				Relinquished by Commercial Carrier:															
				If yes, format: _____				UPS FedEx <input checked="" type="checkbox"/> Other															
				Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt <u>1.7-1.8 °C</u>															
				(If yes, indicate QC sample and submit triplicate sample volume.)																			

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 137774 Sample # 6916262-315
Indications on reverse side correspond with circled numbers.

COC #318733 V

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only		
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other:	Total # of Containers AMMONIA NITRATE	Preservation Codes								FSC: _____				
Project Name/#: <u>BEE JAY SCALES</u>		PWSID#:				Preservation Codes N=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other								SCR#: _____				
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:				Remarks COC #8 OF 9 STANDARD TAT 3-DAY TAT												
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:																
Name of state where samples were collected: <u>WASHINGTON</u>				3		Grab		Composite										
2 Sample Identification			Collected															
			Date	Time														
<u>A1-DB-07a-1.0'</u>			<u>3/25/13</u>	<u>930</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
<u>A1-DB-07a-2.5'</u>				<u>935</u>														
<u>A1-DB-07a-4.0'</u>				<u>940</u>														
<u>DUP-24</u>				<u>945</u>														
<u>A1-DB-07a-5.5'</u>				<u>950</u>														
<u>A1-DB-07b-1.5'</u>				<u>1005</u>														
<u>A1-DB-07b-3.0'</u>				<u>1010</u>														
<u>DUP-25</u>				<u>1015</u>														
<u>A1-DB-07b-4.5'</u>				<u>1020</u>														
<u>A4-DB-07b-0.5'</u>				<u>1105</u>														
7 Turnaround Time (TAT) Requested (please circle) Standard SEE COMMENTS Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC BY</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Reinquished by: <u>BOB MCALISTER - STANTEC</u>		Date: <u>3/25/13</u>	Time: <u>1500</u>	Received by: <u>FED EX</u>		Date: <u>3/25/13</u>	Time: <u>1500</u>	8						
				Reinquished by:		Date:	Time:	Received by:		Date:	Time:							
				Reinquished by:		Date:	Time:	Received by:		Date:	Time:							
				Reinquished by:		Date:	Time:	Received by:		Date:	Time:							
				Reinquished by:		Date:	Time:	Received by:		Date:	Time:							
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				EDD Required? Yes No If yes, format: _____				Reinquished by Commercial Carrier:										
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				UPS _____ FedEx _____ Other _____										
										Temperature upon receipt _____ °C								

Eurofins Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17801 • 717-656-2300
 The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client.

03/26/2013 07:24 5098374647 BW GRAPEVINE INN PAGE 09/10

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1377974 Sample # 6996262-313
Instructions on reverse side correspond with circled numbers.

COC #318733 V

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only																							
Client: <u>STANTEC CONSULTING</u>		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other:		Preservation Codes										FSC: _____																									
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="width: 5%;">1</td><td style="width: 5%;">1</td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td></tr> <tr><td style="text-align: center;">AMMONIA</td><td style="text-align: center;">NITRATE</td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>										1	1											AMMONIA	NITRATE											SCR#: _____	
1	1																																								
AMMONIA	NITRATE																																								
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:		Total # of Containers AMMONIA NITRATE		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other		6 Remarks COC #8 OF 9																																	
Sampler: <u>ERIK BASSETT / BOB MCALISTER</u>		Quote #:																																							
Name of state where samples were collected: <u>WASHINGTON</u>				3																																					
2 Sample Identification		Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers	AMMONIA	NITRATE																														
		Date	Time																																						
<u>A1-DB-07a-1.0'</u>		<u>3/25/13</u>	<u>930</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	STANDARD TAT																													
<u>A1-DB-07a-2.5'</u>			<u>935</u>						1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																														
<u>A1-DB-07a-4.0'</u>			<u>940</u>						1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																														
<u>DUP-24</u>			<u>945</u>						1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																														
<u>A1-DB-07a-5.5'</u>			<u>950</u>						1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																														
<u>A1-DB-01b-1.5'</u>			<u>1005</u>						1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																														
<u>A1-DB-01b-3.0'</u>			<u>1010</u>						1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																														
<u>DUP-25</u>			<u>1015</u>						1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																														
<u>A1-DB-01b-4.5'</u>			<u>1020</u>						1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																														
<u>A4-DB-01b-0.5'</u>			<u>1105</u>						1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3-DAY TAT																													
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by <u>ROB MCALISTER - STANTEC</u>			Date <u>3/25/13</u>		Time <u>1500</u>		Received by <u>FED EX</u>			Date <u>3/25/13</u>		Time <u>1500</u>																									
Standard (SEE COMMENTS) Rush				Relinquished by			Date		Time		Received by			Date		Time																									
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by			Date		Time		Received by			Date		Time																									
Date results are needed: <u>CONTACT STANTEC PA</u>				Relinquished by			Date		Time		Received by			Date		Time																									
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by			Date		Time		Received by			Date		Time																									
8 Data Package Options (circle if required)				Relinquished by			Date		Time		Received by <u>McAlister</u>			Date <u>3/26/13</u>		Time <u>0930</u>																									
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		EDD Required? Yes No				Relinquished by Commercial Carrier:																																	
Type III (Reduced non-CLP)		TX TRRP-13		If yes, format: _____				UPS _____ FedEx <input checked="" type="checkbox"/> Other _____																																	
Type IV (CLP SOW)		MA MCP CT RCP		Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt <u>17-1.8 °C</u>																																	
				(If yes, indicate QC sample and submit triplicate sample volume.)																																					

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1377974 Sample # 6996262-313
 Instructions on reverse side correspond with circled numbers.

COC #318733 w

1 Client Information				4 Matrix				5 Analysis Requested												For Lab Use Only			
Client: <u>STANTEC CONSULTING</u>		Acct. #: _____		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Total # of Containers <u>AMMONIA</u> <u>NITRATE</u> <u>HOLD FOLLOWS POSSIBLE ANALYSIS PER PA</u>	Preservation Codes												FSC: _____					
Project Name#: <u>BEE JAY SCALES</u>		PWSID #: _____				Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other												SCR#: _____					
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #: _____				6 Remarks <div style="font-size: 2em; text-align: center; padding: 10px;">COC #9 OF 9</div>																	
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #: _____																					
Name of state where samples were collected: <u>WASHINGTON</u>																							
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Other	Total # of Containers														
		Date	Time																				
<u>A4-DB-01b-2.5'</u>		<u>3/25/13</u>	<u>1110</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			1	<input checked="" type="checkbox"/>													3-DAY TAT
<u>A4-DB-01e-0.5'</u>			<u>1115</u>																				
<u>A4-DB-01e-2.5'</u>			<u>1120</u>																				
<u>A4-DB-01c-0.5'</u>			<u>1125</u>																				3-DAY TAT
<u>DUP-26</u>			<u>1130</u>																				↓
<u>A4-DB-01c-2.5'</u>			<u>1135</u>																				
<u>A4-DB-01f-0.5'</u>			<u>1140</u>																				
<u>A4-DB-01f-2.5'</u>			<u>1145</u>																				
<u>EB032513</u>			<u>1200</u>				<input checked="" type="checkbox"/>		3	<input checked="" type="checkbox"/>													STANDARD TAT
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by		Date	Time	Received by		Date	Time			9									
Standard SEE COMMENTS Rush				<u>BOB MCALISTER - STANTEC</u>		<u>3/25/13</u>	<u>1500</u>	<u>FED EX</u>		<u>3/25/13</u>	<u>1500</u>												
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by		Date	Time	Received by		Date	Time												
Date results are needed: <u>CONTACT STANTEC PM</u>				Relinquished by		Date	Time	Received by		Date	Time												
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by		Date	Time	Received by		Date	Time												
8 Data Package Options (circle if required)				Relinquished by		Date	Time	Received by		Date	Time												
Type I (Validation/non-CLP)		Type VI (Raw Data Only)						<u>Cash</u>		<u>3/24/13</u>	<u>0930</u>												
Type III (Reduced non-CLP)		TX TRRP-13						Relinquished by Commercial Carrier:															
Type IV (CLP SOW)		MA MCP CT RCP						UPS _____ FedEx <input checked="" type="checkbox"/> Other _____															
				EDD Required? Yes No				Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt <u>1.7-1.8 °C</u>											
				If yes, format: _____				(If yes, indicate QC sample and submit triplicate sample volume.)															

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m³	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

April 02, 2013

Project: Bee Jay Scales Site

Submittal Date: 03/27/2013
Group Number: 1378293
PO Number: 213202156.600.9301
Release Number: BEE JAY SCALES
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
A5W-DB-01a-0.5' Grab Soil	6997834
A5W-DB-01a-2.5' Grab Soil	6997835
DUP-27 Grab Soil	6997836
A5W-DB-02a-0.5' Grab Soil	6997837
A5W-DB-02a-2.5' Grab Soil	6997838
A5W-DB-02b-0.5' Grab Soil	6997839
DUP-28 Grab Soil	6997840
A5W-DB-02b-2.5' Grab Soil	6997841
A1-DB-01a-1.5' Grab Soil	6997842
A1-DB-01a-3.0' Grab Soil	6997843
DUP-29 Grab Soil	6997844
A1-DB-01a-4.5' Grab Soil	6997845
A6-DB-05b-1.0' Grab Soil	6997846
A6-DB-05b-2.5' Grab Soil	6997847
A6-DB-05b-4.0' Grab Soil	6997848
DUP-30 Grab Soil	6997849
A6-DB-05b-5.5' Grab Soil	6997850
A6-DB-05a-1.0' Grab Soil	6997851
A6-DB-05a-2.5' Grab Soil	6997852
A6-DB-05a-4.0' Grab Soil	6997853
A6-DB-05a-5.5' Grab Soil	6997854
A6-DB-09a-1.5' Grab Soil	6997855
A6-DB-09a-3.0' Grab Soil	6997856
A6-DB-09a-5.0' Grab Soil	6997857
DUP-31 Grab Soil	6997858
A6-DB-09a-7.0' Grab Soil	6997859
A6-DB-08a-1.5' Grab Soil	6997860
A6-DB-08a-3.0' Grab Soil	6997861
A6-DB-08a-5.0' Grab Soil	6997862
A6-DB-08a-7.0' Grab Soil	6997863
A6-DB-09b-1.5' Grab Soil	6997864

A6-DB-09b-3.0' Grab Soil	6997865
A6-DB-09b-5.0' Grab Soil	6997866
A6-DB-09b-7.0' Grab Soil	6997867
EB032613 Grab Water	6997868

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	STANTEC International, Inc.	Attn: Marisa Kaffenberger
ELECTRONIC COPY TO	Stantec Consulting Services	Attn: Eric Bassett

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: A5W-DB-01a-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997834
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 14:15 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/27/2013 09:25

Reported: 04/02/2013 09:51

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	95.3 mg/kg	8.5 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	7.0 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13087087201A	03/28/2013 23:47	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: A5W-DB-01a-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997835
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 14:20 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/27/2013 09:25

Suite E

Reported: 04/02/2013 09:51

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	72.3 mg/kg	9.3 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13087087201A	03/29/2013 00:33	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: DUP-27 Grab Soil
Bee Jay Scales

LLI Sample # SW 6997836
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 14:25 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/27/2013 09:25

Suite E

Reported: 04/02/2013 09:51

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	67.7 mg/kg	9.2 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13087087201A	03/29/2013 00:48	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: A5W-DB-02a-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997837
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 15:55 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/27/2013 09:25

Suite E

Reported: 04/02/2013 09:51

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	69.1 mg/kg	8.8 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	9.3 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13087087201A	03/29/2013 01:03	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: A5W-DB-02a-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997838
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 16:00 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/27/2013 09:25

Reported: 04/02/2013 09:51

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 340	mg/kg 9.8	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 19.0	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13087087201A	03/29/2013 01:49	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: A5W-DB-02b-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997839
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 15:40 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 2.8	mg/kg 0.88	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 9.6	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13087087201A	03/29/2013 16:51	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: DUP-28 Grab Soil
Bee Jay Scales

LLI Sample # SW 6997840
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 15:45 by EB

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Reported: 04/02/2013 09:51

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	5.2 mg/kg	0.88 mg/kg	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	9.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13087087201A	03/29/2013 17:06	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: A5W-DB-02b-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997841
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 15:50 by EB

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	48.6 mg/kg	8.9 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13087087201A	03/29/2013 02:34	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: A1-DB-01a-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997842
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 16:25 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	96.2	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	11.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

Sample Description: A1-DB-01a-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997843
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 16:30 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	104	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	18.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

Sample Description: DUP-29 Grab Soil
Bee Jay Scales

LLI Sample # SW 6997844
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 16:35 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	104	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	18.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

Sample Description: A1-DB-01a-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997845
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 16:40 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	113	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	24.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

Sample Description: A6-DB-05b-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997846
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 09:00 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	53.5	8.6	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	91.9	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	7.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13087087201A	03/29/2013 02:50	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: A6-DB-05b-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997847
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 09:05 by EB

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Reported: 04/02/2013 09:51

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	38.0	9.4	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	99.8	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13087087201A	03/29/2013 03:05	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13087087201A	03/28/2013 07:20	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

**Sample Description: A6-DB-05b-4.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997848
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 09:10 by EB

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Submitted: 03/27/2013 09:25

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	37.2	9.6	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	102	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13087087201B	03/29/2013 05:06	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13087087201B	03/28/2013 07:20	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

**Sample Description: DUP-30 Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997849
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 09:15 by EB

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Reported: 04/02/2013 09:51

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	33.7 mg/kg	1.9 mg/kg	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	102 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13087087201B	03/29/2013 17:52	Christopher D Meeks	2
01352	Deionized Water Extraction	EPA 300.0	1	13087087201B	03/28/2013 07:20	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

**Sample Description: A6-DB-05b-5.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997850
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 09:20 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	16.3 mg/kg	1.0 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	112 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	24.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13087087201B	03/29/2013 18:07	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13087087201B	03/28/2013 07:20	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

**Sample Description: A6-DB-05a-1.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997851
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	3.4	0.99	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	105	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13087087201B	03/29/2013 18:22	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13087087201B	03/28/2013 07:20	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

**Sample Description: A6-DB-05a-2.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997852
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 09:30 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	2.2 mg/kg	0.94 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	101 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.7 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13087087201B	03/29/2013 18:37	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13087087201B	03/28/2013 07:20	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

**Sample Description: A6-DB-05a-4.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997853
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 09:35 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	1.8 mg/kg	0.93 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	99.8 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	3	13087087201B	03/29/2013 18:53	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13087087201B	03/28/2013 07:20	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

Sample Description: A6-DB-05a-5.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997854
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 09:40 by EB

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Reported: 04/02/2013 09:51

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	6.4	1.0	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	108	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13087087201B	03/29/2013 19:08	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13087087201B	03/28/2013 07:20	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	2	13086820005A	03/27/2013 22:32	Scott W Freisher	1

**Sample Description: A6-DB-09a-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997855
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:05 by EB

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Reported: 04/02/2013 09:51

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	442 mg/kg	20.2 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	7,070 mg/kg	108 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13088088201A	03/30/2013 23:10	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057301A	03/27/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

**Sample Description: A6-DB-09a-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997856
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:10 by EB

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Reported: 04/02/2013 09:51

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	268	8.9	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	2,050	95.5	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	11.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088201A	03/30/2013 01:07	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

Sample Description: A6-DB-09a-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997857
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:15 by EB

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	608 mg/kg	20.0 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,280 mg/kg	107 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13088088201A	03/30/2013 23:25	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

**Sample Description: DUP-31 Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997858
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:20 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	570 mg/kg	19.8 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,360 mg/kg	106 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.1 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13088088201A	03/30/2013 23:40	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

Sample Description: A6-DB-09a-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997859
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:25 by EB

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Submitted: 03/27/2013 09:25

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	59.5 mg/kg	10.2 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	326 J mg/kg	110 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088201A	03/30/2013 02:23	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

**Sample Description: A6-DB-08a-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997860
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:35 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	782 mg/kg	44.6 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	927 mg/kg	95.4 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13088088201A	03/31/2013 00:26	Joseph E McKenzie	50
01352	Deionized Water Extraction	EPA 300.0	1	13088088201A	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002A	03/29/2013 20:48	Scott W Freisher	1

Sample Description: A6-DB-08a-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997861
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:40 by EB

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Submitted: 03/27/2013 09:25

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	667 mg/kg	45.4 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,580 mg/kg	97.6 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	12.9 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13088088201B	03/31/2013 00:41	Joseph E McKenzie	50
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002B	03/29/2013 20:48	Scott W Freisher	1

**Sample Description: A6-DB-08a-5.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997862
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:45 by EB

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Reported: 04/02/2013 09:51

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	274 mg/kg	9.2 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	994 mg/kg	99.3 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088201B	03/30/2013 03:39	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002B	03/29/2013 20:48	Scott W Freisher	1

Sample Description: A6-DB-08a-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997863
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:50 by EB

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	49.5 mg/kg	11.0 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	27.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088201B	03/30/2013 03:54	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13088820002B	03/29/2013 20:48	Scott W Freisher	1

Sample Description: A6-DB-09b-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997864
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 10:55 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 346	mg/kg 17.4	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg 1,150	mg/kg 92.8	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 8.4	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13088088201B	03/31/2013 01:26	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002B	03/29/2013 20:48	Scott W Freisher	1

Sample Description: A6-DB-09b-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997865
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 11:00 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	585 mg/kg	47.0 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,540 mg/kg	100 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.3 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13088088201B	03/31/2013 01:41	Joseph E McKenzie	50
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13091820002A	04/01/2013 19:21	Scott W Freisher	1

Sample Description: A6-DB-09b-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6997866
LLI Group # 1378293
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 11:05 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	272	9.5	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,660	103	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088201B	03/30/2013 05:10	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002B	03/29/2013 20:48	Scott W Freisher	1

**Sample Description: A6-DB-09b-7.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6997867
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 11:10 by EB

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	344 mg/kg	10.2 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,400 mg/kg	108 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088201B	03/30/2013 05:25	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13086057302A	03/27/2013 21:10	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820002B	03/29/2013 20:48	Scott W Freisher	1

**Sample Description: EB032613 Grab Water
Bee Jay Scales**

**LLI Sample # WW 6997868
LLI Group # 1378293
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/26/2013 12:00 by EB

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 03/27/2013 09:25

Reported: 04/02/2013 09:51

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13086655601A	03/27/2013 21:37	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087022101A	03/28/2013 09:00	Yolunder Y Bunch	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 04/02/13 at 09:51 AM

Group Number: 1378293

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13086655601A Nitrate Nitrogen	Sample number(s): 6997868 N.D.	0.050	mg/l	104		90-110		
Batch number: 13087087201A Nitrate Nitrogen by IC (solid)	Sample number(s): 6997834-6997841, 6997846-6997847 N.D.	0.80	mg/kg	106		90-110		
Batch number: 13087087201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6997848-6997854 N.D.	0.80	mg/kg	106		90-110		
Batch number: 13088088201A Nitrate Nitrogen by IC (solid)	Sample number(s): 6997855-6997860 N.D.	0.80	mg/kg	103		90-110		
Batch number: 13088088201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6997861-6997867 N.D.	0.80	mg/kg	103		90-110		
Batch number: 13086057301A Ammonia Nitrogen	Sample number(s): 6997842-6997855 N.D.	17.0	mg/kg	96		89-101		
Batch number: 13086057302A Ammonia Nitrogen	Sample number(s): 6997856-6997862, 6997864-6997867 N.D.	17.0	mg/kg	95		89-101		
Batch number: 13087022101A Ammonia Nitrogen	Sample number(s): 6997868 N.D.	0.20	mg/l	94	95	85-105	1	5
Batch number: 13086820005A Moisture	Sample number(s): 6997834-6997841, 6997846-6997854 100					99-101		
Batch number: 13088820002A Moisture	Sample number(s): 6997842-6997845, 6997855-6997860 100					99-101		
Batch number: 13088820002B Moisture	Sample number(s): 6997861-6997864, 6997866-6997867 100					99-101		
Batch number: 13091820002A Moisture	Sample number(s): 6997865 100					99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup RPD
----	-----	--------	-----	-----	-----	-----	---------

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.

Group Number: 1378293

Reported: 04/02/13 at 09:51 AM

<u>Analysis Name</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>
Batch number: 13086655601A Nitrate Nitrogen	Sample number(s): 6997868 105		UNSPK: P996922 90-110			BKG: P996922 9.6	9.6	0	20
Batch number: 13087087201A Nitrate Nitrogen by IC (solid)	Sample number(s): 6997834-6997841,6997846-6997847 137 (2)		UNSPK: 6997834 90-110			BKG: 6997834 88.6	86.5	2	20
Batch number: 13087087201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6997848-6997854 96		UNSPK: P996382 90-110			BKG: P996382 0.95 J	1.2 J	27* (1)	20
Batch number: 13088088201A Nitrate Nitrogen by IC (solid)	Sample number(s): 6997855-6997860 0*		UNSPK: P999648 90-110			BKG: P999648 N.D.	N.D.	0 (1)	20
Batch number: 13088088201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6997861-6997867 0 (2)		UNSPK: 6997861 90-110			BKG: 6997861 581	578	0	20
Batch number: 13086057301A Ammonia Nitrogen	Sample number(s): 6997842-6997855 84	87	UNSPK: P996270 72-116	3	5	BKG: P996270 N.D.	N.D.	0 (1)	10
Batch number: 13086057302A Ammonia Nitrogen	Sample number(s): 6997856-6997862,6997864-6997867 88	84	UNSPK: 6997856 72-116	2	5	BKG: 6997856 1,830	1,890	3	10
Batch number: 13087022101A Ammonia Nitrogen	Sample number(s): 6997868 345		BKG: P996672			375		8*	6
Batch number: 13086820005A Moisture	Sample number(s): 6997834-6997841,6997846-6997854 23.5		BKG: P993782			24.2		3	13
Batch number: 13088820002A Moisture	Sample number(s): 6997842-6997845,6997855-6997860 11.0		BKG: 6997856			10.8		2	13
Batch number: 13088820002B Moisture	Sample number(s): 6997861-6997864,6997866-6997867 14.4		BKG: 6997862			13.7		5	13
Batch number: 13091820002A Moisture	Sample number(s): 6997865 11.0		BKG: P998576			10		9	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only Group # 1378293 Sample # 6997834-68
 Instructions on reverse side correspond with circled numbers.

COC #318733 (X)

1 Client Information			4 Matrix			5 Analysis Requested						For Lab Use Only				
Client: <u>STANTEC CONSULTING</u>		Acct. #:	Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> Soil <input checked="" type="checkbox"/>	Ground <input type="checkbox"/> NPDES <input type="checkbox"/>	Surface <input type="checkbox"/>	Other: _____	Total # of Containers: _____	Preservation Codes						SCR#: _____	Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
Project Name#: <u>BEE JAY SCALES</u>	PWSID #:	AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM						6 Remarks COC #1 OF 6								
Project Manager: <u>MARISA KAFFENBERGER</u>	P.O. #:															
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>	Quote #:															
Name of state where samples were collected: <u>WASHINGTON</u>			3		Grab		Composite		Collected		3-DAY TAT 3-DAY TAT					
2 Sample Identification			Date	Time	Grab	Composite										
<u>ASW-DB-01a-0.5'</u>			<u>3/25/13</u>	<u>1415</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>ASW-DB-01a-2.5'</u>				<u>1420</u>												
<u>DUP-27</u>				<u>1425</u>												
<u>ASW-DB-01b-0.5'</u>				<u>1430</u>												
<u>ASW-DB-01b-2.5'</u>				<u>1435</u>												
<u>ASW-DB-01c-0.5'</u>				<u>1405</u>												
<u>ASW-DB-01c-2.5'</u>				<u>1410</u>												
<u>ASW-DB-01d-0.5'</u>				<u>1445</u>												
<u>ASW-DB-01d-2.5'</u>				<u>1450</u>												
<u>ASW-DB-02a-0.5'</u>				<u>1555</u>												

7 Turnaround Time (TAT) Requested (please circle)
 Standard SEE COMMENTS Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: CONTACT STANTEC PM
 E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

Relinquished by: <u>BOB MCALISTER - STANTEC</u>	Date: <u>3/26/13</u>	Time: <u>1500</u>	Received by: <u>FED Ex</u>	Date: <u>3/26/13</u>	Time: <u>1500</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

EDD Required? Yes No
 If yes, format: _____
 Site-Specific QC (MS/MSD/Dup)? Yes No
 (If yes, indicate QC sample and submit triplicate sample volume.)
 Relinquished by Commercial Carrier:
 UPS _____ FedEx X Other _____
 Temperature upon receipt 11.13 °C

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1378293 Sample # 6997834-68
Instructions on reverse side correspond with circled numbers.

COC #318733Y

1 Client Information			4 Matrix			5 Analysis Requested										For Lab Use Only	
Client: STANTEC CONSULTING		Acct. #:	<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other: _____			Preservation Codes										FSC: _____	SCR#: _____
Project Name#: BEE JAY SCALES		PWSID #:				AMMONIA										6 Remarks COC #2 of 6	
Project Manager: MARISA KAFFENBERGER		P.O. #:				NITRATE											
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:				HOLD FOR POSSIBLE ANALYSIS PER PM											
Name of state where samples were collected: WASHINGTON			3		Total # of Containers											3-DAY TAT	
2 Sample Identification		Collected		Grab													
Date	Time																
ASW-DB-02a-2.5'	3/25/13	1600	X	X													
ASW-DB-02b-0.5'		1540															
DUP-28		1545															
ASW-DB-02b-2.5'		1550															
ASW-DB-02c-0.5'		1615															
ASW-DB-02c-2.5'		1620															
ASW-DB-02d-0.5'		1530															
ASW-DB-02d-2.5'		1535															
ASW-DB-02e-0.5'		1605															
ASW-DB-02e-2.5'		1610															

7 Turnaround Time (TAT) Requested (please circle)

Standard SEE COMMENTS Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: CONTACT STANTEC PA

E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

Relinquished by: <u>BOB MCALISTER-STANTER</u>	Date: <u>3/26/13</u>	Time: <u>1500</u>	Received by: <u>FED EX</u>	Date: <u>3/26/13</u>	Time: <u>1500</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt 1.1-1.3 °C

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1378293 Sample # 6997834-68
Instructions on reverse side correspond with circled numbers.

COC #318733 2

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only									
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Total # of Containers	Preservation Codes								FSC: _____											
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				AMMONIA								SCR#: _____											
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:				NITRATE								Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other											
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:				HOLD FOR POTENTIAL ANALYSIS PER PA																			
Name of state where samples were collected: <u>WASHINGTON</u>				3 Composite		6 Remarks COC # 3 OF 6								STANDARD TAT 3-DAY TAT											
2 Sample Identification		Collected		Grab	Soil <input checked="" type="checkbox"/>																				
		Date	Time																						
<u>A1-DB-02a - 1.5'</u>		<u>3/25/13</u>	<u>1625</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																				
<u>A1-DB-02a - 3.0'</u>			<u>1630</u>																						
<u>DUP-29</u>			<u>1635</u>																						
<u>A2-DB-02a - 4.5'</u>			<u>1640</u>																						
<u>A6-DB-05b - 1.0'</u>		<u>3/26/13</u>	<u>900</u>																						
<u>A6-DB-05b - 2.5'</u>			<u>905</u>																						
<u>A6-DB-05b - 4.0'</u>			<u>910</u>																						
<u>DUP-30</u>			<u>915</u>																						
<u>A6-DB-05b - 5.5'</u>			<u>920</u>																						
<u>A6-DB-05c - 1.0'</u>			<u>945</u>																						
7 Turnaround Time (TAT) Requested (please circle) Standard <u>(SEE COMMENT)</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC PA</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by <u>BOB MCALISTER - STANTEC</u>		Date	Time	Received by <u>FED EX</u>		Date	Time														
						<u>3/26/13</u>	<u>1500</u>			<u>3/26/13</u>	<u>1500</u>														
				Relinquished by		Date	Time	Received by		Date	Time														
				Relinquished by		Date	Time	Received by		Date	Time														
				Relinquished by		Date	Time	Received by		Date	Time														
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by		Date	Time	Received by <u>[Signature]</u>		Date	Time														
										<u>3-27-13</u>	<u>925</u>														
				Relinquished by		Date	Time	Received by		Date	Time														
				EDD Required? Yes No If yes, format: _____				Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____																	
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt <u>11-1.5°C</u>																	

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1378293 Sample # 6997834-68
Instructions on reverse side correspond with circled numbers.

COC #318733AA

1 Client Information			4 Matrix				5 Analysis Requested						For Lab Use Only																																																																																																																																																																																																																																																																																																																																																																																																																											
Client: <u>STANTEC CONSULTING</u>		Acct. #:	Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Soil <input checked="" type="checkbox"/>	Composite	Grab <input checked="" type="checkbox"/>	Total # of Containers	Preservation Codes						For Lab Use Only FSC: _____ SCR#: _____																																																																																																																																																																																																																																																																																																																																																																																																																										
Project Name#: <u>BEE JAY SCALES</u>		PWSID #:						<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">/</td><td style="width: 10%;">/</td><td style="width: 10%;">/</td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td> </tr> <tr> <td colspan="16" style="text-align: center; vertical-align: middle;"> AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PA </td> </tr> <tr> <td colspan="16" style="text-align: center;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="8" style="text-align: center;">Preservation Codes</td> </tr> <tr> <td>H=HCl</td><td colspan="3"></td><td>T=Thiosulfate</td><td colspan="3"></td><td colspan="6"></td> </tr> <tr> <td>N=HNO₃</td><td colspan="3"></td><td>B=NaOH</td><td colspan="3"></td><td colspan="6"></td> </tr> <tr> <td>S=H₂SO₄</td><td colspan="3"></td><td>O=Other</td><td colspan="3"></td><td colspan="6"></td> </tr> </table> </td> </tr> <tr> <td colspan="2">Project Manager: <u>MARISA KAFFENBERGER</u></td> <td>P.O. #:</td> <td colspan="2" style="text-align: center;">6 Remarks</td> </tr> <tr> <td colspan="2">Sampler: <u>ERIC BASSETT / BOB MCALISTER</u></td> <td>Quote #:</td> <td colspan="2" style="text-align: center; vertical-align: top;"> COC #4 OF 6 3-DAY TAT ↓ STANDARD TAT </td> </tr> <tr> <td colspan="3">Name of state where samples were collected: <u>WASHINGTON</u></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <th colspan="2" style="text-align: center;">2 Sample Identification</th> <th colspan="2" style="text-align: center;">Collected</th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="6"></th> <th colspan="2"></th> </tr> <tr> <td colspan="2"></td> <th>Date</th> <th>Time</th> <td colspan="2"></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-05c-2.5'</u></td> <td><u>3/26/13</u></td> <td><u>950</u></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-05c-4.0'</u></td> <td></td> <td><u>955</u></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-05c-5.5'</u></td> <td></td> <td><u>1000</u></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-05a-1.0'</u></td> <td></td> <td><u>925</u></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-05a-2.5'</u></td> <td></td> <td><u>930</u></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-05a-4.0'</u></td> <td></td> <td><u>935</u></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-05a-5.5'</u></td> <td></td> <td><u>940</u></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-09a-1.5'</u></td> <td></td> <td><u>1005</u></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-09a-3.0'</u></td> <td></td> <td><u>1010</u></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"><u>A6-DB-09a-5.0'</u></td> <td></td> <td><u>1015</u></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="6"></td> <td colspan="2"></td> </tr> <tr> <td colspan="4" rowspan="5"> 7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENTS</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) 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Yes No If yes, format: _____ </td> <td colspan="4"> Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____ </td> </tr> <tr> <td colspan="4"></td> <td colspan="4"> Site-Specific QC (MS/MSD/Dup)? 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Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1378293 Sample # 6997834-68
Instructions on reverse side correspond with circled numbers.

COC #318733 (AB)

(1) Client Information				(4) Matrix				(5) Analysis Requested				For Lab Use Only	
Client: <u>STANTEC CONSULTING</u>		Acct. #: <u>11842</u>		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> NPDES <input type="checkbox"/> Other:	Total # of Containers AMMONIA NITRATE	Preservation Codes				FSC: _____			
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #: _____								SCR#: _____			
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #: _____								Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other			
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #: _____											
Name of state where samples were collected: <u>WASHINGTON</u>				(3)						(6) Remarks <u>COC # 5 OF 6</u>			
(2) Sample Identification		Collected		Grab	Composite								
Date	Time												
<u>DUP-31</u>	<u>3/26/12</u>	<u>1020</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
<u>AG-DB-09a-7.0'</u>		<u>1025</u>											
<u>AG-DB-08a-1.5'</u>		<u>1035</u>											
<u>AG-DB-08a-3.0'</u>		<u>1040</u>											
<u>AG-DB-08a-5.0'</u>		<u>1045</u>											
<u>AG-DB-08a-7.0'</u>		<u>1050</u>											
<u>AG-DB-09b-1.5'</u>		<u>1055</u>											
<u>AG-DB-09b-3.0'</u>		<u>1100</u>											
<u>AG-DB-09b-5.0'</u>		<u>1105</u>											
<u>AG-DB-09b-7.0'</u>		<u>1110</u>											

(7) Turnaround Time (TAT) Requested (please circle) Standard <u>(SEE COMMENTS)</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC PA</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>	Relinquished by	Date	Time	Received by	Date	Time
	<u>BOB MCALISTER - STANTEC</u>	<u>3/26/12</u>	<u>1530</u>	<u>FED EX</u>	<u>3/26/12</u>	<u>1500</u>
	Relinquished by	Date	Time	Received by	Date	Time
	Relinquished by	Date	Time	Received by	Date	Time
	Relinquished by	Date	Time	Received by	Date	Time

(8) Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP	EDD Required? Yes No If yes, format: _____	Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____
	Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)	
	Temperature upon receipt <u>1.1-1.3°C</u>	

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1378293 Sample # 6997834-68
Instructions on reverse side correspond with circled numbers.

COC #318733AC

(1) Client Information					(4) Matrix		(5) Analysis Requested								For Lab Use Only																																														
Client: <u>STANTEC CONSULTING</u>			Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other: _____		Preservation Codes								FSC: _____																																														
Project Name#: <u>BEE JAY SCALES</u>			PWSID #:				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td><td style="width: 5%;">1</td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td><td style="width: 5%;"> </td> </tr> <tr> <td style="text-align: center;">AMMONIA</td><td style="text-align: center;">NITRATE</td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>								1	1																AMMONIA	NITRATE																	SCR#: _____											
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AMMONIA	NITRATE																																																												
Project Manager: <u>MARISA KAFFENBERGER</u>			P.O. #:												Total # of Containers <u>AMMONIA</u> <u>NITRATE</u>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">(6) Remarks</td> </tr> <tr> <td colspan="2" style="text-align: center; height: 50px;">COC # 6 OF 6</td> </tr> </table>										(6) Remarks		COC # 6 OF 6																																
(6) Remarks																																																													
COC # 6 OF 6																																																													
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>			Quote #:				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">(2) Sample Identification</th> <th colspan="2" style="text-align: center;">Collected</th> <th rowspan="2" style="text-align: center;">Grab <input type="checkbox"/></th> <th rowspan="2" style="text-align: center;">Composite <input type="checkbox"/></th> <th rowspan="2" style="text-align: center;">Soil <input type="checkbox"/></th> <th rowspan="2" style="text-align: center;">Water</th> <th rowspan="2" style="text-align: center;">Other</th> <th rowspan="2" style="text-align: center;">AMMONIA</th> <th rowspan="2" style="text-align: center;">NITRATE</th> <th rowspan="2"></th><th rowspan="2"></th><th rowspan="2"></th><th rowspan="2"></th><th rowspan="2"></th><th rowspan="2"></th><th rowspan="2"></th><th rowspan="2"></th><th rowspan="2"></th> </tr> <tr> <th style="text-align: center;">Date</th><th style="text-align: center;">Time</th><th style="text-align: center;">Date</th><th style="text-align: center;">Time</th> </tr> <tr> <td style="text-align: center;"><u>ERO32613</u></td><td></td><td style="text-align: center;"><u>3/26/13</u></td><td style="text-align: center;"><u>1200</u></td><td style="text-align: center;">X</td><td></td><td></td><td style="text-align: center;">X</td><td></td><td></td><td style="text-align: center;">X</td><td style="text-align: center;">X</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">STANDARD TAT</td> </tr> </table>										(2) Sample Identification		Collected		Grab <input type="checkbox"/>	Composite <input type="checkbox"/>	Soil <input type="checkbox"/>	Water	Other	AMMONIA	NITRATE										Date	Time	Date	Time	<u>ERO32613</u>		<u>3/26/13</u>	<u>1200</u>	X			X			X	X									STANDARD TAT
(2) Sample Identification		Collected		Grab <input type="checkbox"/>	Composite <input type="checkbox"/>	Soil <input type="checkbox"/>											Water	Other	AMMONIA	NITRATE																																									
Date	Time	Date	Time																																																										
<u>ERO32613</u>		<u>3/26/13</u>	<u>1200</u>	X			X			X	X									STANDARD TAT																																									
Name of state where samples were collected: <u>WASHINGTON</u>																																																													
(7) Turnaround Time (TAT) Requested (please circle) <u>Standard</u> Rush <small>(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</small> Date results are needed: <u>CONTACT STANTEC PA</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>			Relinquished by: <u>BOB MCALISTER - STANTEC</u>		Date: <u>3/26/13</u> Time: <u>1500</u>		Received by: <u>FED EX</u>		Date: <u>3/26/13</u> Time: <u>1500</u>																																																				
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(8) Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP			Relinquished by:		Date:		Time:		Received by:		Date:		Time:																																																
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							If yes, format: _____				UPS FedEx <input checked="" type="checkbox"/> Other _____																																																		
							Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt <u>11-13 °C</u>																																																		
							(If yes, indicate QC sample and submit triplicate sample volume.)																																																						

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

April 08, 2013

Project: Bee Jay Scales Site

Submittal Date: 03/27/2013
Group Number: 1378416
PO Number: 213202156.600.9301
Release Number: BEE JAY SCALES
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
A5E-DB-01A-2.0' Grab Soil	6998549
A5E-DB-01A-4.5' Grab Soil	6998550
A5E-DB-01A-6.0' Grab Soil	6998551
A5E-DB-01A-9.5' Grab Soil	6998552
A6-DB-06a-1.5' Grab Soil	6998553
A6-DB-06a-3.0' Grab Soil	6998554
A6-DB-06a-4.5' Grab Soil	6998555
A6-DB-06a-6.5' Grab Soil	6998556
A1-DB-09a-1.0' Grab Soil	6998557
A1-DB-09a-2.5' Grab Soil	6998558
A1-DB-09a-4.0' Grab Soil	6998559
A1-DB-09a-5.5' Grab Soil	6998560
A1-DB-06a-1.5' Grab Soil	6998561
A1-DB-06a-3.0' Grab Soil	6998562
A1-DB-06a-4.5' Grab Soil	6998563
A1-DB-06a-6.5' Grab Soil	6998564
A1-DB-06b-1.5' Grab Soil	6998565
A1-DB-06b-3.0' Grab Soil	6998566
A1-DB-06b-4.5' Grab Soil	6998567
A1-DB-06b-6.5' Grab Soil	6998568
A1-DB-04a-1.5' Grab Soil	6998569
DUP-17 Grab Soil	6998570
A1-DB-04a-3.0' Grab Soil	6998571
A1-DB-04a-4.5' Grab Soil	6998572
A1-DB-04a-6.5' Grab Soil	6998573

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC
COPY TO
ELECTRONIC
COPY TO

STANTEC International, Inc.

Stantec Consulting Services

Attn: Marisa Kaffenberger

Attn: Eric Bassett

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: A5E-DB-01A-2.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6998549
LLI Group # 1378416
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 11:50 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/27/2013 15:30

Suite E

Reported: 04/08/2013 21:47

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 104	mg/kg 10.2	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 21.5	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/21/13 at 09:00. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088201B	03/30/2013 05:40	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A5E-DB-01A-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998550
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 11:55 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/27/2013 15:30

Suite E

Reported: 04/08/2013 21:47

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	79.2 mg/kg	9.3 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/21/13 at 09:00. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088201B	03/30/2013 05:55	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

Sample Description: A5E-DB-01A-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6998551
LLI Group # 1378416
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 12:00 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/27/2013 15:30

Suite E

Reported: 04/08/2013 21:47

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	362 mg/kg	20.3 mg/kg	20
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/21/13 at 09:00. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13088088201B	03/31/2013 01:57	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13088088201B	03/29/2013 10:00	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A5E-DB-01A-9.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998552
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 12:05 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/27/2013 15:30

Suite E

Reported: 04/08/2013 21:47

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 7.2	mg/kg 0.98	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 18.7	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/21/13 at 09:00. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088202A	03/30/2013 18:54	Joseph E McKenzie	1
01352	Deionized Water Extraction	EPA 300.0	1	13088088202A	03/29/2013 10:30	Joseph E McKenzie	1
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A6-DB-06a-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998553
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 16:20 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	2,130	176	200
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	5,370	94.9	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

This sample was originally submitted to the laboratory on 03/22/13 at 09:15. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088202A	03/30/2013 19:40	Joseph E McKenzie	200
01352	Deionized Water Extraction	EPA 300.0	1	13088088202A	03/29/2013 10:30	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A6-DB-06a-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998554
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 16:30 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	2,910 mg/kg	185 mg/kg	200
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	8,090 mg/kg	98.6 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

This sample was originally submitted to the laboratory on 03/22/13 at 09:15. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088202A	03/30/2013 19:55	Joseph E McKenzie	200
01352	Deionized Water Extraction	EPA 300.0	1	13088088202A	03/29/2013 10:30	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A6-DB-06a-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998555
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 16:35 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	2,700 mg/kg	179 mg/kg	200
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	7,310 mg/kg	96.0 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	11.5 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/22/13 at 09:15. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088202A	03/30/2013 20:41	Joseph E McKenzie	200
01352	Deionized Water Extraction	EPA 300.0	1	13088088202A	03/29/2013 10:30	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A6-DB-06a-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998556
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/20/2013 16:40 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	112	10.0	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	669	108	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

This sample was originally submitted to the laboratory on 03/22/13 at 09:15. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088202A	03/29/2013 21:55	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088202A	03/29/2013 10:30	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A1-DB-09a-1.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998557
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 14:00 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	21.7	1.8	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	791	97.0	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	12.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088202A	03/30/2013 20:56	Joseph E McKenzie	2
01352	Deionized Water Extraction	EPA 300.0	1	13088088202A	03/29/2013 10:30	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A1-DB-09a-2.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998558
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 14:05 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	121	9.5	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	932	103	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088202A	03/29/2013 22:25	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088202A	03/29/2013 10:30	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004A	03/29/2013 21:16	Scott W Freisher	1

Sample Description: A1-DB-09a-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6998559
LLI Group # 1378416
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 14:20 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

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Reported: 04/08/2013 21:47

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	255 mg/kg	10.6 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	113 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	24.8 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088202A	03/29/2013 22:40	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13088088202A	03/29/2013 10:30	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A1-DB-09a-5.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998560
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 14:25 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

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Reported: 04/08/2013 21:47

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	434	21.3	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	114	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	25.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13088088202A	03/30/2013 21:11	Joseph E McKenzie	20
01352	Deionized Water Extraction	EPA 300.0	1	13088088202A	03/29/2013 10:30	Joseph E McKenzie	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

Sample Description: A1-DB-06a-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6998561
LLI Group # 1378416
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 16:40 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/27/2013 15:30

Suite E

Reported: 04/08/2013 21:47

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	272	9.0	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	95.9	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	11.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 00:48	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A1-DB-06a-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998562
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 16:45 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

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Reported: 04/08/2013 21:47

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	776	49.9	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	148 J	106	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 12:53	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

Sample Description: A1-DB-06a-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6998563
LLI Group # 1378416
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 16:50 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

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Reported: 04/08/2013 21:47

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	363	19.0	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	101	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 13:08	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A1-DB-06a-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998564
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 16:55 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

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Reported: 04/08/2013 21:47

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	461	20.2	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	211 J	108	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 13:23	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

Sample Description: A1-DB-06b-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6998565
LLI Group # 1378416
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 17:00 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

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Reported: 04/08/2013 21:47

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	189 mg/kg	9.0 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	96.8 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	12.2 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 13:38	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A1-DB-06b-3.0' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998566
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 17:05 by EB

STANTEC International, Inc.

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Submitted: 03/27/2013 15:30

Suite E

Reported: 04/08/2013 21:47

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	904	51.8	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	112	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.9	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 13:54	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

Sample Description: A1-DB-06b-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 6998567
LLI Group # 1378416
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 17:10 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

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Reported: 04/08/2013 21:47

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		EPA 300.0	mg/kg	mg/kg	
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	1,310	102	100
		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	110	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	22.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 18:35	Christopher D Meeks	100
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A1-DB-06b-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998568
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 17:15 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 03/27/2013 15:30

Suite E

Reported: 04/08/2013 21:47

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	523 mg/kg	25.8 mg/kg	25
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	270 J mg/kg	110 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.4 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/23/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 18:51	Christopher D Meeks	25
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13088820004B	03/29/2013 21:16	Scott W Freisher	1

**Sample Description: A1-DB-04a-1.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998569
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 14:10 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	48.5	4.4	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	93.8	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	9.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/26/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 19:06	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13091820002A	04/01/2013 19:21	Scott W Freisher	1

**Sample Description: DUP-17 Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998570
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 14:15 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	68.3	4.4	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	93.9	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	9.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/26/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201A	04/03/2013 19:21	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13092092201A	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13091820002A	04/01/2013 19:21	Scott W Freisher	1

Sample Description: A1-DB-04a-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 6998571
LLI Group # 1378416
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 14:20 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	288	9.7	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	104	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.9	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/26/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201B	04/03/2013 19:36	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13092092201B	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13091820002A	04/01/2013 19:21	Scott W Freisher	1

**Sample Description: A1-DB-04a-4.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998572
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 14:25 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	643 mg/kg	49.3 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	106 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.6 %	0.50 %	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 03/26/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201B	04/03/2013 20:52	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13092092201B	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13087057301A	03/28/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13091820002A	04/01/2013 19:21	Scott W Freisher	1

**Sample Description: A1-DB-04a-6.5' Grab Soil
Bee Jay Scales**

**LLI Sample # SW 6998573
LLI Group # 1378416
Account # 11842**

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 14:30 by EB

STANTEC International, Inc.

Submitted: 03/27/2013 15:30

2321 Club Meridian Drive

Reported: 04/08/2013 21:47

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	643	53.4	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,010	114	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	25.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

This sample was originally submitted to the laboratory on 03/26/13 at 09:30. We received authorization for further testing on 03/27/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13092092201B	04/03/2013 21:07	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13092092201B	04/02/2013 11:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13098057301A	04/08/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13091820002A	04/01/2013 19:21	Scott W Freisher	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 04/08/13 at 09:47 PM

Group Number: 1378416

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13088088201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6998549-6998551 N.D.	0.80	mg/kg	103		90-110		
Batch number: 13088088202A Nitrate Nitrogen by IC (solid)	Sample number(s): 6998552-6998560 N.D.	0.80	mg/kg	105		90-110		
Batch number: 13092092201A Nitrate Nitrogen by IC (solid)	Sample number(s): 6998561-6998570 N.D.	0.80	mg/kg	97		90-110		
Batch number: 13092092201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6998571-6998573 N.D.	0.80	mg/kg	97		90-110		
Batch number: 13087057301A Ammonia Nitrogen	Sample number(s): 6998553-6998572 N.D.	17.0	mg/kg	95		89-101		
Batch number: 13098057301A Ammonia Nitrogen	Sample number(s): 6998573 N.D.	17.0	mg/kg	96		89-101		
Batch number: 13088820004A Moisture	Sample number(s): 6998549-6998558			100		99-101		
Batch number: 13088820004B Moisture	Sample number(s): 6998559-6998568			100		99-101		
Batch number: 13091820002A Moisture	Sample number(s): 6998569-6998573			100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13088088201B Nitrate Nitrogen by IC (solid)	Sample number(s): 6998549-6998551 0 (2)		90-110			UNSPK: P997861 581	BKG: P997861 578	0	20
Batch number: 13088088202A Nitrate Nitrogen by IC (solid)	Sample number(s): 6998552-6998560 97		90-110			UNSPK: 6998552 5.9	BKG: 6998552 6.1	4 (1)	20
Batch number: 13092092201A	Sample number(s): 6998561-6998570					UNSPK: 6998561	BKG: 6998561		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 04/08/13 at 09:47 PM

Group Number: 1378416

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Nitrate Nitrogen by IC (solid)	-619 (2)		90-110			241	206	16	20
Batch number: 13092092201B Nitrate Nitrogen by IC (solid)	-76 (2)		90-110			236	232	2	20
Batch number: 13087057301A Ammonia Nitrogen	107 (2)	108 (2)	72-116	0	5	4,810	4,800	0	10
Batch number: 13098057301A Ammonia Nitrogen	103	108	72-116	1	5	721	702	3	10
Batch number: 13088820004A Moisture						13.8	13.6	1	13
Batch number: 13088820004B Moisture						23.9	23.6	1	13
Batch number: 13091820002A Moisture						11.0	10	9	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1378416 Sample # 6998549-73
Instructions on reverse side correspond with circled numbers.

COC #318733 B

1 Client Information			4 Matrix				5 Analysis Requested								For Lab Use Only	
Client: <u>STANTEC CONSULTING</u>		Acct. #:	<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:		Total # of Containers	Preservation Codes								FSC:	SCR#:	
Project Name/#: <u>BEE JAY SCALES</u>	PWSID #:									Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other						
Project Manager: <u>MARISA KAFFENBERGER</u>	P.O. #:	<input checked="" type="checkbox"/> Soil <input type="checkbox"/> Grab <input type="checkbox"/> Composite		Total # of Containers	AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM								6 Remarks COC #5 OFF			
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>	Quote #:															
Name of state where samples were collected: <u>WASHINGTON</u>																
2 Sample Identification		3 Collected														
		Date	Time	Grab	Composite											
<u>ASE-DB-01A-6.0'</u>		<u>3/20/13</u>	<u>1135</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
<u>ASE-DB-01A-8.5'</u>			<u>1140</u>													
<u>ASE-DB-01A-2.0'</u>			<u>1150</u>													
<u>ASE-DB-01A-4.5'</u>			<u>1155</u>													
<u>ASE-DB-01A-6.0'</u>			<u>1200</u>													
<u>ASE-DB-01A-9.5'</u>			<u>1205</u>													
<u>ASE-DB-03-2.5'</u>			<u>1220</u>													
<u>ASE-DB-03-5.0'</u>			<u>1250</u>													
<u>DUP-09</u>			<u>1255</u>													
<u>ASE-DB-03-7.5'</u>			<u>1300</u>													
7 Turnaround Time (TAT) Requested (please circle) Standard <u>(SEE COMMENT)</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by <u>BOB MCALISTER - STANTEC</u> Date <u>3/20/13</u> Time <u>1500</u>		Received by <u>FED EX</u> Date <u>3/20/13</u> Time <u>1500</u>										
Date results are needed: <u>CONTACT STANTEC PM</u>				Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____										
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____										
8 Data Package Options (circle if required)				Relinquished by _____ Date _____ Time _____		Received by <u>Deborah Westlund</u> Date <u>3/21/13</u> Time <u>0900</u>										
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		EDD Required? Yes No If yes, format: _____		Relinquished by Commercial Carrier: UPS <input type="checkbox"/> FedEx <input checked="" type="checkbox"/> Other _____										
Type III (Reduced non-CLP)		TX TRRP-13		Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)		Temperature upon receipt <u>1.3 - 1.6 °C</u>										
Type IV (CLP SOW)		MA MCP CT RCP														

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1378416 Sample # 6998549-73
Instructions on reverse side correspond with circled numbers.

COC #318738D

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only														
Client: <u>STANTEC CONSULTING</u>		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:	Total # of Containers AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM	Preservation Codes										FSC: _____																
Project Name/ #: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; height: 100px;"> <tr><td>1</td><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										1	1	1													SCR#: _____	
1	1	1																														
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:														Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:																														
Name of state where samples were collected: <u>WASHINGTON</u>				3												6																
2 Sample Identification		Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers											Remarks												
Date	Time																															
<u>A6-DB-06-1.5'</u>	<u>3/20/13</u>	<u>1530</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					1	X	X											3-DAY TAT										
<u>A6-DB-06-3.0'</u>		<u>1535</u>							1	X	X																					
<u>A6-DB-06-4.5'</u>		<u>1540</u>							1	X	X																					
<u>A6-DB-06-6.5'</u>		<u>1545</u>							1	X	X																					
<u>A6-DB-06-1.5'</u>		<u>1620</u>							1		X																					
<u>A6-DB-06a-3.0'</u>		<u>1630</u>							1		X																					
<u>A6-DB-06a-4.5'</u>		<u>1635</u>							1		X																					
<u>A6-DB-06a-6.5'</u>		<u>1640</u>							1		X																					
<u>A6-DB-06b-1.5'</u>		<u>1555</u>							1		X																					
<u>A6-DB-06b-3.0'</u>		<u>1600</u>							1		X																					
7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENTS</u> Rush				Relinquished by <u>BOB MCALISTER - STANTEC</u>		Date <u>3/20/13</u>	Time <u>1500</u>	Received by <u>FED EX</u>		Date <u>3/21/13</u>	Time <u>1520</u>	Relinquished by <u>Brent</u> Date <u>3-22-13</u> Time <u>915</u>																				
Date results are needed: <u>CONTACT STANTEC PA</u>				Relinquished by		Date	Time	Received by		Date	Time																					
				Relinquished by		Date	Time	Received by		Date	Time																					
				Relinquished by		Date	Time	Received by		Date	Time																					
				Relinquished by		Date	Time	Received by		Date	Time																					
8 Data Package Options (circle if required)				EDD Required? Yes No				Relinquished by Commercial Carrier:																								
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		If yes, format: _____				UPS _____ FedEx <input checked="" type="checkbox"/> Other _____																								
Type III (Reduced non-CLP)		TX TRRP-13		Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt <u>22-24°C</u>																								
Type IV (CLP SOW)		MA MCP CT RCP		(If yes, indicate QC sample and submit triplicate sample volume.)																												



Lancaster Laboratories

Environmental Analysis Request/Chain of Custody

Acct. # 11842
11842

For Eurofins Lancaster Laboratories use only
Group # 137873 Sample # 6998549-73
Instructions on reverse side correspond with circled numbers
1378416 6998549-73

COC #318733 I

1 Client Information				4 Matrix				5 Analysis Requested				6 For Lab Use Only			
Client: <u>STATEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/>		Ground <input type="checkbox"/>		Preservation Codes				FSC:			
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:		Potable <input type="checkbox"/>		Surface <input type="checkbox"/>						SCR#:			
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:		Water <input type="checkbox"/>		NPDES <input type="checkbox"/>						Preservation Codes			
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:		Other: <input type="checkbox"/>		Total # of Containers						H=HCl T=Thiosulfate			
Name of state where samples were collected: <u>WASHINGTON</u>				3 Grab		Soil <input checked="" type="checkbox"/>						N=HNO ₃ B=NaOH			
2 Sample Identification		Collected		Composite		Water						S=H ₂ SO ₄ O=Other			
		Date	Time									6 Remarks			
<u>A1-DB-09a-1.0'</u>		<u>3/21/13</u>	<u>1400</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<u>AMMONIA</u>	<u>NITRATE</u>	<u>HOLD FOR POSSIBLE ANALYSIS PER PM</u>			<u>COC # 1 OF 6</u> <u>3-DAY TAT</u> ↓		
<u>A1-DB-09a-2.5'</u>			<u>1405</u>												
<u>A1-DB-09a-4.0'</u>			<u>1420</u>												
<u>A1-DB-09a-5.5'</u>			<u>1425</u>												
<u>A1-DB-13-1.0'</u>			<u>1435</u>												
<u>A1-DB-13-2.5'</u>			<u>1440</u>												
<u>A1-DB-13-4.0'</u>			<u>1445</u>												
<u>A1-DB-13-5.5'</u>			<u>1450</u>												
<u>A1-DB-08a-1.0'</u>			<u>1500</u>												
<u>A1-DB-08a-2.5'</u>			<u>1505</u>												
7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENTS</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STATEC PM</u>				Relinquished by <u>BOB MCALISTER - STATEC</u>		Date <u>3/20/13</u>		Time <u>1500</u>		Received by <u>FED EX</u>		Date <u>3/22/13</u>		Time <u>1500</u>	
8 Data Package Options (circle if required)				Relinquished by		Date		Time		Received by		Date		Time	
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		Relinquished by		Date		Time		Received by		Date		Time	
Type III (Reduced non-CLP)		TX TRRP-13		Relinquished by		Date		Time		Received by		Date		Time	
Type IV (CLP SOW)		MA MCP CT RCP		Relinquished by		Date		Time		Received by		Date		Time	
				EDD Required? Yes No				Relinquished by Commercial Carrier:							
				If yes, format: _____				UPS FedEx Other <input checked="" type="checkbox"/>							
				Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt <u>66-18</u> °C							
				(If yes, indicate QC sample and submit triplicate sample volume.)											

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only

Group # 1377593

Sample # 6998549-73

Instructions on reverse side correspond with circled numbers

1378416

6998549-73

COC #318733

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only																				
Client: <u>STATEC CONSULTING</u>		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other:		Preservation Codes										FSC: _____																						
Project Name#: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; height: 100px;"> <tr><td style="width: 10%;">/</td><td style="width: 10%;">/</td><td style="width: 10%;">/</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										/	/	/																			SCR#: _____	
/	/	/																																				
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:				AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER P.M.										Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																						
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:		Total # of Containers _____												6 Remarks COC #3 OF 6																						
Name of state where samples were collected: <u>WASHINGTON</u>						3		Grab		Composite																												
2 Sample Identification		Collected		Soil <input checked="" type="checkbox"/>		Water		Other:		AMMONIA		NITRATE		HOLD FOR POSSIBLE ANALYSIS PER P.M.		3-DAY TAT																						
		Date	Time	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																								
<u>ASE-DB-06-9.0'</u>		<u>3/21/13</u>	<u>1615</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																								
<u>A1-DB-06a-1.5'</u>			<u>1640</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>																								
<u>A1-DB-06a-3.0'</u>			<u>1645</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>																								
<u>A1-DB-06a-4.5'</u>			<u>1650</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>																								
<u>A1-DB-06a-6.5'</u>			<u>1655</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>																								
<u>A1-DB-06b-1.5'</u>			<u>1700</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>																								
<u>A1-DB-06b-3.0'</u>			<u>1705</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>																								
<u>A1-DB-06b-4.5'</u>			<u>1710</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>																								
<u>A1-DB-06b-6.5'</u>			<u>1715</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>																								
<u>A1-DB-10a-1.5'</u>		<u>3/22/13</u>	<u>1840</u>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>																								

7 Turnaround Time (TAT) Requested (please circle)
 Standard SEE COMMENT Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: CONTACT STATEC PM
 E-mail address: MARISA.KAFFENBERGER@STATEC.COM

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

Relinquished by: <u>BOB MCALISTER - STATEC</u>	Date: <u>3/22/13</u>	Time: <u>1500</u>	Received by: <u>FED EX</u>	Date: <u>3/22/13</u>	Time: <u>1500</u>	9
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	
EDD Required? Yes No			Relinquished by Commercial Carrier:			
If yes, format: _____			UPS FedEx Other			
Site-Specific QC (MS/MSD/Dup)? Yes No			Temperature upon receipt <u>61.6-1.8</u> °C			
(If yes, indicate QC sample and submit triplicate sample volume.)						

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1377474 Sample # 621629 6246262-313
 Instructions on reverse side correspond with circled numbers
1378416 698549-73 CALL 8/26/13 P 11031614

COC #3187330

1 Client Information				4 Matrix			5 Analysis Requested								6 For Lab Use Only	
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____	Total # of Containers _____	Preservation Codes								FSC: _____		
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM								SCR#: _____		
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:												Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other		
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:												6 Remarks COC # 1 OF 9		
Name of state where samples were collected: <u>WASHINGTON</u>														3 Grab Composite		
2 Sample Identification		Collected														
		Date	Time													
<u>A1-DB-03a-1.5'</u>		<u>3/22/13</u>	<u>1335</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
<u>A1-DB-03a-3.0'</u>			<u>1340</u>													
<u>A1-DB-03a-4.5'</u>			<u>1345</u>													
<u>A1-DB-03a-6.5'</u>			<u>1350</u>													
<u>A1-DB-03b-1.5'</u>			<u>1310</u>													
<u>A1-DB-03b-3.0'</u>			<u>1315</u>													
<u>A1-DB-03b-4.5'</u>			<u>1320</u>													
<u>A1-DB-03b-6.5'</u>			<u>1325</u>													
<u>A1-DB-04a-1.5'</u>			<u>1410</u>													
<u>DUP-17</u>			<u>1415</u>													

7 Turnaround Time (TAT) Requested (please circle)

Standard SEE COMMENTS Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: CONTACT STANTEC P.M.

E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

Relinquished by <u>BOB MCALISTER - STANTEC</u>	Date <u>3/25/13</u>	Time <u>1500</u>	Received by <u>FED EX</u>	Date <u>3/25/13</u>	Time <u>1500</u>
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by <u>Case</u>	Date <u>3/24/13</u>	Time <u>1930</u>
EDD Required? Yes No			Relinquished by Commercial Carrier:		
If yes, format: _____			UPS _____ FedEx <input checked="" type="checkbox"/> Other _____		
Site-Specific QC (MS/MSD/Dup)? Yes No			Temperature upon receipt <u>17.108 °C</u>		
(If yes, indicate QC sample and submit triplicate sample volume.)					

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 137774 Sample # 6998549-73
Instructions on reverse side correspond with circled numbers.

COC #318733P

Client Information				Matrix		Analysis Requested					For Lab Use Only																			
Client: STANTEC CONSULTING				Acct. #: _____		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="5">Preservation Codes</th> </tr> <tr> <td>✓</td><td>✓</td><td>✓</td><td></td><td></td> </tr> </table>					Preservation Codes					✓	✓	✓			FSC: _____									
Preservation Codes																														
✓	✓	✓																												
Project Name#: BEE JAY SCALES				PWSID #: _____		SCR#: _____																								
Project Manager: MARISA KAFFENBERGER				P.O. #: _____		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Preservation Codes</th> </tr> <tr> <td>H=HCl</td><td>T=Thiosulfate</td> </tr> <tr> <td>N=HNO₃</td><td>B=NaOH</td> </tr> <tr> <td>S=H₂SO₄</td><td>O=Other</td> </tr> </table>					Preservation Codes		H=HCl	T=Thiosulfate	N=HNO ₃	B=NaOH	S=H ₂ SO ₄	O=Other												
Preservation Codes																														
H=HCl	T=Thiosulfate																													
N=HNO ₃	B=NaOH																													
S=H ₂ SO ₄	O=Other																													
Sampler: ERIC BASSETT / BOB MCALISTER				Quote #: _____		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Remarks</th> </tr> <tr> <td colspan="2" style="text-align: center;">COC # 2 OF 9</td> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>					Remarks		COC # 2 OF 9																	
Remarks																														
COC # 2 OF 9																														
Name of state where samples were collected: WASHINGTON				Total # of Containers: _____		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">AMMONIA</td> <td style="width: 20px; text-align: center;">NITRATE</td> <td style="width: 20px; text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER P.M.</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>					AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER P.M.																	
AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER P.M.																												
Sample Identification		Collected		Grab	Composite						Soil <input checked="" type="checkbox"/>	Water	Other																	
		Date	Time																											
A1-DB-04a - 3.0'		3/24/13	1420	X							X																			
A1-DB-04a - 4.5'			1425																											
A1-DB-04a - 6.5'			1430																											
A1-DB-05a - 1.0'			1445																											
A1-DB-05a - 2.5'			1450																											
A1-DB-05a - 4.0'			1500																											
A1-DB-05a - 5.5'			1505																											
A1-DB-05b - 1.0'			1515																											
A1-DB-05b - 2.5'			1520																											
A1-DB-05b - 4.0'			1525																											
7 Turnaround Time (TAT) Requested (please circle) Standard _____ Rush _____ (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC P.M.</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by: <u>BOB MCALISTER - STANTEC</u>		Date:	Time:	Received by:	Date:	Time:	9																			
				Relinquished by:		Date:	Time:	Received by:	Date:	Time:																				
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by:		Date:	Time:	Received by:	Date:	Time:																				
				Relinquished by:		Date:	Time:	Received by:	Date:	Time:																				
				Relinquished by:		Date:	Time:	Received by:	Date:	Time:																				
EDD Required? Yes No If yes, format: _____ Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, Indicate QC sample and submit triplicate sample volume.)				Relinquished by Commercial Carrier:		UPS	FedEx	Other	Temperature upon receipt <u>17-18</u> °C																					
				Relinquished by Commercial Carrier:		UPS	FedEx	Other	Temperature upon receipt <u>17-18</u> °C																					

Wendy Kozma

6 # 1378416

From: Kaffenberger, Marisa [marisa.kaffenberger@stantec.com]**Sent:** Wednesday, March 27, 2013 1:23 PM**To:** Wendy Kozma**Cc:** Bassett, Eric**Subject:** RE: Bee-Jay Scales Hold Requests

Here are the instructions so far. I'll send instructions for the rest of the samples on hold once we receive more of the 3-day TAT results. Please let me know if you have any questions!

Borehole ID	Constituent(s)	Sample Depths	COC #s	Recor
A2-DB-01a	NO ₃	1.5, 3.0, 4.5, 6.0	318733G	Do not a
A2-DB-02a	NO ₃	1.5, 3.0, 4.5, 6.0	318733F	Do not a
A5E-DB-01a	NO ₃	2.0, 4.5, 6.0, 9.5	318733B	Run wit
A5E-DB-07a	NO ₃ , NH ₃	2.0, 4.0, 6.0, 8.5	318733A; 318733B	Do not a
A1-DB-04a	NO ₃ , NH ₃	1.5, 3.0, 4.5, 6.5	318733O; 318733P	Run with standa
A1-DB-06a	NO ₃ , NH ₃	1.5, 3.0, 4.5, 6.5	318733K	Run wit
A1-DB-06b	NO ₃ , NH ₃	1.5, 3.0, 4.5, 6.5	318733K	Run wit
A1-DB-09a	NO ₃ , NH ₃	1.0, 2.5, 4.0, 5.5	318733I	Run wit
A1-DB-10a	NO ₃	1.5, 3.0, 5.0, 7.0	318733K; 318733L	Do not analyze; Dis
A6-DB-06a	NO ₃ , NH ₃	1.5, 3.0, 4.5, 6.5	318733D	Run wit
A6-DB-06b	NO ₃ , NH ₃	1.5, 3.0, 4.5, 6.5	318733D; 318733E	Do not analyze; Dis

Please note name change and new email

Marisa Kaffenberger (formerly Patterson)

Associate Engineer

Stantec

2321 Club Meridian Drive Suite E

Okemos MI 48864

Ph: (517) 349-9499 Ext. 275


Fx: (517) 349-6863

Cell: (517) 202-0459

marisa.kaffenberger@stantec.com

stantec.com

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 Please consider the environment before printing this email.

From: Wendy Kozma [mailto:WKozma@lancasterlabs.com]

Sent: Wednesday, March 27, 2013 12:21 PM

To: Kaffenberger, Marisa

Subject: RE: Bee-Jay Scales Hold Requests

An email with instructions including the COC# would be most helpful! Thanks Marisa.

3/28/2013

6*1378416

From: Kaffenberger, Marisa [<mailto:marisa.kaffenberger@stantec.com>]
Sent: Wednesday, March 27, 2013 12:20 PM
To: Wendy Kozma
Subject: Bee-Jay Scales Hold Requests


We have made decisions on some, but not all, of the hold requests we had indicated on the COCs. What is the best way to relay the instructions of what to run and what to dispose of to you? Do you need amended COCs, or would an email with the instructions be sufficient?

Thanks,
Marisa

Please note name change and new email

Marisa Kaffenberger (formerly Patterson)
Associate Engineer
Stantec
2321 Club Meridian Drive Suite E
Okemos MI 48864
Ph: (517) 349-9499 Ext. 275
Fx: (517) 349-6863
Cell: (517) 202-0459
marisa.kaffenberger@stantec.com
stantec.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but \geq IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>$ 25%	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

April 17, 2013

Project: Bee Jay Scales Site

Submittal Date: 04/09/2013
Group Number: 1381517
PO Number: 213202156.600.9301
Release Number: BEE JAY SCALES
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLD) #</u>
A4-DB-01e-0.5' Grab Soil	7015383
A4-DB-01e-2.5' Grab Soil	7015384
A5W-DB-02c-0.5' Grab Soil	7015385
A5W-DB-02c-2.5' Grab Soil	7015386
A5S-DB-03a-1.5' Grab Soil	7015387
A5S-DB-03a-3.0' Grab Soil	7015388
A5S-DB-03a-4.5' Grab Soil	7015389
A5S-DB-03a-6.5' Grab Soil	7015390
A1-DB-03b-1.5' Grab Soil	7015391
A1-DB-03b-3.0' Grab Soil	7015392
A1-DB-03b-4.5' Grab Soil	7015393
A1-DB-03b-6.5' Grab Soil	7015394
A1-DB-05b-1.0' Grab Soil	7015395
A1-DB-05b-2.5' Grab Soil	7015396
A1-DB-05b-4.0' Grab Soil	7015397
A1-DB-05b-5.5' Grab Soil	7015398
A1-DB-05c-1.0' Grab Soil	7015399
A1-DB-05c-2.5' Grab Soil	7015400
A1-DB-05c-4.0' Grab Soil	7015401
A1-DB-05c-5.5' Grab Soil	7015402
A1-DB-08a-1.0' Grab Soil	7015403
A1-DB-08a-2.5' Grab Soil	7015404
A1-DB-08a-4.0' Grab Soil	7015405
A1-DB-08a-5.5' Grab Soil	7015406
A1-DB-12b-1.0' Grab Soil	7015407
A1-DB-12b-2.5' Grab Soil	7015408
A1-DB-12b-4.0' Grab Soil	7015409
A6-DB-02-1.0' Grab Soil	7015410
A6-DB-02-2.5' Grab Soil	7015411
A6-DB-02-4.0' Grab Soil	7015412
A6-DB-02-5.5' Grab Soil	7015413

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO STANTEC International, Inc.

Attn: Marisa Kaffenberger

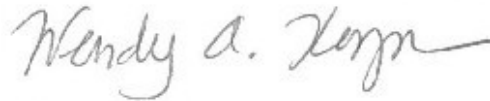
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ELECTRONIC COPY TO Stantec Consulting Services

Attn: Eric Bassett

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Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: A4-DB-01e-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015383
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 11:15 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	96.5	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	11.9	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/21/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004A	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A4-DB-01e-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015384
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 11:20 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry					
		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	99.1	5
	Reporting limits were raised due to interference from the sample matrix.				
Wet Chemistry					
		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	14.2	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/21/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004A	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A5W-DB-02c-0.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015385
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 16:15 by EB

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Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 24.1	mg/kg 0.88	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 9.3	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/27/13 at 09:25. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201A	04/13/2013 12:39	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13105820004A	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A5W-DB-02c-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015386
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 16:20 by EB

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Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	113 mg/kg	9.0 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	12.0 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/27/13 at 09:25. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201A	04/12/2013 23:01	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13105820004A	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A5S-DB-03a-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015387
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 10:50 by EB

STANTEC International, Inc.

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Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	9.6 mg/kg	0.89 mg/kg	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10.8 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201A	04/13/2013 13:28	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13105820004A	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A5S-DB-03a-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015388
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 11:00 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	7.9	0.97	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.3	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13101101201A	04/13/2013 13:44	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13105820004A	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A5S-DB-03a-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015389
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 11:05 by EB

STANTEC International, Inc.

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Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	14.7 mg/kg	0.95 mg/kg	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.2 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13101101201A	04/13/2013 13:59	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13105820004A	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A5S-DB-03a-6.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015390
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/23/2013 11:10 by EB

STANTEC International, Inc.

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Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	112 mg/kg	10.6 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	25.4 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201A	04/13/2013 00:32	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-03b-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015391
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 13:10 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	308	9.3	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,090	98.4	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.6	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201A	04/13/2013 00:47	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-03b-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015392
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 13:15 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	437	19.1	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	487	102	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.4	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201A	04/13/2013 15:30	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-03b-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015393
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 13:20 by EB

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Submitted: 04/09/2013 16:20

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	373	19.4	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	104	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.5	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201A	04/13/2013 15:06	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-03b-6.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015394
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 13:25 by EB

STANTEC International, Inc.

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Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	283 mg/kg	9.7 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	104 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.4 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201A	04/13/2013 01:32	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13101101201A	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-05b-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015395
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 15:15 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

2321 Club Meridian Drive

Reported: 04/17/2013 14:16

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	578	46.6	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	99.4	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	14.5	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 14:14	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-05b-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015396
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 15:20 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	847 mg/kg	48.0 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	102 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.0 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 12:32	Christopher D Meeks	50
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-05b-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015397
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 15:25 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	533	20.3	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	109	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.2	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 12:48	Christopher D Meeks	20
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-05b-5.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015398
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 15:30 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

2321 Club Meridian Drive

Reported: 04/17/2013 14:16

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	184 mg/kg	10.0 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	108 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.1 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 13:04	Christopher D Meeks	10
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-05c-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015399
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 15:40 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	6.1	0.99	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	137 J	106	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.9	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 13:53	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-05c-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015400
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 15:45 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	16.2	1.0	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	107	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.8	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 14:09	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-05c-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015401
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 15:50 by EB

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Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	9.5 mg/kg	1.0 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	107 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.5 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13102102201A	04/13/2013 15:51	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13102102201A	04/12/2013 08:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-05c-5.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015402
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/22/2013 15:55 by EB

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Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	14.8 mg/kg	1.0 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	111 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	23.6 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13102102201A	04/13/2013 16:37	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13102102201A	04/12/2013 08:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13105820004B	04/15/2013 19:16	Scott W Freisher	1

Sample Description: A1-DB-08a-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015403
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 15:00 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	5.2 mg/kg	0.94 mg/kg	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	101 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.5 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13102102201A	04/13/2013 16:52	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13102102201A	04/12/2013 08:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A1-DB-08a-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015404
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 15:05 by EB

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Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	5.9	1.1	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	113	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	24.6	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13102102201A	04/13/2013 17:07	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13102102201A	04/12/2013 08:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A1-DB-08a-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015405
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 15:10 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	11.1	0.98	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	105	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.7	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13102102201A	04/13/2013 17:22	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13102102201A	04/12/2013 08:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A1-DB-08a-5.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015406
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/21/2013 15:15 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	70.5 mg/kg	4.8 mg/kg	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	103 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.6 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/23/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13102102201A	04/13/2013 17:38	Christopher D Meeks	5
01352	Deionized Water Extraction	EPA 300.0	1	13102102201A	04/12/2013 08:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A1-DB-12b-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015407
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 09:10 by EB

STANTEC International, Inc.

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Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	143 J	99.6	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	14.7	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/26/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A1-DB-12b-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015408
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 09:15 by EB

STANTEC International, Inc.

Submitted: 04/09/2013 16:20

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Reported: 04/17/2013 14:16

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	122 J	97.3	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	12.6	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/26/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13100057301A	04/10/2013 18:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A1-DB-12b-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015409
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/25/2013 09:20 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry					
		SM 4500-NH3 B/C modified-1997	mg/kg	mg/kg	
00573	Ammonia Nitrogen	7664-41-7	N.D.	106	5
	Reporting limits were raised due to interference from the sample matrix.				
Wet Chemistry					
		SM 2540 G-1997	%	%	
00111	Moisture	n.a.	19.6	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/26/13 at 09:30. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13101057301A	04/11/2013 17:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A6-DB-02-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015410
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:00 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 24.9	mg/kg 0.92	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 13.7	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/26/13 at 09:20. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 14:25	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A6-DB-02-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015411
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:05 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 22.8	mg/kg 1.0	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 20.7	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/26/13 at 09:20. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 14:42	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A6-DB-02-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015412
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:15 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 8.7	mg/kg 0.98	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 18.9	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/26/13 at 09:20. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 14:58	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Sample Description: A6-DB-02-5.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7015413
LLI Group # 1381517
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 03/19/2013 13:20 by EB

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 04/09/2013 16:20

Suite E

Reported: 04/17/2013 14:16

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	3.7	1.0	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.3	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259
This sample was originally submitted to the laboratory on 3/26/13 at 09:20. We received authorization for further testing on 4/09/13.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13101101201B	04/13/2013 15:14	Christopher D Meeks	1
01352	Deionized Water Extraction	EPA 300.0	1	13101101201B	04/11/2013 15:00	Carolyn M Mastropietro	1
00111	Moisture	SM 2540 G-1997	1	13106820003A	04/16/2013 18:13	Scott W Freisher	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 04/17/13 at 02:16 PM

Group Number: 1381517

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13101101201A Nitrate Nitrogen by IC (solid)	Sample number(s): 7015385-7015394 N.D.	0.80	mg/kg	97		90-110		
Batch number: 13101101201B Nitrate Nitrogen by IC (solid)	Sample number(s): 7015395-7015400,7015410-7015413 N.D.	0.80	mg/kg	97		90-110		
Batch number: 13102102201A Nitrate Nitrogen by IC (solid)	Sample number(s): 7015401-7015406 N.D.	0.80	mg/kg	108		90-110		
Batch number: 13100057301A Ammonia Nitrogen	Sample number(s): 7015383-7015384,7015391-7015408 N.D.	17.0	mg/kg	98		89-101		
Batch number: 13101057301A Ammonia Nitrogen	Sample number(s): 7015409 N.D.	17.0	mg/kg	98		89-101		
Batch number: 13105820004A Moisture	Sample number(s): 7015383-7015389			100		99-101		
Batch number: 13105820004B Moisture	Sample number(s): 7015390-7015402			100		99-101		
Batch number: 13106820003A Moisture	Sample number(s): 7015403-7015413			100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13101101201A Nitrate Nitrogen by IC (solid)	Sample number(s): 7015385-7015394 23*		90-110	UNSPK:	7015385	BKG: 7015385 21.9	7015385 22.8	4	20
Batch number: 13101101201B Nitrate Nitrogen by IC (solid)	Sample number(s): 7015395-7015400,7015410-7015413 1039 (2)		90-110	UNSPK:	7015395	BKG: 7015395 494	7015395 538	9	20
Batch number: 13102102201A Nitrate Nitrogen by IC (solid)	Sample number(s): 7015401-7015406 113*		90-110	UNSPK:	7015401	BKG: 7015401 7.6	7015401 7.6	0	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 04/17/13 at 02:16 PM

Group Number: 1381517

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Batch number: 13100057301A Ammonia Nitrogen	94	94	72-116	0	5	N.D.	N.D.	0 (1)	10
Batch number: 13101057301A Ammonia Nitrogen	96	97	72-116	1	5	N.D.	N.D.	0 (1)	10
Batch number: 13105820004A Moisture						BKG: 7015389 16.2	16.6	2	13
Batch number: 13105820004B Moisture						BKG: 7015390 25.4	24.4	4	13
Batch number: 13106820003A Moisture						BKG: 7015405 18.7	19.8	6	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



Lancaster Laboratories

Environmental Analysis Request/Chain of Custody

Acct. # 11842 For Eurofins Lancaster Laboratories use only
Group # 1377974 Sample # 6496267-313
Instructions on reverse side correspond with circled numbers.
1381517 201413 7015383-413

COC # 318733 ^(w)

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only			
Client: <u>STATEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/>		Ground <input type="checkbox"/>		Surface <input type="checkbox"/>		Preservation Codes										FSC:	
Project Name#: <u>BEE JAY SCALES</u>		PWSID #:		Potable <input type="checkbox"/>		NPDES <input type="checkbox"/>		Other:												SCR#:	
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:		Water <input type="checkbox"/>																Preservation Codes	
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:		Soil <input checked="" type="checkbox"/>																H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
Name of state where samples were collected: <u>WASHINGTON</u>				3 Grab		Composite		Total # of Containers												6 Remarks	
2 Sample Identification				Collected																	
		Date		Time																	
<u>A4-DB-01b-2.5'</u>		<u>3/25/13</u>		<u>1110</u>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<u>1</u>		<u>AMMONIA</u>		<u>NITRATE</u>		<u>HOLD FOR POSSIBLE ANALYSIS PER P.M.</u>					
<u>A4-DB-01e-0.5'</u>				<u>1115</u>		<input type="checkbox"/>						<input checked="" type="checkbox"/>								<u>3-DAY TAT</u>	
<u>A4-DB-01e-2.5'</u>				<u>1120</u>		<input type="checkbox"/>						<input checked="" type="checkbox"/>									
<u>A4-DB-01c-0.5'</u>				<u>1125</u>		<input type="checkbox"/>						<input checked="" type="checkbox"/>									
<u>DUP-26</u>				<u>1130</u>		<input type="checkbox"/>						<input checked="" type="checkbox"/>								<u>3-DAY TAT</u>	
<u>A4-DB-01c-2.5'</u>				<u>1135</u>		<input type="checkbox"/>						<input checked="" type="checkbox"/>									
<u>A4-DB-01f-0.5'</u>				<u>1140</u>		<input type="checkbox"/>						<input checked="" type="checkbox"/>									
<u>A4-DB-01f-2.5'</u>				<u>1145</u>		<input type="checkbox"/>						<input checked="" type="checkbox"/>									
<u>EB032513</u>				<u>1200</u>		<input checked="" type="checkbox"/>				<u>3</u>		<input checked="" type="checkbox"/>								<u>STANDARD TAT</u>	

7 Turnaround Time (TAT) Requested (please circle)
 Standard SEE COMMENTS Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: CONTACT STATEC P.M.
 E-mail address: MARISA.KAFFENBERGER@STATEC.COM

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

Relinquished by <u>BOB MCALISTER - STATEC</u>	Date <u>3/25/13</u>	Time <u>1520</u>	Received by <u>FED EX</u>	Date <u>3/25/13</u>	Time <u>1500</u>	9
Relinquished by	Date	Time	Received by	Date	Time	
Relinquished by	Date	Time	Received by	Date	Time	
Relinquished by	Date	Time	Received by	Date	Time	
Relinquished by	Date	Time	Received by <u>C. Fisher</u>	Date <u>3/26/13</u>	Time <u>0830</u>	
EDD Required? Yes No			Relinquished by Commercial Carrier:			
If yes, format: _____			UPS _____ FedEx <input checked="" type="checkbox"/> Other _____			
Site-Specific QC (MS/MSD/Dup)? Yes No			Temperature upon receipt <u>1.7-1.8 °C</u>			
(If yes, indicate QC sample and submit triplicate sample volume.)						

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1381517 Sample # 7015383-413

COC #318733Y

Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analysis Requested						For Lab Use Only																																																																																																																																																																																																																		
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Project Name/ #: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1" style="width: 100%; height: 100%; text-align: center;"> <tr> <td style="width: 10%;">/</td><td style="width: 10%;">/</td><td style="width: 10%;">/</td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td> </tr> <tr> <td colspan="10" style="font-size: small;">AMMONIA</td> </tr> <tr> <td colspan="10" style="font-size: small;">NITRATE</td> </tr> <tr> <td colspan="10" style="font-size: small;">HOLD FOR POSSIBLE ANALYSIS PER PA</td> </tr> </table>						/	/	/								AMMONIA										NITRATE										HOLD FOR POSSIBLE ANALYSIS PER PA										SCR#: _____																																																																																																																																																																										
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Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:	<table border="1" style="width: 100%; height: 100%; text-align: center;"> <tr> <td colspan="2" style="font-size: small;">H=HCl</td> <td colspan="2" style="font-size: small;">T=Thiosulfate</td> </tr> <tr> <td colspan="2" style="font-size: small;">N=HNO₃</td> <td colspan="2" style="font-size: small;">B=NaOH</td> </tr> <tr> <td colspan="2" style="font-size: small;">S=H₂SO₄</td> <td colspan="2" style="font-size: small;">O=Other</td> </tr> </table>						H=HCl		T=Thiosulfate		N=HNO ₃		B=NaOH		S=H ₂ SO ₄		O=Other		6 Remarks <u>COC #2 of 6</u>																																																																																																																																																																																																									
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Name of state where samples were collected: <u>WASHINGTON</u>					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Sample Identification</th> <th colspan="2" style="width: 10%;">Collected</th> <th style="width: 5%;">Grab</th> <th style="width: 5%;">Composite</th> <th style="width: 5%;">Soil</th> <th style="width: 5%;">Water</th> <th style="width: 5%;">Other</th> <th style="width: 5%;">Total # of Containers</th> <th style="width: 5%;">AMMONIA</th> <th style="width: 5%;">NITRATE</th> <th style="width: 5%;">HOLD FOR POSSIBLE ANALYSIS PER PA</th> <th style="width: 5%;"></th> <th style="width: 5%;"></th> <th style="width: 5%;"></th> <th style="width: 5%;"></th> <th style="width: 5%;"></th> <th style="width: 5%;"></th> </tr> <tr> <td></td> <th>Date</th> <th>Time</th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </thead> <tbody> <tr> <td><u>ASW-DB-02a-2.5'</u></td> <td><u>3/25/13</u></td> <td><u>1600</u></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td style="text-align: center;">-</td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>ASW-DB-02b-0.5'</u></td> <td></td> <td><u>1540</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>DUP-28</u></td> <td></td> <td><u>1545</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>ASW-DB-02c-2.5'</u></td> <td></td> <td><u>1550</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>ASW-DB-02c-0.5'</u></td> <td></td> <td><u>1615</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>ASW-DB-02d-2.5'</u></td> <td></td> <td><u>1620</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>ASW-DB-02d-0.5'</u></td> <td></td> <td><u>1530</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>ASW-DB-02e-2.5'</u></td> <td></td> <td><u>1535</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>ASW-DB-02e-0.5'</u></td> <td></td> <td><u>1605</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>ASW-DB-02e-2.5'</u></td> <td></td> <td><u>1610</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Sample Identification	Collected		Grab	Composite	Soil	Water	Other	Total # of Containers	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PA								Date	Time																<u>ASW-DB-02a-2.5'</u>	<u>3/25/13</u>	<u>1600</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			-		<input checked="" type="checkbox"/>								<u>ASW-DB-02b-0.5'</u>		<u>1540</u>								<input checked="" type="checkbox"/>								<u>DUP-28</u>		<u>1545</u>								<input checked="" type="checkbox"/>								<u>ASW-DB-02c-2.5'</u>		<u>1550</u>								<input checked="" type="checkbox"/>								<u>ASW-DB-02c-0.5'</u>		<u>1615</u>								<input checked="" type="checkbox"/>								<u>ASW-DB-02d-2.5'</u>		<u>1620</u>								<input checked="" type="checkbox"/>								<u>ASW-DB-02d-0.5'</u>		<u>1530</u>								<input checked="" type="checkbox"/>								<u>ASW-DB-02e-2.5'</u>		<u>1535</u>								<input checked="" type="checkbox"/>								<u>ASW-DB-02e-0.5'</u>		<u>1605</u>								<input checked="" type="checkbox"/>								<u>ASW-DB-02e-2.5'</u>		<u>1610</u>								<input checked="" type="checkbox"/>							
Sample Identification	Collected		Grab	Composite			Soil	Water	Other	Total # of Containers	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PA																																																																																																																																																																																																																	
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<u>ASW-DB-02a-2.5'</u>	<u>3/25/13</u>	<u>1600</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			-		<input checked="" type="checkbox"/>																																																																																																																																																																																																																		
<u>ASW-DB-02b-0.5'</u>		<u>1540</u>										<input checked="" type="checkbox"/>																																																																																																																																																																																																																		
<u>DUP-28</u>		<u>1545</u>										<input checked="" type="checkbox"/>																																																																																																																																																																																																																		
<u>ASW-DB-02c-2.5'</u>		<u>1550</u>										<input checked="" type="checkbox"/>																																																																																																																																																																																																																		
<u>ASW-DB-02c-0.5'</u>		<u>1615</u>										<input checked="" type="checkbox"/>																																																																																																																																																																																																																		
<u>ASW-DB-02d-2.5'</u>		<u>1620</u>										<input checked="" type="checkbox"/>																																																																																																																																																																																																																		
<u>ASW-DB-02d-0.5'</u>		<u>1530</u>										<input checked="" type="checkbox"/>																																																																																																																																																																																																																		
<u>ASW-DB-02e-2.5'</u>		<u>1535</u>								<input checked="" type="checkbox"/>																																																																																																																																																																																																																				
<u>ASW-DB-02e-0.5'</u>		<u>1605</u>								<input checked="" type="checkbox"/>																																																																																																																																																																																																																				
<u>ASW-DB-02e-2.5'</u>		<u>1610</u>								<input checked="" type="checkbox"/>																																																																																																																																																																																																																				

7 Turnaround Time (TAT) Requested (please circle)

Standard (SEE COMMENTS) Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: CONTACT STANTEC PA

E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

Relinquished by: <u>[Signature]</u>	Date: <u>3/26/13</u>	Time: <u>1500</u>	Received by: <u>FED EX</u>	Date: <u>3/26/13</u>	Time: <u>1520</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS FedEx Other

Temperature upon receipt 1.1-1.3 °C



Lancaster Laboratories

Environmental Analysis Request/Chain of Custody

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377974 Sample # 6716262-313
 Instructions on reverse side correspond with circled numbers.
1381517 NOV 19 13 7015383-413

COC #3187335

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only																															
Client: STANTEC CONSULTING		Acct. #:		Sediment <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Other: <input type="checkbox"/> Total # of Containers:				Preservation Codes								FSC: _____																															
Project Name/ #: BEE JAY SCALES		PWSID #:						<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">AMMONIA</td><td style="width: 15%;">NITRATE</td><td style="width: 15%;">HOLD FOR POSSIBLE ANALYSIS PER PM</td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td><td style="width: 15%;"> </td> </tr> </table>								AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM																			SCR#: _____										
AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM																																													
Project Manager: MARISA KAFFENBERGER		P.O. #:														Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other		6 Remarks COC # 5 OF 9 3-DAY TAT																													
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:																																													
Name of state where samples were collected: WASHINGTON				3 Grab <input type="checkbox"/> Composite <input type="checkbox"/> Soil <input checked="" type="checkbox"/>																																											
2 Sample Identification		Collected																																													
		Date	Time																																												
ASS-DB-03-3.0'		3/25/13	1030																																												
DUP-20			1035																																												
ASS-DB-03-4.5'			1040																																												
ASS-DB-03-6.5'			1045																																												
ASS-DB-03a-1.5'			1050																																												
ASS-DB-03a-3.0'			1100																																												
ASS-DB-03a-4.5'			1105																																												
ASS-DB-03a-6.5'			1110																																												
ASS-DB-01a-1.5'			1120																																												
ASS-DB-01a-3.0'			1125																																												
7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENTS</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: CONTACT STANTEC PM E-mail address: MARISA.KAFFENBERGER@STANTEC.COM				Relinquished by: <u>BOB MCALISTER - STANTEC</u>		Date: <u>3/25/13</u>	Time: <u>1500</u>	Received by: <u>FED EX</u>		Date: <u>3/25/13</u>	Time: <u>1520</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Relinquished by:</td><td>Date:</td><td>Time:</td><td>Received by:</td><td>Date:</td><td>Time:</td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>						Relinquished by:	Date:	Time:	Received by:	Date:	Time:																								
Relinquished by:	Date:	Time:	Received by:	Date:	Time:																																										
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:																																				
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:																																				
				Relinquished by:		Date:	Time:	Received by:		Date:	Time:																																				
				Relinquished by:		Date:	Time:	Received by: <u>CCisher</u>		Date: <u>3/26/13</u>	Time: <u>0930</u>																																				
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				EDD Required? Yes No If yes, format: _____ Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____ Temperature upon receipt: <u>17-18 °C</u>																																							



Lancaster Laboratories

Environmental Analysis Request/Chain of Custody

Acct. # 11842

For Eurofins Lancaster Laboratories use only
Group # 1377974 Sample # 621629 6946262-313

COC # 3187330

Instructions on reverse side correspond with circled numbers.
1381517 ANC 4/9/13 CALL 3/26/13 7015383-413

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only																							
Client: <u>STANTEC CONSULTING</u>		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:	Total # of Containers	Preservation Codes										FSC:	SCR#:																								
Project Name/ID: <u>BEE JAY SCALES</u>		PWSID #:				<table border="1"> <tr><td>1</td><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>AMMONIA</td><td>NITRATE</td><td>HOLD FOR POSSIBLE ANALYSIS PER PH</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										1	1	1										AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PH										Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
1	1	1																																							
AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PH																																							
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:												6 Remarks																											
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:												COC # 1 OF 9																											
Name of state where samples were collected: <u>WASHINGTON</u>				3 Composite																																					
2 Sample Identification		Collected		Grab	Composite																																				
		Date	Time																																						
<u>A1-DB-03a-1.5'</u>		<u>3/22/13</u>	<u>1335</u>																																						
<u>A1-DB-03a-3.0'</u>			<u>1340</u>																																						
<u>A1-DB-03a-4.5'</u>			<u>1345</u>																																						
<u>A1-DB-03a-6.5'</u>			<u>1350</u>																																						
<u>A1-DB-03b-1.5'</u>			<u>1310</u>																																						
<u>A1-DB-03b-3.0'</u>			<u>1315</u>																																						
<u>A1-DB-03b-4.5'</u>			<u>1320</u>																																						
<u>A1-DB-03b-6.5'</u>			<u>1325</u>																																						
<u>A1-DB-04a-1.5'</u>			<u>1410</u>																																						
<u>DUP-17</u>			<u>1415</u>																																						

7 Turnaround Time (TAT) Requested (please circle)
 Standard SEE COMMENTS Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
 Date results are needed: CONTACT STANTEC P.M.
 E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

Relinquished by <u>BOB MCALISTER - STANTEC</u>	Date <u>3/25/13</u>	Time <u>1500</u>	Received by <u>FED EX</u>	Date <u>3/25/13</u>	Time <u>1500</u>
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by <u>CASH</u>	Date <u>3/26/13</u>	Time <u>0930</u>
EDD Required? Yes No			Relinquished by Commercial Carrier:		
If yes, format: _____			UPS _____ FedEx <input checked="" type="checkbox"/> Other _____		
Site-Specific QC (MS/MSD/Dup)? Yes No			Temperature upon receipt <u>17-18</u> °C		
(If yes, indicate QC sample and submit triplicate sample volume.)					

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 137779 Sample # 6046262313 7015383-413
 Instructions on reverse side correspond with circled numbers.
1381517 AK04/4/13 CALL 3/26/13

COC #318733P

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only																						
Client: <u>STANTEC CONSULTING</u>		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:		Preservation Codes										FSC: _____																								
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:														SCR#: _____																								
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:														Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																								
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:														6 Remarks COC #2 OF 9																								
Name of state where samples were collected: <u>WASHINGTON</u>				3																																				
2 Sample Identification			Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM																											
Date	Time																																							
<u>A1-DB-04a - 3.0'</u>	<u>3/22/13</u>	<u>1420</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																																			
<u>A1-DB-04a - 4.5'</u>		<u>1425</u>																																						
<u>A1-DB-04a - 6.5'</u>		<u>1430</u>																																						
<u>A1-DB-05a - 1.0'</u>		<u>1445</u>																																						
<u>A1-DB-05a - 2.5'</u>		<u>1450</u>																																						
<u>A1-DB-05a - 4.0'</u>		<u>1500</u>																																						
<u>A1-DB-05a - 5.5'</u>		<u>1505</u>																																						
<u>A1-DB-05b - 1.0'</u>		<u>1515</u>																																						
<u>A1-DB-05b - 2.5'</u>		<u>1520</u>																																						
<u>A1-DB-05b - 4.0'</u>		<u>1525</u>																																						

7 Turnaround Time (TAT) Requested (please circle)				Date		Time		Received by		Date		Time			
Standard		Rush													
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by <u>BOB MCALISTER - STANTEC</u>		<u>3/25/13 1500</u>		<u>FED EX</u>		<u>3/25/13</u>		<u>1500</u>			
Date results are needed: <u>CONTACT STANTEC PM</u>				Relinquished by				Received by							
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by				Received by							
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by				Received by							
				Relinquished by				Received by		<u>C. Asher</u>		<u>3/26/13</u>		<u>0930</u>	
				EDD Required? Yes No		If yes, format: _____		Site-Specific QC (MS/MSD/Dup)? Yes No		(If yes, indicate QC sample and submit triplicate sample volume.)		Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____			
Temperature upon receipt <u>16.7-1.8</u> °C															

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 137774 Sample # 6946262-3+3
 Instructions on reverse side correspond with dated numbers.
1381517 MO 1/19/13 7015383-413

COC #318733

1 Client Information				4 Matrix				6 Analysis Requested						For Lab Use Only		
Client: <u>STANTEC CONSULTING</u>		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other:	Total # of Containers AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER PM	Preservation Codes						FSC: _____				
Project Name/#: <u>BEE JAY SCALES</u>		PWSID #:				Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other						SCR#: _____				
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:				6) Remarks COC # 3 OF 9 3-DAY TAT ↓ STANDARD TAT										
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:														
Name of state where samples were collected: <u>WASHINGTON</u>																
2 Sample Identification			3 Collected		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM			
		Date	Time													
<u>A1-DB-055-5.5'</u>		<u>4/22/13</u>	<u>1530</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											
<u>A1-DB-056-1.0'</u>			<u>1540</u>													
<u>A1-DB-056-2.5'</u>			<u>1545</u>													
<u>A1-DB-056-4.0'</u>			<u>1550</u>													
<u>A1-DB-056-5.5'</u>			<u>1555</u>													
<u>A1-DB-056-1.0'</u>			<u>1605</u>													
<u>A1-DB-056-2.5'</u>			<u>1610</u>													
<u>A1-DB-056-4.0'</u>			<u>1615</u>													
<u>A1-DB-056-5.5'</u>			<u>1620</u>													
<u>DUP-18</u>			<u>1625</u>													
7) Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENT</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by: <u>BOB MCALISTER - STANTEC</u>		Date: <u>4/22/13</u>	Time: <u>1520</u>	Received by: <u>FED EX</u>		Date: <u>4/22/13</u>	Time: <u>1500</u>					
Date results are needed: <u>CONTACT STANTEC PM</u>				Relinquished by:		Date:	Time:	Received by:		Date:	Time:					
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by:		Date:	Time:	Received by:		Date:	Time:					
8) Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by:		Date:	Time:	Received by:		Date:	Time:					
				EDD Required? Yes No		If yes, format:		Relinquished by Commercial Carrier:								
				Site-Specific QC (MS/MSD/Dup)? Yes No		(If yes, indicate QC sample and submit triplicate sample volume.)		UPS _____ FedEx _____ Other _____		Temperature upon receipt _____ °C						

03/26/2013 07:24 5098374647 BW GRAPEVINE INN PAGE 04/10

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1377593 Sample # 671578-613
Instructions on reverse side correspond with circled numbers.
1381517 AD04613 7015383-413

COC #318733I

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only	
Client: <u>STANTEC CONSULTING</u>		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____		Total # of Containers		Preservation Codes AMMONIA NITRATE HOLD FOR POSSIBLE ANALYSIS PER DM										FSC: _____	
Project Name #: <u>BEE JAY SCALES</u>		PWSID #:						Remarks COC # 1 OF 6 3-DAY TAT											
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #:																	
Sampler: <u>ERIC BASSETT / BOB MCALISTER</u>		Quote #:																	
Name of state where samples were collected: <u>WASHINGTON</u>				3 Grab <input checked="" type="checkbox"/> Composite <input type="checkbox"/>		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other													
2 Sample Identification		Collected																	
Date	Time	Grab	Composite	Soil	Water	Other:													
<u>A1-DB-09a-1.0'</u>	<u>3/21/13 1400</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>															
<u>A1-DB-09a-2.5'</u>	<u>1405</u>	<input type="checkbox"/>	<input type="checkbox"/>																
<u>A1-DB-09a-4.0'</u>	<u>1420</u>	<input type="checkbox"/>	<input type="checkbox"/>																
<u>A1-DB-09a-5.5'</u>	<u>1425</u>	<input type="checkbox"/>	<input type="checkbox"/>																
<u>A1-DB-13-1.0'</u>	<u>1435</u>	<input type="checkbox"/>	<input type="checkbox"/>																
<u>A1-DB-13-2.5'</u>	<u>1440</u>	<input type="checkbox"/>	<input type="checkbox"/>																
<u>A1-DB-13-4.0'</u>	<u>1445</u>	<input type="checkbox"/>	<input type="checkbox"/>																
<u>A1-DB-13-5.5'</u>	<u>1450</u>	<input type="checkbox"/>	<input type="checkbox"/>																
<u>A1-DB-08a-1.0'</u>	<u>1500</u>	<input type="checkbox"/>	<input type="checkbox"/>																
<u>A1-DB-08a-2.5'</u>	<u>1505</u>	<input type="checkbox"/>	<input type="checkbox"/>																

7 Turnaround Time (TAT) Requested (please circle)

Standard SEE COMMENTS Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: CONTACT STANTEC PM

E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

Relinquished by <u>BOB MCALISTER - STANTEC</u>	Date <u>3/22/13</u>	Time <u>1500</u>	Received by <u>FED EX</u>	Date <u>3/22/13</u>	Time <u>1500</u>
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

EDD Required? Yes No

If yes, format: _____

Relinquished by Commercial Carrier: _____

UPS _____ FedEx Other

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Temperature upon receipt 16-18 °C

1 Client Information				4 Matrix				5 Analysis Requested								6 Remarks																																																													
Client: STANTEC CONSULTING		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:		Total # of Containers		Preservation Codes								For Lab Use Only																																																													
Project Name/#: BEE JAY SCALES		PWSID #:						<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td><td style="width:5%;">/</td></tr> <tr><td colspan="15" style="text-align: center;">AMMONIA</td></tr> <tr><td colspan="15" style="text-align: center;">NITRATE</td></tr> <tr><td colspan="15" style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM</td></tr> </table>								/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	AMMONIA															NITRATE															HOLD FOR POSSIBLE ANALYSIS PER PM															FSC: _____	
/	/	/	/													/	/	/	/	/	/	/	/	/	/	/																																																			
AMMONIA																																																																													
NITRATE																																																																													
HOLD FOR POSSIBLE ANALYSIS PER PM																																																																													
Project Manager: MARISA KAFFENBERGER		P.O. #:		SCR#: _____		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																																																							
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:																																																																											
Name of state where samples were collected: WASHINGTON				6 Remarks COC #2 OF 6 3-DAY TAT STANDARD TAT 3 DAY TAT																																																																									
2 Sample Identification		3 Collected				Grab	Composite	Soil	Water	Other:	AMMONIA	NITRATE	HOLD FOR POSSIBLE ANALYSIS PER PM	/	/	/	/	/	/	/	/																																																								
Date		Time																																																																											
A1-DB-08a-4.0'		3/21/13 1510		X		X			X	X	X																																																																		
A1-DB-08a-5.5'		1515							X	X	X																																																																		
ASE-DB-04-2.0'		1535							X	X	X																																																																		
ASE-DB-04-4.5'		1545							X	X	X																																																																		
ASE-DB-04-7.0'		1550							X	X	X																																																																		
ASE-DB-04-9.5'		1555							X	X	X																																																																		
DUP-13		1540							X	X	X																																																																		
ASE-DB-06-2.0'		1600							X	X	X																																																																		
ASE-DB-06-4.0'		1605							X	X	X																																																																		
ASE-DB-06-6.5'		1610							X	X	X																																																																		
7 Turnaround Time (TAT) Requested (please circle) Standard <u>SEE COMMENT</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: <u>CONTACT STANTEC PM</u> E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by: <u>BOB MCALISTER - STANTEC</u>		Date: <u>3/22/13</u> Time: <u>1500</u>		Received by: <u>FED EX</u>		Date: <u>3/22/13</u> Time: <u>1500</u>																																																																			
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by:		Date:		Received by:		Date:																																																																			
				Relinquished by:		Date:		Received by:		Date:																																																																			
				Relinquished by:		Date:		Received by:		Date:																																																																			
				Relinquished by:		Date:		Received by:		Date:																																																																			
				Relinquished by:		Date:		Received by:		Date:																																																																			
				EDD Required? Yes No If yes, format: _____				Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____																																																																					
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt <u>16.18</u> °C																																																																					

Rec'd revised COC 3/20 per M. Haffenberger.

UM 3/20

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842

For Eurofins Lancaster Laboratories use only
 Group # 1376001 Sample # 6989092-126
Instructions on reverse side correspond with colored numbers

COC #318737

1381517 7015383-413

PAGE 05/05

BW GRAPEVINE INN

5098374647

03/19/2013 18:21

1 Client Information				4 Matrix				5 Analysis Requested				For Lab Use Only											
Client: STANTEC CONSULTING		Acct. #:		Sediment <input type="checkbox"/>		Ground <input type="checkbox"/>		Surface <input type="checkbox"/>		Preservation Codes		FSC:											
Project Name: SEE JAY SCALES		PWSID #:		Potable <input type="checkbox"/>		Water <input type="checkbox"/>		NPDES <input type="checkbox"/>		AMMONIA		SDR#:											
Project Manager: MARISA HAFENBERGER		P.O. #:		Soil <input checked="" type="checkbox"/>		Other: <input type="checkbox"/>		NITRATE		NITRATE NITROGEN		AMMONIA NITROGEN											
Sampler: ERIC BASSETT / BOB MCALISTER		Quote #:		Total # of Containers		AMMONIA		NITRATE		NITRATE NITROGEN		AMMONIA NITROGEN											
Name of state where samples were collected:				Composite		Grab		AMMONIA		NITRATE		NITRATE NITROGEN		AMMONIA NITROGEN									
2 Sample Identification				3 Collected		Grab		AMMONIA		NITRATE		NITRATE NITROGEN		AMMONIA NITROGEN									
		Date		Time																			
AG-DB-02-1.0'		3/19/13		1300		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									
AG-DB-02-2.5'				1305		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									
AG-DB-02-4.0'				1315		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									
AG-DB-02-5.5'				1320		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									
EB031913				1330		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									
7 Turnaround Time (TAT) Requested (please circle)												Relinquished by		Date		Time		Received by		Date		Time	
Standard												Relinquished by		Date		Time		Received by		Date		Time	
Rush <u>24-HR</u>												Relinquished by		Date		Time		Received by		Date		Time	
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)												Relinquished by		Date		Time		Received by		Date		Time	
Date results are needed: <u>CONTACT STANTEC PM</u>												Relinquished by		Date		Time		Received by		Date		Time	
E-mail address: <u>MARISA.HAFENBERGER@STANTEC.COM</u>												Relinquished by		Date		Time		Received by		Date		Time	
8 Data Package Options (circle if required)												Relinquished by		Date		Time		Received by		Date		Time	
Type I (Validation/non-CLP)				Type VI (Raw Data Only)				EDD Required? Yes No				Relinquished by Commercial Carrier:											
Type III (Reduced non-CLP)				TX TRRP-13				If yes, format:				UPS FedEx <input checked="" type="checkbox"/> Other											
Type IV (CLP SOW)				MA MCP CTRCP				Site-Specific QC (MS/MSD/Dup)? Yes No				Temperature upon receipt <u>1.0</u> °C											
								(If yes, indicate QC sample and submit triplicate sample volume.)															

Preservation Codes
 H=HCl T=Thiosulfate
 N=HNO₃ B=NaOH
 S=H₂SO₄ O=Other

Remarks
 COC #4 of 4

NITRATE-Hold, NH₃-Rush
 NITRATE-Hold, NH₃-Rush
 NITRATE-Hold, NH₃-Rush
 NITRATE-Hold, NH₃-Rush
 STANDARD TAT

Wendy,

Here are additional instructions regarding held samples. We still have a few samples (A1-DB-05a, A6-DB-05c) we'd like to keep on hold until we receive these results. Please let me know if you have any questions! Thanks!

Borehole ID	Constituent(s)	Sample Depths	COC #s	Recommendation?
A4-DB-01e	NH ₃	0.5, 2.5	318733W	Run with standard TAT 7014
A4-DB-01f	NH ₃	0.5, 2.5	318733W	Do not analyze; Dispose 7014
A5W-DB-01b	NO ₃	0.5, 2.5	318733X	Do not analyze; Dispose 7018
A5W-DB-01c	NO ₃	0.5, 2.5	318733X	Do not analyze; Dispose 7018
A5W-DB-01d	NO ₃	0.5, 2.5	318733X	Do not analyze; Dispose 7018
A5W-DB-02c	NO ₃	0.5, 2.5	318733Y	Run with standard TAT 7018
A5W-DB-02d	NO ₃	0.5, 2.5	318733Y	Do not analyze; Dispose 7018
A5W-DB-02e	NO ₃	0.5, 2.5	318733Y	Do not analyze; Dispose 7018
A5S-DB-01a	NO ₃	1.5, 3.0, 4.5, 6.5	318733S; 318733T	Do not analyze; Dispose; also dispose DUP-21 7014
A5S-DB-03a	NO ₃	1.5, 3.0, 4.5, 6.5	318733T; 318733U	Run with standard TAT 7014
A1-DB-03b	NO ₃ , NH ₃	1.5, 3.0, 4.5, 6.5	318733O	Run with standard TAT 7014
A1-DB-05b	NO ₃ , NH ₃	1.0, 2.5, 4.0, 5.5	318733P; 318733Q	Run with standard TAT 7014
A1-DB-05c	NO ₃ , NH ₃	1.0, 2.5, 4.0, 5.5	318733Q	Run with standard TAT 7014
A1-DB-08a	NO ₃ , NH ₃	1.0, 2.5, 4.0, 5.5	318733I; 318733J	Run with standard TAT 7012
A1-DB-12b	NH ₃	1.0, 2.5, 4.0	318733U	Run with standard TAT 7014
A6-DB-02	NO ₃ , NH ₃	1.0, 2.5, 4.0, 5.5	318737	Run Nitrate with standard TAT

Page 46 of 47

↓ 6989122 -25 requisition

= discard

Hold # 7012, 7014, 7018
 CMC CMC AHO

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but \geq IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>$ 25%	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

June 26, 2013

Project: Bee Jay Scales Site

Submittal Date: 06/14/2013
Group Number: 1397245
PO Number: 213202156.600.9301
Release Number: BEE JAY SCALES
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLD) #</u>
A1-DB-04b-1.5' Grab Soil	7093443
A1-DB-04b-3.0' Grab Soil	7093444
A1-DB-04b-4.5' Grab Soil	7093445
A1-DB-04b-6.0' Grab Soil	7093446
A6-DB-08b-7.0' Grab Soil	7093447
A6-DB-07a-1.5' Grab Soil	7093448
A6-DB-07a-3.0' Grab Soil	7093449
A6-DB-07a-5.0' Grab Soil	7093450
A6-DB-07a-7.0' Grab Soil	7093451
DUP-33 Grab Soil	7093452
A6-DB-08b-1.5' Grab Soil	7093453
A6-DB-08b-3.0' Grab Soil	7093454
A6-DB-08b-5.0' Grab Soil	7093455
DUP-34 Grab Soil	7093456
EB061213 Grab Water	7093457
A1-DB-11b-1.5' Grab Soil	7093458
A1-DB-11b-3.0' Grab Soil	7093459
A1-DB-11b-5.0' Grab Soil	7093460
A1-DB-11b-7.0' Grab Soil	7093461

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO
ELECTRONIC COPY TO

STANTEC International, Inc.
Stantec Consulting Services

Attn: Marisa Kaffenberger
Attn: Eric Bassett

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: A1-DB-04b-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093443
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/12/2013 16:10 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 36.6	mg/kg 9.6	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 16.3	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/21/2013 23:50	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A1-DB-04b-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093444
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/12/2013 16:20 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	59.8 mg/kg	9.8 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.5 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/22/2013 01:05	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A1-DB-04b-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093445
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/12/2013 16:30 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	163 mg/kg	9.7 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	104 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.6 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/22/2013 01:19	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057302A	06/19/2013 19:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A1-DB-04b-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093446
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/12/2013 16:35 by RM

STANTEC International, Inc.

Submitted: 06/14/2013 09:25

2321 Club Meridian Drive

Reported: 06/26/2013 12:01

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	150 mg/kg	9.8 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	105 mg/kg	5
Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.2 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/22/2013 01:34	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A6-DB-08b-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093447
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 11:10 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	96.6	10.0	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	108	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.0	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/22/2013 01:49	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A6-DB-07a-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093448
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 09:10 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 30.0	mg/kg 8.6	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 8.3	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/22/2013 02:04	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A6-DB-07a-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093449
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 09:20 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	61.2 mg/kg	9.8 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.5 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/22/2013 02:19	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A6-DB-07a-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093450
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 09:25 by RM

STANTEC International, Inc.

Submitted: 06/14/2013 09:25

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Reported: 06/26/2013 12:01

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	36.9	9.6	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	103	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.5	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/22/2013 02:34	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A6-DB-07a-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093451
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 09:35 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	102 mg/kg	9.9 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	149 mg/kg	106 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	19.5 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/22/2013 02:49	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: DUP-33 Grab Soil
Bee Jay Scales

LLI Sample # SW 7093452
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 09:12 by RM

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 06/14/2013 09:25

Reported: 06/26/2013 12:01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 25.4	mg/kg 8.7	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 7.7	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201A	06/22/2013 03:33	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201A	06/21/2013 07:05	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A6-DB-08b-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093453
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 10:45 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	313	8.7	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	92.9	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	8.5	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201B	06/22/2013 03:48	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201B	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A6-DB-08b-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093454
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 10:55 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 244	mg/kg 8.7	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg N.D.	mg/kg 93.4	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 9.0	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201B	06/22/2013 04:33	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201B	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A6-DB-08b-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093455
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 11:00 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 181	mg/kg 9.3	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg N.D.	mg/kg 100	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 15.2	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201B	06/22/2013 04:48	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201B	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: DUP-34 Grab Soil
Bee Jay Scales

LLI Sample # SW 7093456
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 10:47 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	368 mg/kg	17.7 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	94.4 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	10 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201B	06/22/2013 17:30	Clinton M Wilson	20
01352	Deionized Water Extraction	EPA 300.0	1	13172172201B	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: EB061213 Grab Water
Bee Jay Scales

LLI Sample # WW 7093457
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/12/2013 18:35 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13165655601A	06/14/2013 12:11	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13171022101A	06/20/2013 14:15	Luz M Groff	1

Sample Description: A1-DB-11b-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093458
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/12/2013 14:30 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	171 mg/kg	9.5 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.3 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201B	06/22/2013 05:17	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201B	06/21/2013 07:05	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A1-DB-11b-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093459
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/12/2013 14:45 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 334	mg/kg 9.6	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 17.8	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201B	06/22/2013 05:32	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201B	06/21/2013 07:05	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A1-DB-11b-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093460
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/12/2013 15:30 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	54.4 mg/kg	9.5 mg/kg	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	15.7 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201B	06/22/2013 05:47	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201B	06/21/2013 07:05	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Sample Description: A1-DB-11b-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7093461
LLI Group # 1397245
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/12/2013 15:45 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/14/2013 09:25

Suite E

Reported: 06/26/2013 12:01

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	12.6 mg/kg	1.1 mg/kg	1
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	25.5 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	2	13172172201B	06/22/2013 17:45	Clinton M Wilson	1
01352	Deionized Water Extraction	EPA 300.0	1	13172172201B	06/21/2013 07:05	Nancy J Shoop	1
00111	Moisture	SM 2540 G-1997	1	13170820002A	06/19/2013 22:19	Scott W Freisher	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 06/26/13 at 12:01 PM

Group Number: 1397245

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13165655601A Nitrate Nitrogen	Sample number(s): 7093457 N.D.	0.050	mg/l	93	92	90-110	1	20
Batch number: 13172172201A Nitrate Nitrogen by IC (solid)	Sample number(s): 7093443-7093452 N.D.	0.80	mg/kg	106		90-110		
Batch number: 13172172201B Nitrate Nitrogen by IC (solid)	Sample number(s): 7093453-7093456,7093458-7093461 N.D.	0.80	mg/kg	106		90-110		
Batch number: 13170057301A Ammonia Nitrogen	Sample number(s): 7093446-7093447,7093450-7093451,7093453-7093456 N.D.	17.0	mg/kg	96		89-101		
Batch number: 13170057302A Ammonia Nitrogen	Sample number(s): 7093445 N.D.	17.0	mg/kg	94		89-101		
Batch number: 13171022101A Ammonia Nitrogen	Sample number(s): 7093457 N.D.	0.20	mg/l	93	93	85-105	1	5
Batch number: 13170820002A Moisture	Sample number(s): 7093443-7093456,7093458-7093461 100					99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13165655601A Nitrate Nitrogen	Sample number(s): 7093457 UNSPK: P093036 91		90-110			BKG: P093036 0.64	0.57	12 (1)	20
Batch number: 13172172201A Nitrate Nitrogen by IC (solid)	Sample number(s): 7093443-7093452 UNSPK: 7093443 BKG: 7093443 122*		90-110			30.6	30.0	2 (1)	20
Batch number: 13172172201B Nitrate Nitrogen by IC (solid)	Sample number(s): 7093453-7093456,7093458-7093461 UNSPK: 7093453 BKG: 7093453 -132 (2)		90-110			287	258	10	20
Batch number: 13170057301A Ammonia Nitrogen	Sample number(s): 7093446-7093447,7093450-7093451,7093453-7093456 UNSPK: P088945 BKG: P088945 100	98	78-109	1	5	275	282	3	10

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 06/26/13 at 12:01 PM

Group Number: 1397245

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Batch number: 13170057302A Ammonia Nitrogen	Sample number(s): 7093445 82	84	UNSPK: P098177 78-109	2	5	BKG: P098177 N.D.	N.D.	0 (1)	10
Batch number: 13171022101A Ammonia Nitrogen	Sample number(s): 7093457		BKG: P091973			31.3	30.6	2	6
Batch number: 13170820002A Moisture	Sample number(s): 7093443-7093456, 7093458-7093461					26.1	BKG: P090909 24.9	5	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1397245 Sample # 7093443-61
 Instructions on reverse side correspond with circled numbers.

COC # 318985

COC # 1 OF 4

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only						
Client: STANTEC		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other:		Preservation Codes / / / / / / / / / / / / / / / /								FSC: _____								
Project Name#: GEE JAY SCALES ADD. ASSESSMENT		PWSID #:				NITRATE AMMONIA HOLD FOR POSSIBLE ANALYSIS PER PA								SCR#: _____								
Project Manager: MARISA KAFFENBERGER		P.O. #: 213202156/213202157												Total # of Containers		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other						
Sampler: ROBERT MCALISTER		Quote #:																				
Name of state where samples were collected: WASHINGTON				3		6 Remarks																
2 Sample Identification		Collected		Grab	Composite									<input checked="" type="checkbox"/> Soil								
Date	Time																					
A1-DB-03g-1.5'	6/12/13 1750	X		X																		
A1-DB-03g-3.0'	1800																					
A1-DB-03g-4.5'	1810																					
A1-DB-03g-6.0'	1815																					
DUP-32	1820																					
A1-DB-04b-1.5'	1610				X																	
A1-DB-04b-3.0'	1620																					
A1-DB-04b-4.5'	1630				X																	
A1-DB-04b-6.0'	1635																					
A1-DB-04c-1.5'	1655																					
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by: ROBERT MCALISTER		Date: 6/13/13	Time: 1400	Received by: FED EX		Date: 6/13/13	Time: 1400	9										
Standard Standard Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by:		Date:	Time:	Received by:		Date:	Time:											
Date results are needed: _____				Relinquished by:		Date:	Time:	Received by:		Date:	Time:											
E-mail address: MARISA.KAFFENBERGER@STANTEC.COM				Relinquished by:		Date:	Time:	Received by:		Date:	Time:											
8 Data Package Options (circle if required)				Relinquished by:		Date:	Time:	Received by:		Date:	Time:											
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		Relinquished by:		Date:	Time:	Received by:		Date:	Time:											
Type III (Reduced non-CLP)		TX TRRP-13		Relinquished by:		Date:	Time:	Received by:		Date:	Time:											
Type IV (CLP SOW)		MA MCP CT RCP		Relinquished by:		Date:	Time:	Received by:		Date:	Time:											
				EDD Required? Yes No If yes, format: _____				Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____														
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt 1.1-1.3°C														

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1397245 Sample # 7093443-61
 Instructions on reverse side correspond with circled numbers.

COC #318986

CO # 2 of 4

1 Client Information			4 Matrix			5 Analysis Requested						For Lab Use Only				
Client: STANTEC			Acct. #:			Preservation Codes						FSC: _____ SCR#: _____				
Project Name#: SEE LAY VALLES ADD. ASSESSMENT			PWSID #:			Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____						Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other				
Project Manager: MARINA KAFFENBERGER			P.O. #:													
Sampler: MARCO MALISZETZ			Quote #:			Total # of Containers: _____ ANALYTE: _____ ANALYSIS: _____ ANALYZES: _____						6 Remarks				
Name of state where samples were collected: WASHINGTON			3													
2 Sample Identification		Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers	Analysis Requested						Remarks
Date	Time	Date	Time													
A6-DB-04c-3.0'	6/12/13	1703		X	X											
A1-DB-04c-4.5'		1710														
A1-DB-04c-6.0'		1720														
A6-DB-07a-1.5'	6/13/13	9:00							X							
A6-DB-07a-3.0'		9:20														
A6-DB-07a-5.0'		9:25								X						
A6-DB-07a-7.0'		9:35								X						
200-33		9:12								X						nitrate only
A6-DB-07b-1.5'		9:49								X						
A6-DB-07b-3.0'		9:55								X						
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by		Date	Time	Received by		Date	Time	9				
Standard <input checked="" type="radio"/> Rush <input type="radio"/>				Date/Time		Date	Time	Date/Time		Date	Time					
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)																
Date results are needed: _____				Relinquished by		Date	Time	Received by		Date	Time					
E-mail address: MARINA.KAFFENBERGER@STANTEC.COM				Relinquished by		Date	Time	Received by		Date	Time					
8 Data Package Options (circle if required)				Relinquished by		Date	Time	Received by		Date	Time					
Type I (Validation/non-CLP)		Type VI (Raw Data Only)		Relinquished by		Date	Time	Received by		Date	Time					
Type III (Reduced non-CLP)		TX TRRP-13		Relinquished by		Date	Time	Received by		Date	Time					
Type IV (CLP SOW)		MA MCP CT RCP		Relinquished by		Date	Time	Received by		Date	Time					
EDD Required? Yes No						Relinquished by Commercial Carrier:										
If yes, format _____						UPS _____ FedEx _____ Other _____										
Site-Specific QC (MS/MSD/Dup)? Yes No						Temperature upon receipt _____ °C										
(if yes, indicate QC sample and submit triplicate sample volume.)																

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1397245 Sample # 7093443-61
 Instructions on reverse side correspond with circled numbers.

COC #318986

COC #2 of 4

1 Client Information				4 Matrix				5 Analysis Requested								For Lab Use Only											
Client: STANTEC		Acct. #:		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:		Preservation Codes NITRATE AMMONIA HOLD FOR POSSIBLE ANALYSIS PER PM								FSC: _____													
Project Name/#: BEE JAY SCALES ADD. ASSESSMENT		PWSID #:				Total # of Containers -										SCR#: _____											
Project Manager: MARISA KAFFENBERGER		P.O. #: 213202156/213202157														Soil <input checked="" type="checkbox"/>										Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
Sampler: ROBERT MCALISTER		Quote #:																								Composite <input type="checkbox"/>	
Name of state where samples were collected: WASHINGTON				Grab <input checked="" type="checkbox"/>																							
2 Sample Identification		Collected		Composite <input type="checkbox"/>																							
		Date	Time			Soil <input checked="" type="checkbox"/>																					
A1-DB-04c-3.0'		6/12/13	1703	Water <input type="checkbox"/>																							
A1-DB-04c-4.5'		↓	1710			Other:																					
A1-DB-04c-6.0'		↓	1720	Total # of Containers																							
A6-DB-07a-1.5'		6/13/13	910			Total # of Containers																					
A6-DB-07a-3.0'		↓	920	Total # of Containers																							
A6-DB-07a-5.0'		↓	925			Total # of Containers																					
A6-DB-07a-7.0'		↓	935	Total # of Containers																							
DP-33		↓	912			Total # of Containers																					
A6-DB-07b-1.5'		↓	949	Total # of Containers																							
A6-DB-07b-3.0'		↓	955			Total # of Containers																					
7 Turnaround Time (TAT) Requested (please circle) <u>Standard</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ E-mail address: MARISA.KAFFENBERGER@STANTEC.COM				Relinquished by ROBERT MCALISTER												Date 6/13/13		Time 1400		Received by FED EX		Date 6/13/13		Time 1400			
				Relinquished by		Date		Time		Received by		Date		Time													
Relinquished by		Date		Time		Received by		Date		Time																	
Relinquished by		Date		Time		Received by		Date		Time																	
Relinquished by		Date		Time		Received by		Date		Time																	
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____																							
				EDD Required? Yes No If yes, format: _____				Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____																			
Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt 1.1-1.3 °C																							

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 Group # 1397245 Sample # 7093443-61
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

COC #318987

COC #3 OF 4

1 Client Information			4 Matrix			5 Analysis Requested								For Lab Use Only																					
Client: STANTEC		Acct. #:	<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface Other: _____			Preservation Codes								FSC: _____																					
Project Name/ #: BEE JAY SCALES ADD. ASSESSMENT		PWSID #:				<table border="1" style="width: 100%; height: 100%;"> <tr><td style="width: 10%;">/</td><td style="width: 10%;">/</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td style="text-align: center;">NITRATE</td><td style="text-align: center;">AMMONIA</td><td style="text-align: center;">HOLD FOR POSSIBLE ANALYSIS PER PM</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>								/	/									NITRATE	AMMONIA	HOLD FOR POSSIBLE ANALYSIS PER PM								SCR#: _____	
/	/																																		
NITRATE	AMMONIA	HOLD FOR POSSIBLE ANALYSIS PER PM																																	
Project Manager: MARISA KAFFENBERGER		P.O. #: 213202156/213202157	Total # of Containers: _____		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																														
Sampler: ROBERT MCALISTER		Quote #:			6 Remarks																														
Name of state where samples were collected: WASHINGTON			3 Grab Composite																																
2 Sample Identification		Collected																																	
		Date	Time	Grab	Composite	Soil	Water	Other:	Total # of Containers	NITRATE	AMMONIA	HOLD FOR POSSIBLE ANALYSIS PER PM																							
A6-DB-076-5.0'		6/13/13	1003	X		X			-			X																							
A6-DB-076-7.0'			1012									X																							
A6-DB-086-1.5'			1045							X	X																								
A6-DB-086-3.0'			1055							X	X																								
A6-DB-086-5.0'			1100							X	X																								
A6-DB-086-7.0'			1110							X	X																								
DOP-34			1047							X	X																								
A6-DB-08d-1.5'			1220							X	X																								
A6-DB-08d-3.0'			1230							X	X																								
A6-DB-08d-5.0'			1235							X	X																								
7 Turnaround Time (TAT) Requested (please circle) (Standard) Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by <u>ROBERT MCALISTER</u> Date 6/13/13 Time 1400		Received by <u>FED EX</u> Date 6/13/13 Time 1400		Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____		Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____		Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____																	
Date results are needed: _____																																			
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>																																			
8 Data Package Options (circle if required)				Type I (Validation/non-CLP) Type VI (Raw Data Only)		Type III (Reduced non-CLP) TX TRRP-13		Type IV (CLP SOW) MA MCP CT RCP		EDD Required? Yes No If yes, format: _____		Relinquished by Commercial Carrier: UPS _____ FedEx <u>X</u> Other _____		Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)		Temperature upon receipt <u>11-1.3</u> °C																			

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1397245 Sample # 7093443-61
Instructions on reverse side correspond with circled numbers.

COC #318988

LOC # 4 OF 4

1 Client Information				4 Matrix			5 Analysis Requested								For Lab Use Only																																																												
Client: <u>SPAWC</u>		Acct. #		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other:	Soil <input checked="" type="checkbox"/> Water <input type="checkbox"/> Other:	Preservation Codes								FSC: _____																																																													
Project Name#: <u>SE. JAY SCALDS AND ASSESSMENT</u>		PWSID #:				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td> </tr> <tr> <td style="text-align: center;">1</td><td style="text-align: center;">1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="text-align: center;">2</td><td style="text-align: center;">2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td style="text-align: center;">3</td><td style="text-align: center;">3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>																							1	1														2	2														3	3														SCR#: _____	
1	1																																																																										
2	2																																																																										
3	3																																																																										
Project Manager: <u>MARTINA KOFFERBERGER</u>		P.O. #:		NITRATE AMMONIA PHOS								Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																																															
Sampler: <u>THOMAS M. ALLEN</u>		Quote #:																																																																									
Name of state where samples were collected: <u>WASHINGTON</u>				Total # of Containers			(Remarks)																																																																				
2 Sample Identification		3 Collected													Grab		Composite																																																										
		Date	Time	Date	Time	Date	Time	Date	Time	Date	Time	Date	Time	Date	Time																																																												
<u>AG-DB-080-7.0'</u>		<u>6/12/13</u>	<u>1240</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																												
<u>ER061213</u>		<u>6/12/13</u>	<u>1835</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																												
<u>AI-DB-115-1.5'</u>		<u>6/12/13</u>	<u>1430</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																												
<u>AI-DB-115-3.0'</u>		<u>↓</u>	<u>1445</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																												
<u>AI-DB-115-5.0'</u>		<u>↓</u>	<u>1530</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																												
<u>AI-DB-115-7.0'</u>		<u>↓</u>	<u>1545</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																												

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1397245 Sample # 7093443-61
Instructions on reverse side correspond with circled numbers.

COC #318988

COC #4 of 4

1 Client Information			4 Matrix			5 Analysis Requested										For Lab Use Only																									
Client: <u>STANTEC</u>		Acct. #:	Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Ground <input type="checkbox"/> Other: _____			Preservation Codes										FSC: _____	SCR#: _____																								
Project Name/#: <u>BEE JAY SCALES ADD. ASSESSMENT</u>		PWSID #:				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td><td style="width: 5%;">2</td><td style="width: 5%;">3</td><td style="width: 5%;">4</td><td style="width: 5%;">5</td><td style="width: 5%;">6</td><td style="width: 5%;">7</td><td style="width: 5%;">8</td><td style="width: 5%;">9</td><td style="width: 5%;">10</td><td style="width: 5%;">11</td><td style="width: 5%;">12</td> </tr> <tr> <td style="text-align: center;">NITRATE</td><td style="text-align: center;">AMMONIA</td><td style="text-align: center;">HOLD</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>										1	2	3	4	5	6	7	8	9	10	11	12	NITRATE	AMMONIA	HOLD										Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
1	2	3														4	5	6	7	8	9	10	11	12																	
NITRATE	AMMONIA	HOLD																																							
Project Manager: <u>MARISA RAFFENBERGER</u>		P.O. #: <u>213202156/213202157</u>																																							
Sampler: <u>ROBERT MCALISTER</u>		Quote #:																																							
Name of state where samples were collected: <u>WASHINGTON</u>			3													6 Remarks																									
2 Sample Identification		Collected		Grab	Composite																																				
		Date	Time																																						
<u>A6-DB-08d-7.0'</u>		<u>6/13/13</u>	<u>1240</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																																				
<u>EB061213</u>		<u>6/14/13</u>	<u>1835</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																																				
7 Turnaround Time (TAT) Requested (please circle) <u>Standard</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ E-mail address: <u>MARISA.RAFFENBERGER@STANTEC.COM</u>			Relinquished by <u>[Signature]</u>			Date	Time	Received by	Date	Time	9																														
			Relinquished by			Date	Time	Received by	Date	Time																															
			Relinquished by			Date	Time	Received by	Date	Time																															
			Relinquished by			Date	Time	Received by	Date	Time																															
			Relinquished by			Date	Time	Received by	Date	Time																															
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP			Relinquished by			Date	Time	Received by	Date	Time																															
			EDD Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Relinquished by Commercial Carrier:																																			
			If yes, format: _____			UPS _____ FedEx <input checked="" type="checkbox"/> Other _____			Temperature upon receipt <u>1.1-1.3 °C</u>																																
			Site-Specific QC (MS/MSD/Dup)? Yes No			(If yes, indicate QC sample and submit triplicate sample volume.)																																			

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m³	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

June 26, 2013

Project: Bee Jay Scales Site

Submittal Date: 06/15/2013
Group Number: 1397471
PO Number: 213202156.600.9301
Release Number: BEE JAY SCALES
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
A1-DB-03c-1.5' Grab Soil	7094831
A1-DB-03c-3.0' Grab Soil	7094832
A1-DB-03c-4.5' Grab Soil	7094833
A1-DB-03c-6.0' Grab Soil	7094834
A1-DB-03d-1.5' Grab Soil	7094835
A1-DB-03d-3.0' Grab Soil	7094836
A1-DB-03d-4.5' Grab Soil	7094837
A1-DB-03d-6.0' Grab Soil	7094838
A1-DB-07b-1.0' Grab Soil	7094839
A1-DB-07b-2.5' Grab Soil	7094840
A1-DB-07b-4.0' Grab Soil	7094841
A1-DB-07b-5.5' Grab Soil	7094842
DUP-35 Grab Soil	7094843
A6-DB-08c-1.5' Grab Soil	7094844
A6-DB-08c-3.0' Grab Soil	7094845
A6-DB-08c-5.0' Grab Soil	7094846
A6-DB-08c-7.0' Grab Soil	7094847
A6-DB-09c-1.5' Grab Soil	7094848
A6-DB-09c-3.0' Grab Soil	7094849
A6-DB-09c-5.0' Grab Soil	7094850
A6-DB-09c-7.0' Grab Soil	7094851
EB061313 Grab Water	7094852
EB061413 Grab Water	7094853

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC STANTEC International, Inc.

Attn: Marisa Kaffenberger

COPY TO
ELECTRONIC
COPY TO

Stantec Consulting Services

Attn: Eric Bassett

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: A1-DB-03c-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094831
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/14/2013 08:45 by RM

STANTEC International, Inc.

Submitted: 06/15/2013 09:30

2321 Club Meridian Drive

Reported: 06/26/2013 12:02

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	86.4	4.4	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	698	93.5	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	9.1	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 12:38	Clinton M Wilson	5
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-03c-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094832
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/14/2013 08:55 by RM

STANTEC International, Inc.

Submitted: 06/15/2013 09:30

2321 Club Meridian Drive

Reported: 06/26/2013 12:02

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	690 mg/kg	50.9 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D. mg/kg	109 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	21.9 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 13:22	Clinton M Wilson	50
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-03c-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094833
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/14/2013 09:00 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	344	19.3	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	103	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.1	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 13:37	Clinton M Wilson	20
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-03c-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094834
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/14/2013 09:10 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

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Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	177	10.8	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	115	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	25.8	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 13:52	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-03d-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094835
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/14/2013 09:20 by RM

STANTEC International, Inc.

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Submitted: 06/15/2013 09:30

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Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	5.0	0.92	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	98.5	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.7	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 05:18	Clinton M Wilson	1
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-03d-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094836
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/14/2013 09:25 by RM

STANTEC International, Inc.

Submitted: 06/15/2013 09:30

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Reported: 06/26/2013 12:02

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	23.8	0.97	1
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	104	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	18.1	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 06:02	Clinton M Wilson	1
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-03d-4.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094837
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/14/2013 09:30 by RM

STANTEC International, Inc.

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Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 163	mg/kg 10.1	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg N.D.	mg/kg 108	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 21.2	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 15:25	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-03d-6.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094838
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/14/2013 09:40 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	112 mg/kg	5.2 mg/kg	5
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	110 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	22.9 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 15:40	Clinton M Wilson	5
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-07b-1.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094839
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 17:40 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	103 mg/kg	4.3 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	7.9 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 15:55	Clinton M Wilson	5
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-07b-2.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094840
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 17:45 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 179	mg/kg 9.4	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 15.5	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 17:40	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00111	Moisture	SM 2540 G-1997	1	13169820002A	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-07b-4.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094841
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 18:15 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 252	mg/kg 10.2	10
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 21.2	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 17:54	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A1-DB-07b-5.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094842
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 18:25 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 137	mg/kg 5.1	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 22.3	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 18:09	Clinton M Wilson	5
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: DUP-35 Grab Soil
Bee Jay Scales

LLI Sample # SW 7094843
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 17:42 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	77.4	4.3	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	7.0	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 18:24	Clinton M Wilson	5
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A6-DB-08c-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094844
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 14:45 by RM

STANTEC International, Inc.

Submitted: 06/15/2013 09:30

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Reported: 06/26/2013 12:02

Suite E

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	486 mg/kg	18.4 mg/kg	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	600 mg/kg	97.8 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	13.1 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13169169202A	06/19/2013 18:39	Clinton M Wilson	20
01352	Deionized Water Extraction	EPA 300.0	1	13169169202A	06/18/2013 05:15	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A6-DB-08c-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094845
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 15:00 by RM

STANTEC International, Inc.

Submitted: 06/15/2013 09:30

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Reported: 06/26/2013 12:02

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	593 mg/kg	48.3 mg/kg	50
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	838 mg/kg	103 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	17.4 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 14:07	Clinton M Wilson	50
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A6-DB-08c-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094846
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 15:05 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	191 mg/kg	9.9 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	1,390 mg/kg	106 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	20.0 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 14:22	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057301A	06/19/2013 15:00	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A6-DB-08c-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094847
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 15:10 by RM

STANTEC International, Inc.

Submitted: 06/15/2013 09:30

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Reported: 06/26/2013 12:02

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 329	mg/kg 22.3	20
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg 1,200	mg/kg 119	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 28.6	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 15:36	Clinton M Wilson	20
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057302A	06/19/2013 19:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A6-DB-09c-1.5' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094848
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 15:25 by RM

STANTEC International, Inc.

Submitted: 06/15/2013 09:30

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Reported: 06/26/2013 12:02

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Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	42.2	1.7	2
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	91.6	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	7.2	0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 15:51	Clinton M Wilson	2
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057302A	06/19/2013 19:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A6-DB-09c-3.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094849
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 15:30 by RM

STANTEC International, Inc.

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Submitted: 06/15/2013 09:30

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Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	258 mg/kg	9.5 mg/kg	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	N.D.	101 mg/kg	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	16.0 %	0.50 %	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 16:06	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057302A	06/19/2013 19:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A6-DB-09c-5.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094850
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 15:35 by RM

STANTEC International, Inc.

Submitted: 06/15/2013 09:30

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Reported: 06/26/2013 12:02

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CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 268	mg/kg 9.8	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg N.D.	mg/kg 104	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 18.3	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13170170203A	06/20/2013 16:21	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13170170203A	06/19/2013 05:10	Sandra J Miller	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057302A	06/19/2013 19:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13169820002B	06/18/2013 19:18	Scott W Freisher	1

Sample Description: A6-DB-09c-7.0' Grab Soil
Bee Jay Scales

LLI Sample # SW 7094851
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 15:40 by RM

STANTEC International, Inc.

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Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry EPA 300.0					
07336	Nitrate Nitrogen by IC (solid)	14797-55-8	mg/kg 145	mg/kg 11.0	10
SM 4500-NH3 B/C modified-1997					
00573	Ammonia Nitrogen	7664-41-7	mg/kg 661	mg/kg 118	5
Wet Chemistry SM 2540 G-1997					
00111	Moisture	n.a.	% 28.1	% 0.50	1
Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07336	Nitrate Nitrogen by IC (solid)	EPA 300.0	1	13172172201B	06/22/2013 06:47	Clinton M Wilson	10
01352	Deionized Water Extraction	EPA 300.0	1	13172172201B	06/21/2013 07:05	Nancy J Shoop	1
00573	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13170057302A	06/19/2013 19:20	Luz M Groff	5
00111	Moisture	SM 2540 G-1997	1	13171820001A	06/20/2013 19:17	Scott W Freisher	1

Sample Description: EB061313 Grab Water
Bee Jay Scales

LLI Sample # WW 7094852
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/13/2013 18:40 by RM

STANTEC International, Inc.

2321 Club Meridian Drive

Submitted: 06/15/2013 09:30

Suite E

Reported: 06/26/2013 12:02

Okemos MI 48864

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13166655901B	06/15/2013 17:51	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13175022101A	06/24/2013 15:00	Luz M Groff	1

Sample Description: EB061413 Grab Water
Bee Jay Scales

LLI Sample # WW 7094853
LLI Group # 1397471
Account # 11842

Project Name: Bee Jay Scales Site

Collected: 06/14/2013 11:30 by RM

STANTEC International, Inc.
2321 Club Meridian Drive
Suite E
Okemos MI 48864

Submitted: 06/15/2013 09:30

Reported: 06/26/2013 12:02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry					
00368	Nitrate Nitrogen	EPA 300.0 14797-55-8	mg/l N.D.	mg/l 0.050	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997 7664-41-7	mg/l N.D.	mg/l 0.20	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00368	Nitrate Nitrogen	EPA 300.0	1	13166655901B	06/15/2013 18:07	Christopher D Meeks	1
00221	Ammonia Nitrogen	SM 4500-NH3 B/C modified-1997	1	13175022101A	06/24/2013 15:00	Luz M Groff	1

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 06/26/13 at 12:02 PM

Group Number: 1397471

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13166655901B Nitrate Nitrogen	Sample number(s): 7094852-7094853 N.D.	0.050	mg/l	104		90-110		
Batch number: 13169169202A Nitrate Nitrogen by IC (solid)	Sample number(s): 7094835-7094844 N.D.	0.80	mg/kg	106		90-110		
Batch number: 13170170203A Nitrate Nitrogen by IC (solid)	Sample number(s): 7094831-7094834,7094845-7094850 N.D.	0.80	mg/kg	108		90-110		
Batch number: 13172172201B Nitrate Nitrogen by IC (solid)	Sample number(s): 7094851 N.D.	0.80	mg/kg	106		90-110		
Batch number: 13170057301A Ammonia Nitrogen	Sample number(s): 7094831-7094838,7094844-7094846 N.D.	17.0	mg/kg	96		89-101		
Batch number: 13170057302A Ammonia Nitrogen	Sample number(s): 7094847-7094851 N.D.	17.0	mg/kg	94		89-101		
Batch number: 13175022101A Ammonia Nitrogen	Sample number(s): 7094852-7094853 N.D.	0.20	mg/l	94	95	85-105	1	5
Batch number: 13169820002A Moisture	Sample number(s): 7094831-7094840			100		99-101		
Batch number: 13169820002B Moisture	Sample number(s): 7094841-7094850			100		99-101		
Batch number: 13171820001A Moisture	Sample number(s): 7094851			100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13166655901B Nitrate Nitrogen	Sample number(s): 7094852-7094853 102		90-110	UNSPK:	P094864	BKG: P094864 0.54	0.50	7 (1)	20
Batch number: 13169169202A	Sample number(s): 7094835-7094844			UNSPK:	7094835	BKG: 7094835			

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: STANTEC International, Inc.
Reported: 06/26/13 at 12:02 PM

Group Number: 1397471

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Nitrate Nitrogen by IC (solid)	109		90-110			4.3	4.2	3 (1)	20
Batch number: 13170170203A	Sample number(s): 7094831-7094834, 7094845-7094850 UNSPK: 7094831 BKG: 7094831								
Nitrate Nitrogen by IC (solid)	190 (2)		90-110			78.5	77.5	1	20
Batch number: 13172172201B	Sample number(s): 7094851 UNSPK: P093453 BKG: P093453								
Nitrate Nitrogen by IC (solid)	-132 (2)		90-110			287	258	10	20
Batch number: 13170057301A	Sample number(s): 7094831-7094838, 7094844-7094846 UNSPK: P088945 BKG: P088945								
Ammonia Nitrogen	100	98	78-109	1	5	275	282	3	10
Batch number: 13170057302A	Sample number(s): 7094847-7094851 UNSPK: P098177 BKG: P098177								
Ammonia Nitrogen	82	84	78-109	2	5	N.D.	N.D.	0 (1)	10
Batch number: 13175022101A	Sample number(s): 7094852-7094853 BKG: P096082								
Ammonia Nitrogen						7.8	8.3	6	6
Batch number: 13169820002A	Sample number(s): 7094831-7094840 BKG: 7094831								
Moisture						9.1	9.5	5	13
Batch number: 13169820002B	Sample number(s): 7094841-7094850 BKG: 7094841								
Moisture						21.2	20.8	2	13
Batch number: 13171820001A	Sample number(s): 7094851 BKG: P099072								
Moisture						26.2	26.1	0	13

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1397471 Sample # 7094831-53
 Instructions on reverse side correspond with circled numbers.

COC #318754

COC # 1 OF 4

1 Client Information			4 Matrix			5 Analysis Requested						For Lab Use Only																					
Client: STANTEC		Acct. #:	Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other: _____ Total # of Containers: _____			Preservation Codes						FSC: _____																					
Project Name/#: BEE JAY SCALES ADD. ASSESSMENT		PWSID #:				<table border="1" style="width: 100%; height: 100%; text-align: center;"> <tr> <td style="width: 10%;">1</td><td style="width: 10%;">1</td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td><td style="width: 10%;"></td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">NITRATE</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">AMMONIA</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">HOLD</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>						1	1									NITRATE	AMMONIA	HOLD								SCR#: _____	
1	1																																
NITRATE	AMMONIA	HOLD																															
Project Manager: MARISA KAFFENBERGER		P.O. #:	6 Preservation Codes		H=HCl		T=Thiosulfate																										
Sampler: ROBERT MCALISTER		Quote #:	7 Remarks		N=HNO ₃		B=NaOH																										
Name of state where samples were collected: WASHINGTON			8		S=H ₂ SO ₄		O=Other																										
2 Sample Identification		3 Collected		Grab	Composite	Soil <input checked="" type="checkbox"/>	Water	Other:	Total # of Containers	NITRATE	AMMONIA	HOLD																					
		Date	Time																														
A1-DB-03c-1.5'		6/14/13	845	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		STANDARD TAT																				
A1-DB-03c-3.0'			855										3-DAY TAT ↓ ↓ ↓ ↓ ↓ ↓																				
A1-DB-03c-4.5'			900																														
A1-DB-03c-6.0'			910																														
A1-DB-03d-1.5'			920																														
A1-DB-03d-3.0'			925																														
A1-DB-03d-4.5'			930																														
A1-DB-03d-6.0'			940																														
A1-DB-03f-1.5'			955								<input checked="" type="checkbox"/>																						
A1-DB-03f-3.0'			1005																														

7 Turnaround Time (TAT) Requested (please circle)

Standard SEE ABOVE Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: _____

E-mail address: MARISA.KAFFENBERGER@STANTEC.COM

Relinquished by: <u>ROBERT MCALISTER</u>	Date: <u>6/14/13</u>	Time: <u>1300</u>	Received by: <u>FED EX</u>	Date: <u>6/14/13</u>	Time: <u>1400</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
EDD Required? Yes No			Relinquished by Commercial Carrier:		
If yes, format: _____			UPS _____ FedEx <input checked="" type="checkbox"/> Other _____		
Site-Specific QC (MS/MSD/Dup)? Yes No			Temperature upon receipt <u>3.6</u> °C		
(If yes, indicate QC sample and submit triplicate sample volume.)					

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only
 Group # 1397471 Sample # 7094831-53
Instructions on reverse side correspond with circled numbers.

COC #318989

COC # 2 OF 4

1 Client Information				4 Matrix			5 Analysis Requested										For Lab Use Only																																				
Client: STANTEC		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Other:	Total # of Containers	Preservation Codes										FSC: _____																																					
Project Name/#: BEE JAY SCALES ADD. ASSESSMENT		PWSID #:				<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																																														SCR#: _____	
Project Manager: MARISA KAFFENBERGER		P.O. #: 212202156/213202157		NITRATE AMMONIA HOLD		Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other																																															
Sampler: ROBERT MCALISTER		Quote #:				6 Remarks																																															
Name of state where samples were collected: WASHINGTON				3 Grab Composite <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Water																																																	
2 Sample Identification			Collected																																																		
			Date	Time																																																	
A1-DB-03f-4.5'			6/14/13	1015	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																															
A1-DB-03f-6.0'			↓	1020																																																	
A1-DB-07b-1.0'			6/13/13	1740			<input checked="" type="checkbox"/>											STANDARD TAT																																			
A1-DB-07b-2.5'			↓	1745																																																	
A1-DB-07b-4.0'			↓	1815																																																	
A1-DB-07b-5.5'			↓	1825																																																	
DUP-35			↓	1742																																																	
A1-DB-07c-1.0'			6/14/13	755				<input checked="" type="checkbox"/>																																													
A1-DB-07c-2.5'			↓	815																																																	
A1-DB-07c-4.0'			↓	820																																																	

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: _____

E-mail address: MARISA.KAFFENBERGER@STANTEC.CO

Relinquished by	Date	Time	Received by	Date	Time
<u>ROBERT MCALISTER</u>	<u>6/14/13</u>	<u>1300</u>	<u>FED EX</u>	<u>6/14/13</u>	<u>1300</u>

8 Data Package Options (circle if required)

Type I (Validation/non-CLP)	Type VI (Raw Data Only)
Type III (Reduced non-CLP)	TX TRRP-13
Type IV (CLP SOW)	MA MCP CT RCP

EDD Required? Yes No	Relinquished by Commercial Carrier: <u>6/15/13</u>
If yes, format: _____	UPS FedEx <input checked="" type="checkbox"/> Other _____
Site-Specific QC (MS/MSD/Dup)? Yes No	Temperature upon receipt <u>3.6</u> °C
<small>(If yes, indicate QC sample and submit triplicate sample volume.)</small>	

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11842 For Eurofins Lancaster Laboratories use only Group # 1397471 Sample # 7094831-53
 Instructions on reverse side correspond with circled numbers.

COC #318990

COC #3 of 4

1 Client Information				4 Matrix			5 Analysis Requested								For Lab Use Only																										
Client: STANTEC		Acct. #:		<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Water <input type="checkbox"/> Surface <input type="checkbox"/> NPDES <input type="checkbox"/> Other:			Preservation Codes								FSC: _____																										
Project Name/#: BEE JAY SCALES ADD. ASSESSMENT		PWSID #:					<table border="1" style="width: 100%; height: 100%; text-align: center;"> <tr><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>NITRATE</td><td>AMMONIA</td><td>HOLD</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>								1	1													NITRATE	AMMONIA	HOLD										
1	1																																								
NITRATE	AMMONIA	HOLD																																							
Project Manager: MARISA KAFFENBERGER		P.O. #: 213202156/213202157		Total # of Containers:			<table border="1" style="width: 100%; height: 100%; text-align: center;"> <tr><td>1</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>								1	1													Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other												
1	1																																								
Sampler: ROBERT MCALISTER		Quote #:																																							
Name of state where samples were collected: WASHINGTON				3			<table border="1" style="width: 100%; height: 100%; text-align: center;"> <tr><td colspan="2">6</td><td colspan="12">Remarks</td></tr> </table>								6		Remarks																								
6		Remarks																																							
2 Sample Identification			Collected		Grab	Composite																																			
Date	Time		Soil	Water			Other																																		
A1-DB-07c- 5.0 ^{EM} -5.5'	6/14/13	825	X	X		-	X	X	X																																
A6-DB-08c-1.5'	6/13/13	1445								X	X																														
A6-DB-08c-3.0'		1500																																							
A6-DB-08c-5.0'		1505																																							
A6-DB-08c-7.0'		1510																																							
A6-DB-09c-1.5'		1525																																							
A6-DB-09c-3.0'		1530																																							
A6-DB-09c-5.0'		1535																																							
A6-DB-09c-7.0'		1540																																							
EBO61313		1840					X	X	X																																
7 Turnaround Time (TAT) Requested (please circle) Standard (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by: ROBERT MCALISTER			Date: 6/14/13 Time: 1300		Received by: FED EX		Date: 6/14/13 Time: 1300		9																												
Date results are needed: _____				Relinquished by: _____			Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____																														
E-mail address: MARISA.KAFFENBERGER@STANTEC.CO				Relinquished by: _____			Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____																														
8 Data Package Options (circle if required) Type I (Validation/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) TX TRRP-13 Type IV (CLP SOW) MA MCP CT RCP				Relinquished by: _____			Date: _____ Time: _____		Received by: Post 5/6		Date: 6/15/13 Time: 0930																														
				EDD Required? Yes No If yes, format: _____			Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____		Temperature upon receipt 3.6 °C																																
				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)																																					

Environmental Analysis Request/Chain of Custody



**Lancaster
Laboratories**

Acct. # 11842 For Eurofins Lancaster Laboratories use only
Group # 1397471 Sample # 7094831-53
Instructions on reverse side correspond with circled numbers.

COC #318991

COC #4 of 4

1 Client Information				4 Matrix				5 Analysis Requested										For Lab Use Only													
Client: <u>STANTEC</u>		Acct. #:		Sediment <input type="checkbox"/>	Potable <input type="checkbox"/>	Ground <input type="checkbox"/>	Surface <input type="checkbox"/>	Preservation Codes										FSC: _____	SCR#: _____												
Project Name#: <u>BEE JAY SCALES ADD. ASSESSMENT</u>		PWSID #:						Soil <input type="checkbox"/>	Water <input type="checkbox"/>	NPDES <input type="checkbox"/>	Other:	<table border="1"> <tr> <td colspan="2">Preservation Codes</td> </tr> <tr> <td>H=HCl</td> <td>T=Thiosulfate</td> </tr> <tr> <td>N=HNO₃</td> <td>B=NaOH</td> </tr> <tr> <td>S=H₂SO₄</td> <td>O=Other</td> </tr> </table>										Preservation Codes		H=HCl	T=Thiosulfate	N=HNO ₃	B=NaOH	S=H ₂ SO ₄	O=Other	6 Remarks	
Preservation Codes																															
H=HCl	T=Thiosulfate																														
N=HNO ₃	B=NaOH																														
S=H ₂ SO ₄	O=Other																														
Project Manager: <u>MARISA KAFFENBERGER</u>		P.O. #: <u>213202156/213202157</u>		Total # of Containers <u>NITRATE</u> <u>AMMONIA</u>																											
Sampler: <u>ROBERT MCALISTER</u>		Quote #:																													
Name of state where samples were collected: <u>WASHINGTON</u>				3																											
2 Sample Identification		Collected		Grab <input checked="" type="checkbox"/>	Composite <input type="checkbox"/>											6 Remarks															
		Date	Time																												
<u>EB061413</u>		<u>6/14/13</u>	<u>1130</u>											<u>STANDARD TAT</u>																	
7 Turnaround Time (TAT) Requested (please circle)				Relinquished by <u>ROBERT MCALISTER</u>		Date	Time	Received by <u>FED EX</u>		Date	Time	9																			
Standard _____ Rush _____ (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)						<u>6/14/13</u>	<u>1300</u>			<u>6/14/13</u>	<u>1300</u>																				
Date results are needed: _____				Relinquished by		Date	Time	Received by		Date	Time																				
E-mail address: <u>MARISA.KAFFENBERGER@STANTEC.COM</u>				Relinquished by		Date	Time	Received by		Date	Time																				
8 Data Package Options (circle if required)				Relinquished by		Date	Time	Received by <u>Ret-Ex</u>		Date	Time	<u>6/19/13 0930</u>																			
Type I (Validation/non-CLP)		Type VI (Raw Data Only)						Relinquished by Commercial Carrier:																							
Type III (Reduced non-CLP)		TX TRRP-13						UPS _____ FedEx <u>X</u> Other _____																							
Type IV (CLP SOW)		MA MCP CT RCP						Temperature upon receipt <u>3.6</u> °C																							
				EDD Required? Yes No																											
				If yes, format: _____																											
				Site-Specific QC (MS/MSD/Dup)? Yes No																											
				(If yes, indicate QC sample and submit triplicate sample volume.)																											

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but \geq IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>$ 25%	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Appendix B

Borehole Logs

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-01



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363093.556** EASTING (ft): **1761972.614**
 LAT: **46° 19' 40.84769"** LONG: **120° 1' 7.73198"**
 GROUND ELEV (ft): **742.19** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand; some fine roots						
		SP	SAND WITH SILT ; SP; 10YR 5/8 yellowish brown; medium dense; slightly moist; no odor; trace small rounded gravels; non cohesive		945 A1-DB-01 -1.5'			0.8	
			7.5YR 6/4 light brown; moist; trace mica		950 A1-DB-01 -3.0'			1.1	
5			Wet		955 A1-DB-01 -4.5'			1.1	5
			Borehole terminated at 7 feet.		1000 A1-DB-01 -6.5' DUP-05 @1005			0.9	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-01a



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363107.176** EASTING (ft): **1761966.824**
 LAT: **46° 19' 40.98249"** LONG: **120° 1' 7.8133"**
 GROUND ELEV (ft): **741.78** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **5.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive		1625 A1-DB-01a -1.5'			2.0	
			Moist; trace mica		1630 A1-DB-01a -3.0' DUP-29 @1635			1.8	
5			Borehole terminated at 5 feet.		1640 A1-DB-01a -4.5'			2.6	5

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-01b



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363099.671** EASTING (ft): **1761986.375**
 LAT: **46° 19' 40.90723"** LONG: **120° 1' 7.53535"**
 GROUND ELEV (ft): **741.84** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **5.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive		1005 A1-DB-01b -1.5'			1.6	
			Moist; trace mica		1010 A1-DB-01b -3.0' DUP-25 @1015			1.9	
					1020 A1-DB-01b -4.5'			2.2	
5			Borehole terminated at 5 feet.						5

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-02



DRILLING / INSTALLATION:
 STARTED: **3/18/13** COMPLETED: **3/18/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363033.789** EASTING (ft): **1761981.722**
 LAT: **46° 19' 40.25713"** LONG: **120° 1' 7.60738"**
 GROUND ELEV (ft): **741.96** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 10YR 5/2 grayish brown; medium dense; slightly moist; no odor; trace small rounded gravels; non cohesive		955 A1-DB-02 -1.5'			0.0	
		ML	SANDY SILT ; ML; 7.5YR 6/4 light brown; low plasticity; stiff; moist; no odor; trace small rounded gravels; trace fine roots		1015 A1-DB-02 -3.0' DUP-01 @1020			0.2	
5			Wet		1025 A1-DB-02 -4.5'			0.4	5
		SP	SAND WITH TRACE SILT ; SP; 7.5 YR 4/4 brown; medium dense; no odor; non cohesive		1030 A1-DB-02 -6.5'			0.0	
			Borehole terminated at 7 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-02a



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363026.267** EASTING (ft): **1761974.721**
 LAT: **46° 19' 40.18329"** LONG: **120° 1' 7.70781"**
 GROUND ELEV (ft): **741.89** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; moist; no odor; non cohesive		1110 A1-DB-02a -1.5'			2.4	
			Trace mica		1115 A1-DB-02a -3.0' DUP-16 @1120			3.0	
			Wet		1125 A1-DB-02a -4.5'			3.0	
5									5
			Borehole terminated at 7 feet.		1130 A1-DB-02a -6.5'			3.3	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-02b



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363019.572** EASTING (ft): **1761998.647**
 LAT: **46° 19' 40.11576"** LONG: **120° 1' 7.36742"**
 GROUND ELEV (ft): **742.07** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive; trace mica		1050 A1-DB-02b -1.5'			2.5	
			Moist; increase in silt		1055 A1-DB-02b -3.0'			2.6	
5		ML	SANDY SILT ; ML; 7.5YR 6/4 light brown; low plasticity; stiff; moist; no odor; trace mica		1100 A1-DB-02b -4.5'			3.3	5
		SM	SILTY SAND ; SM; 10YR 5/2 grayish brown; medium dense; wet; no odor; non cohesive; trace mica		1105 A1-DB-02b -6.5'			3.5	
			Borehole terminated at 7 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-03



DRILLING / INSTALLATION:
 STARTED: **3/18/13** COMPLETED: **3/18/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363067.471** EASTING (ft): **1761990.108**
 LAT: **46° 19' 40.58912"** LONG: **120° 1' 7.48495"**
 GROUND ELEV (ft): **742.14** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 7.5YR 6/4 light brown; medium dense; slightly moist; slight weathered hydrocarbon odor; non cohesive		1100 A1-DB-03 -1.5'			14.5	
			Trace mica		1105 A1-DB-03 -3.0'			11.5	
			Moist; decrease in odor		1110 A1-DB-03 -4.5'			0.9	
5			7.5 YR 3/4 dark brown; wet; no odor		1115 A1-DB-03 -6.5'			0.9	5
			Borehole terminated at 7 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-03a



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363086.333** EASTING (ft): **1762006.233**
 LAT: **46° 19' 40.77436"** LONG: **120° 1' 7.25352"**
 GROUND ELEV (ft): **741.79** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive		1335 A1-DB-03a-1.5'			3.6	
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; moist; no odor; trace mica; non cohesive		1340 A1-DB-03a-3.0'			2.6	
5					1345 A1-DB-03a-4.5'			3.3	5
			Wet		1350 A1-DB-03a-6.5'			2.9	
			Borehole terminated at 7 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-03b



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363061.297** EASTING (ft): **1762017.836**
 LAT: **46° 19' 40.5265"** LONG: **120° 1' 7.09035"**
 GROUND ELEV (ft): **741.86** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 7.5YR 4/4 brown; medium dense; moist; no odor; non cohesive		1310 A1-DB-03b -1.5'			2.5	
			Trace mica		1315 A1-DB-03b -3.0'			2.4	
5		SP	SAND WITH SILT ; SP; 7.5YR 4/4 brown; medium dense; wet; no odor; trace mica; non cohesive		1320 A1-DB-03b -4.5'			2.1	5
			Borehole terminated at 7 feet.		1325 A1-DB-03b -6.5'			3.3	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-03c



DRILLING / INSTALLATION:
 STARTED: **6/14/13** COMPLETED: **6/14/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363089.660** EASTING (ft): **1762015.680**
 LAT: **46° 19' 40.80672"** LONG: **120° 1' 7.11857"**
 GROUND ELEV (ft): **741.97** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; loose to medium dense; slightly moist; no odor; many medium to large subrounded gravels; non cohesive						
			No gravels		845 A1-DB-03c -1.5'			1.2	
		SM	SANDY SILT ; SM; 10YR 5/3 brown; medium dense; moist; no odor; no gravels; trace iron oxide staining; non cohesive						
			10YR 5/1 gray; increase in moisture		855 A1-DB-03c -3.0'			1.0	
5					900 A1-DB-03c -4.5'			0.8	
					910 A1-DB-03c -6.0'			0.6	5
			Borehole terminated at 6.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-03d



DRILLING / INSTALLATION:
 STARTED: **6/14/13** COMPLETED: **6/14/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363060.960** EASTING (ft): **1762027.930**
 LAT: **46° 19' 40.52266"** LONG: **120° 1' 6.9464"**
 GROUND ELEV (ft): **742.04** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 3/3 dark brown; loose to medium dense; moist; no odor; some small subrounded gravels; non cohesive		920 A1-DB-03d -1.5'			1.7	
		SM	SILTY SAND ; SM; 10YR 3/3 dark brown; some small subrounded gravels; non cohesive		925 A1-DB-03d -3.0'			1.9	
			10YR 5/1 gray; increase in moisture; trace mica		930 A1-DB-03d -4.5'			1.8	
5			Wet		940 A1-DB-03d -6.0'			1.5	5
			Borehole terminated at 6.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-03f



DRILLING / INSTALLATION:
 STARTED: **6/14/13** COMPLETED: **6/14/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363060.520** EASTING (ft): **1762037.770**
 LAT: **46° 19' 40.51765"** LONG: **120° 1' 6.80633"**
 GROUND ELEV (ft): **741.94** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 5/4 brown; loose to medium dense; dry to slightly moist; no odor; many medium to large subrounded gravels; non cohesive						
			7.5YR 3/4 dark brown; trace gravels		955 A1-DB-03f -1.5'			1.9	
		SM	SILTY SAND ; SM; 7.5YR 4/3 brown; medium dense; moist; no odor; no gravels; non cohesive; trace mica		1005 A1-DB-03f -3.0'			2.0	
5			7.5YR 5/1 gray; increase in moisture		1015 A1-DB-03f -4.5'			1.8	5
			Borehole terminated at 6.5 feet.		1020 A1-DB-03f -6.0'			2.0	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-03g



DRILLING / INSTALLATION:
 STARTED: **6/12/13** COMPLETED: **6/12/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363061.530** EASTING (ft): **1762048.590**
 LAT: **46° 19' 40.52704"** LONG: **120° 1' 6.65201"**
 GROUND ELEV (ft): **741.96** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		SP	SAND ; SP; 7.5YR 6/4 light brown; loose; dry; no odor; many small to medium subrounded gravels; non cohesive; some fine roots						
			7.5YR 4/3 brown; decrease in gravels; trace fine roots		1750 A1-DB-03g -1.5'			0.9	
		ML	SILT WITH SAND ; ML; 7.5YR 3/4 dark brown; low plasticity; stiff; moist; no odor; trace iron oxide staining; trace mica		1800 A1-DB-03g -3.0'			0.7	
5			7.5YR 5/1 gray		1810 A1-DB-03g -4.5'			0.4	5
			Borehole terminated at 6.5 feet.		1815 A1-DB-03g -6.0' DUP-32 @1820			0.1	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-04



DRILLING / INSTALLATION:
 STARTED: **3/18/13** COMPLETED: **3/18/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363021.126** EASTING (ft): **1762044.891**
 LAT: **46° 19' 40.12831"** LONG: **120° 1' 6.7083"**
 GROUND ELEV (ft): **742.25** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 7.5YR 3/4 dark brown; medium dense; slightly moist; no odor; many small subrounded gravels; non cohesive		1140 A1-DB-04 -1.5'			0.4	
		ML	SANDY SILT ; ML; 10YR 5/6 yellowish brown; low plasticity; stiff; slightly moist; no odor		1145 A1-DB-04 -3.0'			0.9	
5			Decrease in silt; trace mica		1155 A1-DB-04 -4.5'			0.7	5
			Wet		1200 A1-DB-04 -6.5'			0.8	
			Borehole terminated at 7 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-04a



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363032.930** EASTING (ft): **1762011.976**
 LAT: **46° 19' 40.24682"** LONG: **120° 1' 7.17632"**
 GROUND ELEV (ft): **741.99** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 4/3 brown; medium dense; slightly moist; no odor; trace small rounded gravels; non cohesive		1410 A1-DB-04a -1.5' DUP-17 @1415			2.1	
			7.5YR 6/4 light brown; moist; trace mica		1420 A1-DB-04a -3.0'			2.6	
5		SM	SILTY SAND ; SM; 7.5YR 6/4 light brown; medium dense; wet; no odor; trace mica		1425 A1-DB-04a -4.5'			2.8	
			Borehole terminated at 7 feet.		1430 A1-DB-04a -6.5'			3.4	5

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-04b



DRILLING / INSTALLATION:
 STARTED: **6/12/13** COMPLETED: **6/12/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363027.930** EASTING (ft): **1762026.070**
 LAT: **46° 19' 40.19664"** LONG: **120° 1' 6.97579"**
 GROUND ELEV (ft): **742.18** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 5/4 brown; loose to medium dense; dry to slightly moist; no odor; trace small to medium subrounded gravels; non cohesive						
		ML	SILT WITH TRACE SAND ; ML; 7.5YR 4/3 brown; low plasticity; stiff; moist; no odor; trace fine subrounded gravels		1610 A1-DB-04b -1.5'			1.2	
					1620 A1-DB-04b -3.0'			0.5	
					1630 A1-DB-04b -4.5'			0.8	
5			7.5YR 5/1 gray; increase in sand; no gravels		1635 A1-DB-04b -6.0'			0.2	5
			Borehole terminated at 6.5 feet.						

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-04c



DRILLING / INSTALLATION:
 STARTED: **6/12/13** COMPLETED: **6/12/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363024.460** EASTING (ft): **1762035.520**
 LAT: **46° 19' 40.16189"** LONG: **120° 1' 6.84151"**
 GROUND ELEV (ft): **742.07** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 7.5YR 3/4 dark brown; medium dense; dry to slightly moist; no odor; trace small subrounded gravels; non cohesive						
			7.5YR 4/3 brown; no gravels; trace mica		1655 A1-DB-04c -1.5'			0.5	
		ML	SILT WITH SAND ; ML; 7.5YR 3/4 dark brown; low plasticity; stiff; moist; no odor; no gravels; trace mica						
			7.5YR 5/1 gray; very moist		1703 A1-DB-04c -3.0'			0.7	
5					1710 A1-DB-04c -4.5'			0.4	
					1720 A1-DB-04c -6.0'			0.4	
			Borehole terminated at 6.5 feet.						5

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-05



DRILLING / INSTALLATION:
 STARTED: **3/18/13** COMPLETED: **3/18/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363059.545** EASTING (ft): **1762059.447**
 LAT: **46° 19' 40.50671"** LONG: **120° 1' 6.49753"**
 GROUND ELEV (ft): **742.39** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SW	GRAVELLY SAND ; SW; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; well graded rounded gravels; non cohesive		1215 A1-DB-05 -1.0'			1.0	
		ML	SILT WITH SAND ; ML; 10YR 5/2 grayish brown; low plasticity; stiff; slightly moist; no odor		1220 A1-DB-05 -2.5'			1.3	
			SILT ; 7.5YR 6/3 light brown; moist; trace sand; some mica		1230 A1-DB-05 -4.0'			0.7	
5		SP	SAND WITH SILT ; SP; 7.5YR 5/1 gray; medium dense; moist; no odor; non cohesive; trace mica		1235 A1-DB-05 -5.5'			1.6	5
			Borehole terminated at 6 feet.						

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-05a



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363084.229** EASTING (ft): **1762046.619**
 LAT: **46° 19' 40.75116"** LONG: **120° 1' 6.67819"**
 GROUND ELEV (ft): **742.00** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand; slight ammonia odor						
			Increase in sand						
		SM	SILTY SAND ; SM; 7.5YR 4/3 brown; medium dense; moist; slight ammonia odor; non cohesive; trace mica						
					1445 A1-DB-05a -1.0'			5.3	
					1450 A1-DB-05a -2.5'			4.5	
					1500 A1-DB-05a -4.0'			92.0	
5			5Y 4/2 olive gray; weathered hydrocarbon odor						
			Wet						5
			Borehole terminated at 6 feet.		1505 A1-DB-05a -5.5'			123.9	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-05b



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363081.335** EASTING (ft): **1762074.366**
 LAT: **46° 19' 40.72092"** LONG: **120° 1' 6.28304"**
 GROUND ELEV (ft): **741.91** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
		SP	Grass SAND WITH GRAVEL ; SP; 7.5YR 6/3 light brown; loose to medium dense; slightly moist; no odor; many well graded rounded gravels; non cohesive; trace fine roots						
			No roots		1515 A1-DB-05b -1.0'			2.5	
					1520 A1-DB-05b -2.5'			2.8	
		SM	SILTY SAND ; SM; 10YR 5/2 grayish brown; medium dense; moist; no odor; trace mica; non cohesive		1525 A1-DB-05b -4.0'			3.0	
5					1530 A1-DB-05b -5.5'			2.4	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-05c



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363102.092** EASTING (ft): **1762027.286**
 LAT: **46° 19' 40.92867"** LONG: **120° 1' 6.95213"**
 GROUND ELEV (ft): **741.43** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	GRAVELLY SAND ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; many well graded rounded gravels; non cohesive; trace glass and small rusted metal debris Large (~2") piece of rusted metal @ 1.75' bgs		1540 A1-DB-05c -1.0'			1.4	
			SAND WITH SILT ; 10YR 5/2 grayish brown; moist; trace mica		1545 A1-DB-05c -2.5'			1.9	
					1550 A1-DB-05c -4.0'			1.7	
5			Wet		1555 A1-DB-05c -5.5'			2.0	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-05d



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363106.908** EASTING (ft): **1762065.626**
 LAT: **46° 19' 40.9739"** LONG: **120° 1' 6.40536"**
 GROUND ELEV (ft): **741.61** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Grass						
		SP	SAND WITH GRAVEL ; SP; 7.5YR 6/3 light brown; loose to medium dense; slightly moist; no odor; some well graded rounded gravels; non cohesive; trace fine roots						
		SM	SILTY SAND ; SM; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; non cohesive		1605 A1-DB-05d -1.0'			1.9	
			10YR 4/3 brown; moist		1610 A1-DB-05d -2.5'			2.7	
			10YR 5/2 grayish brown		1615 A1-DB-05d -4.0'			2.3	
5					1620 A1-DB-05d -5.5' DUP-18 @1625			2.6	5
			Borehole terminated at 6 feet.						

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-06



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363020.897** EASTING (ft): **1762061.366**
 LAT: **46° 19' 40.12506"** LONG: **120° 1' 6.47354"**
 GROUND ELEV (ft): **742.51** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/PRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH GRAVEL ; SP; 10YR 6/4 light yellowish brown; medium dense; slightly moist; no odor; many small rounded gravels; non cohesive		1620 A1-DB-06 -1.5'			0.9	
		SM	SILTY SAND ; SM; 10YR 6/4 light yellowish brown; medium dense; slightly moist; no odor; trace mica		1625 A1-DB-06 -3.0'			0.7	
5		SP	SAND WITH SILT ; SP; 10YR 5/2 grayish brown; medium dense; moist; no odor; trace mica		1630 A1-DB-06 -4.5'			1.2	5
			10YR 4/3 brown; wet		1635 A1-DB-06 -6.5'			1.1	
			Borehole terminated at 7 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-06a



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363020.143** EASTING (ft): **1762076.025**
 LAT: **46° 19' 40.11673"** LONG: **120° 1' 6.26472"**
 GROUND ELEV (ft): **742.19** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive		1640 A1-DB-06a -1.5'			1.6	
			Moist; trace small rounded gravels; trace mica						
		SM	SILTY SAND ; SM; 10YR 4/3 brown; medium dense; moist; no odor; trace small rounded gravels; trace mica		1645 A1-DB-06a -3.0'			1.8	
5									
			Wet						
					1650 A1-DB-06a -4.5'			1.9	
					1655 A1-DB-06a -6.5'			2.2	
			Borehole terminated at 7 feet.						5

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-06b



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363032.716** EASTING (ft): **1762091.404**
 LAT: **46° 19' 40.23992"** LONG: **120° 1' 6.04447"**
 GROUND ELEV (ft): **742.54** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; some small rounded gravels; non cohesive; trace mica		1700 A1-DB-06b -1.5'			1.9	
		SM	SILTY SAND ; SM; 10YR 4/3 brown; medium dense; moist; no odor; some small rounded gravels; non cohesive; trace mica		1705 A1-DB-06b -3.0'			2.1	
5			Wet		1710 A1-DB-06b -4.5'			1.9	5
			Borehole terminated at 7 feet.		1715 A1-DB-06b -6.5'			2.0	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-07



DRILLING / INSTALLATION:
 STARTED: **3/18/13** COMPLETED: **3/18/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363120.469** EASTING (ft): **1762090.939**
 LAT: **46° 19' 41.10624"** LONG: **120° 1' 6.04345"**
 GROUND ELEV (ft): **741.47** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; non cohesive; trace mica		1315 A1-DB-07 -1.0'			0.7	
			10YR 5/2 grayish brown; moist		1320 A1-DB-07 -2.5'			1.8	
			Wet; increase in silt		1330 A1-DB-07 -4.0'			0.9	
5					1335 A1-DB-07 -5.5'			1.6	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-07a



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363129.647** EASTING (ft): **1762080.816**
 LAT: **46° 19' 41.19746"** LONG: **120° 1' 6.18691"**
 GROUND ELEV (ft): **741.71** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; non cohesive		930 A1-DB-07a -1.0'			0.9	
			Moist; trace mica		935 A1-DB-07a -2.5'			1.6	
			10YR 5/2 grayish brown		940 A1-DB-07a -4.0' DUP-24 @945			1.2	
5			Wet		950 A1-DB-07a -5.5'			0.8	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-07b



DRILLING / INSTALLATION:
 STARTED: **6/13/13** COMPLETED: **6/13/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363139.190** EASTING (ft): **1762077.770**
 LAT: **46° 19' 41.29194"** LONG: **120° 1' 6.22948"**
 GROUND ELEV (ft): **742.13** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 5/3 brown; loose; dry; slight organic odor; some small subrounded gravels; trace mica		1740 A1-DB-07b -1.0' DUP-35 @1742			0.3	
			Medium dense; slightly moist; some medium to large subrounded gravels						
		ML	SILT WITH SAND ; ML; 10YR 4/3 brown; low plasticity; stiff; moist; no odor; no gravels; trace mica		1745 A1-DB-07b -2.5'			0.1	
			Very moist		1815 A1-DB-07b -4.0'			0.2	
5					1825 A1-DB-07b -5.5'			0.2	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-07c



DRILLING / INSTALLATION:
 STARTED: **6/14/13** COMPLETED: **6/14/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363155.130** EASTING (ft): **1762074.920**
 LAT: **46° 19' 41.44939"** LONG: **120° 1' 6.2687"**
 GROUND ELEV (ft): **742.82** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 5/3 brown; loose; dry; no odor; some small subrounded gravels; non cohesive		755 A1-DB-07c -1.0'			0.2	
			Medium dense; moist; trace subrounded cobbles		815 A1-DB-07c -2.5'			0.1	
			7.5YR 4/2 brown; no cobbles; no gravels		820 A1-DB-07c -4.0'			0.4	
5			Very moist; trace mica		825 A1-DB-07c -5.5'			0.6	5
			Borehole terminated at 6 feet.						

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-08



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363103.430** EASTING (ft): **1762106.973**
 LAT: **46° 19' 40.93707"** LONG: **120° 1' 5.81645"**
 GROUND ELEV (ft): **741.30** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			12" Concrete						
		SM	SILTY SAND ; SM; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; some well graded rounded gravels; some medium (~3/8") tree roots; non cohesive						
			No gravels						
			7.5YR 6/4 light brown; trace small rounded gravels; some fine (<1/16") tree roots		1205 A1-DB-08 -2.0'			1.6	
			Wet; no gravels; trace mica		1210 A1-DB-08 -3.0'			2.2	
					1215 A1-DB-08 -4.0' DUP-12 @1220			2.3	
5					1225 A1-DB-08 -5.5'			2.7	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-08a



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363116.057** EASTING (ft): **1762123.856**
 LAT: **46° 19' 41.0607"** LONG: **120° 1' 5.57476"**
 GROUND ELEV (ft): **741.07** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			9" Concrete						
		SM	SILTY SAND ; SM; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; some small rounded gravels; non cohesive		1500 A1-DB-08a -1.0'			2.8	
			10YR 5/2 grayish brown; moist; trace mica		1505 A1-DB-08a -2.5'			1.8	
			Wet		1510 A1-DB-08a -4.0'			2.8	
5					1515 A1-DB-08a -5.5'			3.0	5
			Borehole terminated at 6 feet.						

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-09



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363094.606** EASTING (ft): **1762130.494**
 LAT: **46° 19' 40.84854"** LONG: **120° 1' 5.48202"**
 GROUND ELEV (ft): **741.24** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			12" Concrete						
		SM	SILTY SAND ; SM; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; some small well graded gravels; non cohesive		1140 A1-DB-09 -1.5'			1.4	
			Moist; trace small rounded gravels		1145 A1-DB-09 -3.0'			1.9	
			Wet; trace mica		1150 A1-DB-09 -4.5'			3.0	
5					1155 A1-DB-09 -6.0'			3.1	5
			Borehole terminated at 6.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-09a



DRILLING / INSTALLATION:

STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **3636086.895**

EASTING (ft): **1762115.133**

LAT: **46° 19' 40.77334"**

LONG: **120° 1' 5.7016"**

GROUND ELEV (ft): **741.90**

TOC ELEV (ft): **N/A**

INITIAL DTW (ft): **Not Encountered**

WELL DEPTH (ft): **---**

STATIC DTW (ft): **Not Encountered**

BOREHOLE DEPTH (ft): **6.0**

WELL CASING DIA. (in): **N/A**

BOREHOLE DIA. (in): **3.0**

LOGGED BY: **RM**

CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 10YR 4/3 brown; medium dense; slightly moist; no odor; some small rounded gravels; non cohesive		1400 A1-DB-09a -1.0'			1.6	
			Large rounded gravel (~2.0") @ 3.0' bgs		1405 A1-DB-09a -2.5'			2.0	
			10YR 5/2 grayish brown; moist; moderately cohesive		1420 A1-DB-09a -4.0'			1.0	
5			Wet		1425 A1-DB-09a -5.5'			2.3	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-10



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363022.591** EASTING (ft): **1762113.891**
 LAT: **46° 19' 40.13862"** LONG: **120° 1' 5.7249"**
 GROUND ELEV (ft): **742.28** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	
		SP	GRAVELLY SAND ; SP; 10YR 5/6 yellowish brown; loose to medium dense; slightly moist; no odor; well graded rounded gravels; non cohesive; trace fine roots							
			SAND WITH SILT ; some small rounded gravels		1645 A1-DB-10 -1.5'			1.7		
			Moist			1650 A1-DB-10 -3.0'			1.5	
5		SM	SILTY SAND ; SM; 10YR 5/2 grayish brown			1655 A1-DB-10 -5.0' DUP-07 @1700			1.4	5
			Borehole terminated at 7.5 feet.		1705 A1-DB-10 -7.0'			1.6		

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A1-DB-10a



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363020.974** EASTING (ft): **1762127.482**
 LAT: **46° 19' 40.12183"** LONG: **120° 1' 5.53135"**
 GROUND ELEV (ft): **742.23** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive		840 A1-DB-10a -1.5'			1.1	
		SM	SILTY SAND ; SM; 7.5YR 6/4 light brown; medium dense; moist; no odor; trace small rounded gravels; non cohesive		845 A1-DB-10a -3.0'			0.8	
5			Trace mica						
			Wet						
					850 A1-DB-10a -5.0' DUP-14 @855			2.0 1.6	5
					900 A1-DB-10a -7.0'			1.6	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:


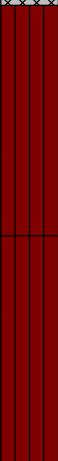

A1-DB-11



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363021.540** EASTING (ft): **1762139.796**
 LAT: **46° 19' 40.12667"** LONG: **120° 1' 5.35583"**
 GROUND ELEV (ft): **742.26** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand; trace fine roots						
		ML	SANDY SILT ; ML; 10YR 5/3 brown; low plasticity; stiff; slightly moist; no odor; some small rounded gravels; trace fine roots		1020 A1-DB-11 -1.5'			0.8	
			10YR 5/6 yellowish brown; no gravels		1025 A1-DB-11 -3.0'			1.2	
5		SM	SILTY SAND ; SM; 10YR 5/3 brown; medium dense; wet; no odor; trace small rounded gravels; non cohesive; trace mica		1030 A1-DB-11 -5.0'			0.8	5
			Borehole terminated at 7.5 feet.		1040 A1-DB-11 -7.0'			2.1	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-11a



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363021.024** EASTING (ft): **1762158.472**
 LAT: **46° 19' 40.12046"** LONG: **120° 1' 5.08973"**
 GROUND ELEV (ft): **742.45** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; loose to medium dense; slightly moist; no odor; some small rounded gravels; non cohesive						
			Large (~3") subrounded cobble @ 1.5'		915 A1-DB-11a -1.5'			1.9	
			Moist; no gravels; trace mica		925 A1-DB-11a -3.0'			1.7	
5			Wet		930 A1-DB-11a -5.0'			1.5	5
			Borehole terminated at 7.5 feet.		935 A1-DB-11a -7.0'			2.0	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-11b



DRILLING / INSTALLATION:
 STARTED: **6/12/13** COMPLETED: **6/12/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363022.000** EASTING (ft): **1762173.390**
 LAT: **46° 19' 40.12924"** LONG: **120° 1' 4.87693"**
 GROUND ELEV (ft): **742.66** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		SP	SAND WITH SILT ; SP; 7.5YR 4/3 brown; loose; dry; no odor; no gravels; non cohesive						
			Medium dense; slightly moist; some small rounded gravels		1430 A1-DB-11b -1.5'			0.2	
			Trace large subrounded gravels		1445 A1-DB-11b -3.0'			0.2	
5		SM	SILTY SAND ; SM; 7.5YR 4/3 brown; medium dense; slightly moist; no odor; no gravels; non cohesive; trace iron oxide staining						
			10YR 5/2 grayish brown; moist		1530 A1-DB-11b -5.0'			0.1	5
			SAND WITH TRACE SILT ; 7.5YR 3/4 dark brown; medium dense; moist; no odor; no gravels; non cohesive		1545 A1-DB-11b -7.0'			0.0	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-12



DRILLING / INSTALLATION:
 STARTED: **3/18/13** COMPLETED: **3/18/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363138.146** EASTING (ft): **1762131.810**
 LAT: **46° 19' 41.27828"** LONG: **120° 1' 5.45948"**
 GROUND ELEV (ft): **741.92** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand; trace fine roots						
			Large piece of concrete (>3.0") @1.0' bgs						
		SP	SAND WITH TRACE SILT ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; trace small rounded gravels; non cohesive; trace mica		1340 A1-DB-12 -1.5' DUP-02 @1345			1.5	
					1350 A1-DB-12 -2.5'			0.9	
			Moist		1355 A1-DB-12 -4.0'			1.4	
5					1400 A1-DB-12 -5.5'			1.6	5
			Borehole terminated at 6 feet.						

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-12a



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363146.768** EASTING (ft): **1762129.215**
 LAT: **46° 19' 41.36356"** LONG: **120° 1' 5.49572"**
 GROUND ELEV (ft): **742.14** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **4.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Grass						
	SP	SP	SAND WITH GRAVEL ; SP; 10YR 5/6 yellowish brown; loose to medium dense; slightly moist; no odor; some well graded rounded gravels; non cohesive						
			Trace small-medium rounded gravels		850 A1-DB-12a -1.0'			0.5	
			Moist; no gravels; trace mica		855 A1-DB-12a -2.5' DUP-23 @900			0.6	
			Borehole terminated at 4.5 feet.		905 A1-DB-12a -4.0			1.3	
5									5

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-12b



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363156.661** EASTING (ft): **1762127.618**
 LAT: **46° 19' 41.46132"** LONG: **120° 1' 5.51761"**
 GROUND ELEV (ft): **742.78** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **4.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Grass						
	[Graphic Log]	SP	SAND WITH GRAVEL ; SP; 10YR 5/6 yellowish brown; loose to medium dense; slightly moist; no odor; some well graded rounded gravels; non cohesive						
			SAND WITH SILT ; 10YR 4/3 brown; moist; no gravels		910 A1-DB-12b -1.0'			0.9	
			Trace mica		915 A1-DB-12b -2.5'			0.9	
					920 A1-DB-12b -4.0'			1.6	
5			Borehole terminated at 4.5 feet.						5

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A1-DB-13



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363087.740** EASTING (ft): **1762144.900**
 LAT: **46° 19' 40.77975"** LONG: **120° 1' 5.27732"**
 GROUND ELEV (ft): **742.13** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 1 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 10YR 4/3 brown; medium dense; slightly moist; trace small rounded gravels; non cohesive		1435 A1-DB-13 -1.0'			2.0	
					1440 A1-DB-13 -2.5'			2.2	
			10YR 5/2 grayish brown; moist		1445 A1-DB-13 -4.0'			2.1	
5			Wet		1450 A1-DB-13 -5.5'			2.7	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A2-DB-01



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363120.695** EASTING (ft): **1761838.756**
 LAT: **46° 19' 41.12366"** LONG: **120° 1' 9.63715"**
 GROUND ELEV (ft): **742.57** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 2 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/10/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; medium dense; moist; no odor; non cohesive		835 A2-DB-01 -1.5'			0.5	
		SM	SILTY SAND ; SM; 10YR 4/3 brown; medium dense; moist; no odor; non cohesive		840 A2-DB-01 -3.0'			1.3	
			10YR 5/2 grayish brown; wet		845 A2-DB-01 -4.5'			0.6	
5					850 A2-DB-01 -6.0'			1.0	5
			Borehole terminated at 6.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A2-DB-01a



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363110.505** EASTING (ft): **1761836.729**
 LAT: **46° 19' 41.02319"** LONG: **120° 1' 9.66692"**
 GROUND ELEV (ft): **742.76** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 2 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/10/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive		950 A2-DB-01a -1.5'			1.1	
			Trace small rounded gravel		955 A2-DB-01a -3.0'			1.5	
			Wet; trace mica		1000 A2-DB-01a -4.5'			1.3	
5					1005 A2-DB-01a -6.0'			1.5	5
			Borehole terminated at 6.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A2-DB-02



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363127.359** EASTING (ft): **1761849.279**
 LAT: **46° 19' 41.18881"** LONG: **120° 1' 9.48662"**
 GROUND ELEV (ft): **742.47** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 2 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/10/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive		905 A2-DB-02 -1.5'			1.3	
			SAND WITH SILT ; 7.5YR 6/3 light brown		910 A2-DB-02 -3.0' DUP-11 @915			0.3	
			Wet; trace mica		920 A2-DB-02 -4.5'			1.5	
5					925 A2-DB-02 -6.0'			2.1	5
			Borehole terminated at 6.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A2-DB-02a



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363124.327** EASTING (ft): **1761858.482**
 LAT: **46° 19' 41.15833"** LONG: **120° 1' 9.35573"**
 GROUND ELEV (ft): **742.47** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 2 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/10/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive		930 A2-DB-02a -1.5'			1.5	
					935 A2-DB-02a -3.0'			1.3	
			10YR 5/2 grayish brown; trace mica		940 A2-DB-02a -4.5'			1.4	
5					945 A2-DB-02a -6.0'			1.9	5
			Borehole terminated at 6.5 feet.						


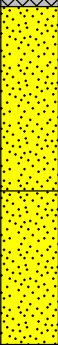
PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A4-DB-01



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363200.663** EASTING (ft): **1761844.186**
 LAT: **46° 19' 41.91278"** LONG: **120° 1' 9.55283"**
 GROUND ELEV (ft): **742.79** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND ; SP; 10YR 6/4 light yellowish brown; medium dense; slightly moist; no odor; some well graded rounded gravels; non cohesive		855 A4-DB-01 -0.5'			0.6	
			SAND WITH SILT		900 A4-DB-01 -2.5'			0.5	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 4 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/9/13


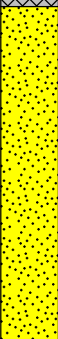
PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A4-DB-01b



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363192.027** EASTING (ft): **1761837.537**
 LAT: **46° 19' 41.82792"** LONG: **120° 1' 9.64832"**
 GROUND ELEV (ft): **742.96** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; moist; no odor; non cohesive; trace mica		1105 A4-DB-01b -0.5'			1.5	
					1110 A4-DB-01b -2.5'			1.9	
5			Borehole terminated at 3 feet.						5

GEO FORM 304 MARCH 2013 AREA 4 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/9/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A4-DB-01c



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363193.506** EASTING (ft): **1761850.115**
 LAT: **46° 19' 41.84177"** LONG: **120° 1' 9.46896"**
 GROUND ELEV (ft): **742.58** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive; trace mica		1125 A4-DB-01c -0.5' DUP-26 @1130			1.5	
			Moist						
			Borehole terminated at 3 feet.		1135 A4-DB-01c -2.5'			1.9	
5									5

GEO FORM 304 MARCH 2013 AREA 4 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/9/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**


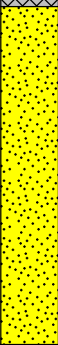
WELL/PROBEHOLE/BOREHOLE NO:

A4-DB-01e



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363184.219** EASTING (ft): **1761831.124**
 LAT: **46° 19' 41.75123"** LONG: **120° 1' 9.7404"**
 GROUND ELEV (ft): **742.82** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; moist; no odor; non cohesive; trace mica		1115 A4-DB-01e -0.5'			1.0	
					1120 A4-DB-01e -2.5'			1.4	
5			Borehole terminated at 3 feet.						5

GEO FORM 304 MARCH 2013 AREA 4 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/9/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A4-DB-01f



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363187.703** EASTING (ft): **1761858.573**
 LAT: **46° 19' 41.78397"** LONG: **120° 1' 9.34893"**
 GROUND ELEV (ft): **742.59** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive; trace mica		1140 A4-DB-01f -0.5'			1.6	
			Moist		1145 A4-DB-01f -2.5'			2.9	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 4 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/9/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A4-DB-02



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363196.927** EASTING (ft): **1761842.487**
 LAT: **46° 19' 41.876"** LONG: **120° 1' 9.57737"**
 GROUND ELEV (ft): **742.75** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH GRAVEL ; SP; 10YR 6/4 light yellowish brown; medium dense; moist; no odor; some well graded rounded gravels; non cohesive		835 A4-DB-02 -0.5'			0.6	
			----- Decrease in gravels		845 A4-DB-02 -2.5' DUP-04 @850			0.4	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 4 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/9/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-01



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363238.092** EASTING (ft): **1761901.339**
 LAT: **46° 19' 42.27884"** LONG: **120° 1' 8.73512"**
 GROUND ELEV (ft): **743.53** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive; trace mica		840 A5W-DB-01 -0.5'			1.1	
					845 A5W-DB-01 -2.5'			1.0	
5			Borehole terminated at 3 feet.						5

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-01a



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363236.298** EASTING (ft): **1761903.019**
 LAT: **46° 19' 42.26102"** LONG: **120° 1' 8.71133"**
 GROUND ELEV (ft): **743.51** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive		1415 A5W-DB-01a -0.5'			2.9	
			Moist; trace mica		1420 A5W-DB-01a -2.5' DUP-27 @1425			3.1	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-01b



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363244.446** EASTING (ft): **1761897.070**
 LAT: **46° 19' 42.34182"** LONG: **120° 1' 8.7954"**
 GROUND ELEV (ft): **743.72** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive		1430 A5W-DB-01b -0.5'			2.3	
			Moist; trace mica		1435 A5W-DB-01b -2.5'			2.1	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-01c



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363227.335** EASTING (ft): **1761900.781**
 LAT: **46° 19' 42.17268"** LONG: **120° 1' 8.744"**
 GROUND ELEV (ft): **743.29** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive		1405 A5W-DB-01c -0.5'			1.1	
			Moist; trace mica		1410 A5W-DB-01c -2.5'			2.4	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-01d



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363238.826** EASTING (ft): **1761912.940**
 LAT: **46° 19' 42.28538"** LONG: **120° 1' 8.56973"**
 GROUND ELEV (ft): **743.72** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive		1445 A5W-DB-01d -0.5'			2.1	
			Moist; trace mica		1450 A5W-DB-01d -2.5'			3.5	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-02



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363242.049** EASTING (ft): **1761953.874**
 LAT: **46° 19' 42.31474"** LONG: **120° 1' 7.98613"**
 GROUND ELEV (ft): **744.19** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; some well graded rounded gravels; non cohesive		910 A5W-DB-02 -0.5'			0.5	
		SM	SILTY SAND ; SM; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; trace well graded gravels; non cohesive; trace mica		915 A5W-DB-02 -2.5'			0.8	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13


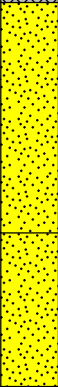
PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-02a



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363242.853** EASTING (ft): **1761949.388**
 LAT: **46° 19' 42.32295"** LONG: **120° 1' 8.04998"**
 GROUND ELEV (ft): **744.30** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive		1555 A5W-DB-02a -0.5'			3.0	
			Moist; trace mica		1600 A5W-DB-02a -2.5'			1.1	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-02b



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363238.456** EASTING (ft): **1761951.917**
 LAT: **46° 19' 42.27938"** LONG: **120° 1' 8.01432"**
 GROUND ELEV (ft): **744.13** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/3 light brown; medium dense; slightly moist; no odor; non cohesive		1540 A5W-DB-02b -0.5' DUP-28 @1545			2.2	
			Moist; trace mica; plastic (PVC) debris @ 2.0' bgs		1550 A5W-DB-02b -2.5'			2.4	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-02c



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363251.696** EASTING (ft): **1761951.721**
 LAT: **46° 19' 42.4101"** LONG: **120° 1' 8.01597"**
 GROUND ELEV (ft): **744.20** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/3 light brown; medium dense; slightly moist; no odor; non cohesive		1615 A5W-DB-02c -0.5'			2.1	
			Moist; trace mica		1620 A5W-DB-02c -2.5'			1.5	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-02d



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363232.225** EASTING (ft): **1761946.784**
 LAT: **46° 19' 42.21818"** LONG: **120° 1' 8.08801"**
 GROUND ELEV (ft): **743.96** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/3 light brown; medium dense; slightly moist; no odor; non cohesive; some iron oxide staining		1530 A5W-DB-02d -0.5'			1.8	
			Moist; trace mica; no iron oxide staining		1535 A5W-DB-02d -2.5'			1.9	
5			Borehole terminated at 3 feet.						5

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5W-DB-02e



DRILLING / INSTALLATION:
 STARTED: **3/25/13** COMPLETED: **3/25/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363242.722** EASTING (ft): **1761961.512**
 LAT: **46° 19' 42.32092"** LONG: **120° 1' 7.87722"**
 GROUND ELEV (ft): **744.36** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/3 light brown; medium dense; slightly moist; no odor; non cohesive		1605 A5W-DB-02e -0.5'			1.7	
			Moist; trace mica		1610 A5W-DB-02e -2.5'			2.0	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-01



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363259.088** EASTING (ft): **1762026.086**
 LAT: **46° 19' 42.47859"** LONG: **120° 1' 6.95558"**
 GROUND ELEV (ft): **744.97** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **10.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		SP	SAND ; SP; 10YR 6/4 light yellowish brown; loose to medium dense; moist; no odor; trace small subrounded gravels; non cohesive						
			Sand with silt; same as above		1030 A5E-DB-01 -2.0'			2.9	
5					1035 A5E-DB-01 -4.5' DUP-08 @1040			1.9	5
				Wet; trace mica		1045 A5E-DB-01 -7.0'			2.8
					1050 A5E-DB-01 -9.5'			3.4	

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

Borehole terminated at 10 feet.

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-01a



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363257.537** EASTING (ft): **1762016.159**
 LAT: **46° 19' 42.46389"** LONG: **120° 1' 7.09719"**
 GROUND ELEV (ft): **744.64** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **10.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)	
		SP	GRAVELLY SAND ; SP; 10YR 6/4 light yellowish brown; loose to medium dense; slightly moist; no odor; some well graded rounded gravels; non cohesive							
			Moist; no gravels							
				Trace mica						
5						1150 A5E-DB-01a -2.0'			2.0	
						1155 A5E-DB-01a -4.5'			2.5	
					1200 A5E-DB-01a -6.0'			3.0		
			Wet							
					1205 A5E-DB-01a -9.5'			5.0		

Borehole terminated at 10 feet.

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-02



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363233.911** EASTING (ft): **1762035.505**
 LAT: **46° 19' 42.22948"** LONG: **120° 1' 6.82355"**
 GROUND ELEV (ft): **744.17** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **9.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; non cohesive		930 A5E-DB-02 -2.0'			1.4	
			Trace small rounded gravels		935 A5E-DB-02 -4.0'			3.5	
5		SM	SILTY SAND ; SM; 10YR 5/6 yellowish brown; medium dense; moist; no odor; non cohesive		940 A5E-DB-02 -6.0'			2.2	5
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; medium dense; wet; no odor; non cohesive		945 A5E-DB-02 -8.5'			3.5	
			Borehole terminated at 9 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-03



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363289.945** EASTING (ft): **1762044.551**
 LAT: **46° 19' 42.7821"** LONG: **120° 1' 6.68976"**
 GROUND ELEV (ft): **745.12** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **10.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Grass						
			Gravel road base with sand; some fine roots						
		SP	SAND ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive; trace fine roots						
5					1220 A5E-DB-03 -2.5'			1.8	
					1250 A5E-DB-03 -5.0' DUP-09 @1255			2.2	5
			SAND WITH SILT ; wet						
					1300 A5E-DB-03 -7.5'			2.7	
		SM	SANDY SILT ; SM; 7.5YR 6/3 light brown; low plasticity; stiff; wet; no odor; trace mica						
					1305 A5E-DB-03 -10.0'			3.0	

Borehole terminated at 10 feet.

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-03a



DRILLING / INSTALLATION:
 STARTED: **3/23/13** COMPLETED: **3/23/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363283.910** EASTING (ft): **1762043.031**
 LAT: **46° 19' 42.72262"** LONG: **120° 1' 6.71194"**
 GROUND ELEV (ft): **744.92** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **10.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Grass						
		SP	GRAVELLY SAND ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; some well graded rounded gravels; non cohesive; some fine roots						
			No gravels						
			Moist; trace mica						
			SAND WITH SILT						
5									
		SM	SILTY SAND ; SM; 10YR 5/2 grayish brown; medium dense; wet; no odor; moderately cohesive						
					1205 A5E-DB-03a -2.5'			1.5	
					1210 A5E-DB-03a -5.0' DUP-22 @1215			2.3	5
					1220 A5E-DB-03a -7.5'			3.4	
					1225 A5E-DB-03a -10.0'			4.6	

Borehole terminated at 10 feet.

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-04



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363274.456** EASTING (ft): **1762045.025**
 LAT: **46° 19' 42.62917"** LONG: **120° 1' 6.68436"**
 GROUND ELEV (ft): **744.47** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **10.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVI/RO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Grass						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; non cohesive						
			Moist						
5			10YR 4/3 brown; wet; trace mica						
					1535 A5E-DB-04 -2.0' DUP-13 @1540			1.4	
					1545 A5E-DB-04 -4.5'			2.6	
					1550 A5E-DB-04 -7.0'			2.3	
					1555 A5E-DB-04 -9.5'			2.3	

Borehole terminated at 10 feet.

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-05



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363219.691** EASTING (ft): **1762048.297**
 LAT: **46° 19' 42.08833"** LONG: **120° 1' 6.64248"**
 GROUND ELEV (ft): **743.79** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **8.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
		SP	GRAVELLY SAND ; SP; 10YR 4/3; loose to medium dense; slightly moist; no odor; some well graded rounded gravels; non cohesive						
			SAND WITH SILT ; no gravels						
5			Wet; trace mica		845 A5E-DB-05 -2.0'			1.2	
			Increase in silt		900 A5E-DB-05 -4.0'			2.0	
					905 A5E-DB-05 -6.0'			2.7	5
					910 A5E-DB-05 -8.0'			1.6	
			Borehole terminated at 8.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-05a



DRILLING / INSTALLATION:
 STARTED: **3/23/13** COMPLETED: **3/23/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363227.417** EASTING (ft): **1762042.103**
 LAT: **46° 19' 42.16497"** LONG: **120° 1' 6.73009"**
 GROUND ELEV (ft): **743.91** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **8.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			Grass						
			Gravel road base with sand; trace fine roots						
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; non cohesive; trace fine roots						
			Moist; trace mica		1145 A5E-DB-05a -2.0'			1.8	
5					1150 A5E-DB-05a -4.0'			3.2	5
			Wet		1150 A5E-DB-05a -6.0'			4.4	
					1200 A5E-DB-05a -8.0'			3.4	
			Borehole terminated at 8.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-06



DRILLING / INSTALLATION:
 STARTED: **3/21/13** COMPLETED: **3/21/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363262.514** EASTING (ft): **1762053.577**
 LAT: **46° 19' 42.51076"** LONG: **120° 1' 6.56352"**
 GROUND ELEV (ft): **744.17** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **9.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Grass						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; non cohesive						
			Moist						
5		SM	SILTY SAND ; SM; 10YR 5/2 grayish brown; medium dense; wet; no odor; non cohesive						
				1600 A5E-DB-06 -2.0'				2.3	
				1605 A5E-DB-06 -4.0'				2.1	
				1610 A5E-DB-06 -6.5'				2.3	
				1615 A5E-DB-06 -9.0'				2.4	
			Borehole terminated at 9.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-07



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363260.860** EASTING (ft): **1762066.988**
 LAT: **46° 19' 42.49363"** LONG: **120° 1' 6.37255"**
 GROUND ELEV (ft): **744.17** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **9.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)	
		SP	SAND WITH GRAVEL ; SP; 10YR 6/4 light yellowish brown; loose to medium dense; slightly moist; no odor; non cohesive							
			No gravels							
				Moist; increase in silt						
5				Wet; trace mica						
				Borehole terminated at 9 feet.						
				1000 A5E-DB-07 -2.0'				1.8		
				1005 A5E-DB-07 -4.0'				2.9		
				1010 A5E-DB-07 -6.0'				3.3		
				1015 A5E-DB-07 -8.5'				3.3		
									5	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5E-DB-07a



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363258.193** EASTING (ft): **1762067.251**
 LAT: **46° 19' 42.46728"** LONG: **120° 1' 6.36904"**
 GROUND ELEV (ft): **744.25** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **9.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
		SP	SAND ; SP; 10YR 4/3 brown; loose to medium dense; slightly moist; no odor; trace small rounded gravels; non cohesive						
			Trace mica						
5					1125 A5E-DB-07a -2.0'			1.9	
					1130 A5E-DB-07a -4.0'			1.8	
					1135 A5E-DB-07a -6.0'			2.0	
			Wet						
					1140 A5E-DB-07a -8.5'			3.3	
			Borehole terminated at 9 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5S-DB-01



DRILLING / INSTALLATION:
 STARTED: **3/23/13** COMPLETED: **3/23/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363164.736** EASTING (ft): **1762038.949**
 LAT: **46° 19' 41.54638"** LONG: **120° 1' 6.78048"**
 GROUND ELEV (ft): **742.64** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; loose to medium dense; slightly moist; no odor; few small rounded gravels; non cohesive; trace fine roots						
			No gravels; no roots		940 A5S-DB-01 -1.5'			0.5	
			10YR 5/2 grayish brown; moist; trace mica		945 A5S-DB-01 -3.0'			1.0	
5					950 A5S-DB-01 -4.5'			1.1	5
			Wet		955 A5S-DB-01 -6.5' DUP-19 @1000			2.0	
			Borehole terminated at 7 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5S-DB-01a



DRILLING / INSTALLATION:
 STARTED: **3/23/13** COMPLETED: **3/23/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363153.827** EASTING (ft): **1762031.529**
 LAT: **46° 19' 41.43914"** LONG: **120° 1' 6.88717"**
 GROUND ELEV (ft): **742.33** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive		1120 A5S-DB-01a -1.5'			1.6	
			Moist; trace mica		1125 A5S-DB-01a -3.0'			2.3	
5			Wet		1130 A5S-DB-01a -4.5' DUP-21 @1135			2.1	5
			Borehole terminated at 7 feet.		1140 A5S-DB-01a -6.5'			3.7	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5S-DB-02



DRILLING / INSTALLATION:
 STARTED: **3/23/13** COMPLETED: **3/23/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363181.207** EASTING (ft): **1762046.968**
 LAT: **46° 19' 41.7085"** LONG: **120° 1' 6.66478"**
 GROUND ELEV (ft): **743.23** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Grass						
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; loose to medium dense; slightly moist; no odor; some small rounded gravels; non cohesive; trace fine roots						
			Moist; no gravels		1005 A5S-DB-02 -1.5'			0.8	
		SM	SANDY SILT ; SM; 10YR 5/6 yellowish brown; low plasticity; stiff; moist; no odor		1010 A5S-DB-02 -3.0'			1.4	
			Wet		1015 A5S-DB-02 -4.5'			2.1	
5					1020 A5S-DB-02 -6.5'			1.5	5
			Borehole terminated at 7 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5S-DB-03



DRILLING / INSTALLATION:
 STARTED: **3/23/13** COMPLETED: **3/23/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363170.595** EASTING (ft): **1762053.239**
 LAT: **46° 19' 41.60336"** LONG: **120° 1' 6.57633"**
 GROUND ELEV (ft): **743.40** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 4/16/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; loose to medium dense; slightly moist; no odor; some small rounded gravels; non cohesive; trace fine roots							
			No gravels							
				Moist; trace mica						
				10YR 5/2 grayish brown						
5						1025 A5S-DB-03 -1.5'			1.2	
						1030 A5S-DB-03 -3.0' DUP-20 @1035			2.1	
						1040 A5S-DB-03 -4.5'			1.9	
					1045 A5S-DB-03 -6.5'			2.5		
			Wet							
			Borehole terminated at 7 feet.							

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A5S-DB-03a



DRILLING / INSTALLATION:
 STARTED: **3/23/13** COMPLETED: **3/23/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363168.748** EASTING (ft): **1762065.251**
 LAT: **46° 19' 41.5844"** LONG: **120° 1' 6.40532"**
 GROUND ELEV (ft): **743.19** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		SP	Grass SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; loose to medium dense; slightly moist; no odor; some small to medium rounded gravels; non cohesive; trace fine roots						
			No gravels						
		SM	SILTY SAND ; SM; 10YR 5/2 grayish brown; medium dense; moist; no odor; non cohesive; encountered 2"-dia. PVC pipe on northern side of borhole @3.0' bgs		1050 A5S-DB-03a -1.5'			2.2	
					1100 A5S-DB-03a -3.0'			2.1	
					1105 A5S-DB-03a -4.5'			1.6	
5			Wet		1110 A5S-DB-03a -6.5'			2.4	5
			Borehole terminated at 7 feet.						

GEO FORM 304 MARCH 2013 AREA 5 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 4/16/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-01



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363065.601** EASTING (ft): **1762167.166**
 LAT: **46° 19' 40.55999"** LONG: **120° 1' 9.96196"**
 GROUND ELEV (ft): **742.18** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		SW	SAND ; SW; 7.5YR 6/4 light brown; loose; slightly moist; no odor; well graded; trace fines; non cohesive						
					1055 A6-DB-01 -1.5'			1.1	
					1100 A6-DB-01 -3.0'			1.4	
5		SP	SILTY SAND ; SP; 10YR 5/2 grayish brown; medium dense; moist; no odor; non cohesive						
					1110 A6-DB-01 -4.5'			2.2	
					1120 A6-DB-01 -6.0'			2.9	
			Borehole terminated at 6.5 feet.						5

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-01a



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363077.779** EASTING (ft): **1762174.262**
 LAT: **46° 19' 40.67979"** LONG: **120° 1' 4.85978"**
 GROUND ELEV (ft): **742.33** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
5		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; loose to medium dense; slightly moist; no odor; non cohesive						
			Moist		1010 A6-DB-01a -1.5'			1.4	
		SM	SILTY SAND ; SM; 10YR 5/2 grayish brown; medium dense; moist; no odor; trace mica		1015 A6-DB-01a -3.0'			2.3	
			Wet		1020 A6-DB-01a -4.5'			2.2	
			Borehole terminated at 6.5 feet.		1025 A6-DB-01a -6.0'			2.1	5

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-01b



DRILLING / INSTALLATION:
 STARTED: **3/22/13** COMPLETED: **3/22/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363054.939** EASTING (ft): **1762174.401**
 LAT: **46° 19' 40.4543"** LONG: **120° 1' 4.85978"**
 GROUND ELEV (ft): **742.51** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	
		SP	SAND WITH SILT ; SP; 10YR 5/6 yellowish brown; loose to medium dense; slightly moist; no odor; non cohesive							
			10YR 5/2 grayish brown; moist; trace mica		945 A6-DB-01b -1.5'			1.5		
						950 A6-DB-01b -3.0' DUP-15 @955			2.0	
5			Wet			1000 A6-DB-01b -4.5'			1.8	5
			Borehole terminated at 6.5 feet.		1005 A6-DB-01b -6.0'			2.2		

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A6-DB-02



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363112.224** EASTING (ft): **1762175.075**
 LAT: **46° 19' 41.01978"** LONG: **120° 1' 4.84519"**
 GROUND ELEV (ft): **741.58** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; loose; dry; no odor; trace small rounded gravels; non cohesive						
			Medium dense; slightly moist		1300 A6-DB-02 -1.0'			2.0	
						1305 A6-DB-02 -2.5'			1.7
				10YR 4/3 brown; increase in moisture; trace mica		1315 A6-DB-02 -4.0'			1.5
5				Wet; some small rounded gravels		1320 A6-DB-02 -5.5'			1.2
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-03



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363063.115** EASTING (ft): **1762182.390**
 LAT: **46° 19' 40.53456"** LONG: **120° 1' 4.74957"**
 GROUND ELEV (ft): **741.64** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
		SM	SILTY SAND ; SM; 10YR 4/3 brown; loose to medium dense; slightly moist; no odor; non cohesive		1350 A6-DB-03 -0.5'			1.7	
			Trace small rounded gravels		1355 A6-DB-03 -2.5'			2.3	
			Borehole terminated at 3 feet.						

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A6-DB-04



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363061.028** EASTING (ft): **1762205.637**
 LAT: **46° 19' 40.51393"** LONG: **120° 1' 4.7454"**
 GROUND ELEV (ft): **741.62** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **3.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
		SM	SILTY SAND ; SM; 10YR 4/3 brown; loose to medium dense; slightly moist; no odor; non cohesive		1400 A6-DB-04 -0.5' DUP-06 @1405			0.8	
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; some small rounded gravels; non cohesive		1410 A6-DB-04 -2.5'			1.9	
5			Borehole terminated at 3 feet.						5

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A6-DB-05



DRILLING / INSTALLATION:
 STARTED: **3/19/13** COMPLETED: **3/19/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363100.526** EASTING (ft): **1762193.885**
 LAT: **46° 19' 40.90245"** LONG: **120° 1' 4.41069"**
 GROUND ELEV (ft): **742.05** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SILTY SAND ; SP; 10YR 4/3 brown; medium dense; moist; no odor; moderately cohesive		1420 A6-DB-05 -1.0'			3.2	
			7.5YR 6/4 light brown; non cohesive		1425 A6-DB-05 -2.5'			3.2	
		SP	SAND WITH TRACE SILT ; SP; 7.5YR 6/4 light brown; medium dense; moist; no odor; non cohesive		1430 A6-DB-05 -4.0'			2.5	
5			Wet		1435 A6-DB-05 -5.5'			2.4	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A6-DB-05a



DRILLING / INSTALLATION:
 STARTED: **3/26/13** COMPLETED: **3/26/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363102.860** EASTING (ft): **1762199.685**
 LAT: **46° 19' 40.9262"** LONG: **120° 1' 4.57796"**
 GROUND ELEV (ft): **741.99** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive		925 A6-DB-05a -1.0'			0.6	
			7.5YR 6/3 light brown; moist; trace mica		930 A6-DB-05a -2.5'			0.8	
			10YR 5/2 grayish brown		935 A6-DB-05a -4.0'			0.8	
5			Wet		940 A6-DB-05a -5.5'			0.8	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-05b



DRILLING / INSTALLATION:
 STARTED: **3/26/13** COMPLETED: **3/26/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363113.769** EASTING (ft): **1762182.565**
 LAT: **46° 19' 41.03354"** LONG: **120° 1' 4.49436"**
 GROUND ELEV (ft): **742.19** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVI/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/3 light brown; medium dense; slightly moist; no odor; non cohesive		900 A6-DB-05b -1.0'			0.8	
			Moist; trace mica		905 A6-DB-05b -2.5'			0.7	
			Wet		910 A6-DB-05b -4.0' DUP-30 @915			0.8	
5					920 A6-DB-05b -5.5'			1.2	5
			Borehole terminated at 6 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A6-DB-05c



DRILLING / INSTALLATION:
 STARTED: **3/26/13** COMPLETED: **3/26/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363116.364** EASTING (ft): **1762204.911**
 LAT: **46° 19' 41.0602"** LONG: **120° 1' 4.73809"**
 GROUND ELEV (ft): **741.47** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
		SP	SAND WITH SILT ; SP; 7.5YR 6/3 light brown; loose to medium dense; slightly moist; no odor; non cohesive		945 A6-DB-05c -1.0'			1.4	
		SM	SILTY SAND ; SM; 10YR 5/2 grayish brown; medium dense; moist; no odor; non cohesive; trace mica		950 A6-DB-05c -2.5'			2.4	
					955 A6-DB-05c -4.0'			2.4	
5			Wet						5
			Borehole terminated at 6 feet.		1000 A6-DB-05c -5.5'			1.5	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-06



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363067.513** EASTING (ft): **1762214.700**
 LAT: **46° 19' 40.57659"** LONG: **120° 1' 4.42391"**
 GROUND ELEV (ft): **742.06** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 10YR 5/6 yellowish brown; medium dense; moist; no odor; non cohesive						
			10YR 5/2 grayish brown		1530 A6-DB-06 -1.5'			2.5	
			Wet		1535 A6-DB-06 -3.0'			3.1	
5					1540 A6-DB-06 -4.5'			2.3	5
					1545 A6-DB-06 -6.5'			2.6	
			Borehole terminated at 7 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-06a



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363080.229** EASTING (ft): **1762195.285**
 LAT: **46° 19' 40.70153"** LONG: **120° 1' 4.28331"**
 GROUND ELEV (ft): **742.15** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.0**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENV/PRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
	3" Asphalt		3" Asphalt						
	Gravel road base with sand		Gravel road base with sand						
	SP SAND WITH SILT ; SP; 7.5YR 6/3 light brown; medium dense; slightly moist; non cohesive; slight ammonia odor	SP	SAND WITH SILT ; SP; 7.5YR 6/3 light brown; medium dense; slightly moist; non cohesive; slight ammonia odor						
			Small (~1.5") piece of concrete @ 3.0' bgs		1620 A6-DB-06a -1.5' DUP-10 @1625			24.3	
			Strong ammonia odor		1630 A6-DB-06a -3.0'			47.7	
5			Wet; no ammonia odor		1635 A6-DB-06a -4.5'			42.4	5
			Borehole terminated at 7 feet.		1640 A6-DB-06a -6.5'			1.6	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A6-DB-06b



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363063.829** EASTING (ft): **1762212.721**
 LAT: **46° 19' 40.54081"** LONG: **120° 1' 4.56141"**
 GROUND ELEV (ft): **741.91** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **6.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive						
					1555 A6-DB-06b -1.5'			2.5	
					1600 A6-DB-06b -3.0'			2.3	
			10YR 5/2 grayish brown						
					1605 A6-DB-06b -4.5'			2.6	
5									5
			Wet						
					1610 A6-DB-06b -6.5'			1.3	
			Borehole terminated at 6.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-07



DRILLING / INSTALLATION:
 STARTED: **3/20/13** COMPLETED: **3/20/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363045.376** EASTING (ft): **1762233.339**
 LAT: **46° 19' 40.35759"** LONG: **120° 1' 4.31454"**
 GROUND ELEV (ft): **742.26** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 10YR 4/3 brown; medium dense; slightly moist; no odor; non cohesive						
			10YR 5/2 grayish brown						
5					1650 A6-DB-07 -1.5'			0.8	
					1655 A6-DB-07 -3.0'			2.2	
					1700 A6-DB-07 -5.0'			2.3	5
			Wet; trace mica						
					1705 A6-DB-07 -7.0'			1.8	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-07a



DRILLING / INSTALLATION:
 STARTED: **6/13/13** COMPLETED: **6/13/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363037.680** EASTING (ft): **1762206.320**
 LAT: **46° 19' 40.28208"** LONG: **120° 1' 4.4064"**
 GROUND ELEV (ft): **742.20** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SM	SILTY SAND ; SM; 7.5YR 4/3 brown; loose; dry; no odor; some small subrounded gravels; non cohesive						
			Medium dense; slightly moist; decrease in gravels		910 A6-DB-07a -1.5' DUP-33 @912			0.9	
		SP	SAND WITH SILT ; SP; 7.5YR 4/3 brown; medium dense; moist; no odor; no gravels; non cohesive; trace mica						
					920 A6-DB-07a -3.0'			0.5	
		ML	SANDY SILT ; ML; 7.5YR 4/2 brown; low plasticity; stiff; moist; no odor; no gravels; trace mica						
5			Increase in moisture		925 A6-DB-07a -5.0'			0.3	5
			Wet						
					935 A6-DB-07a -7.0'			0.6	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-07b



DRILLING / INSTALLATION:
 STARTED: **6/13/13** COMPLETED: **6/13/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363030.070** EASTING (ft): **1762199.880**
 LAT: **46° 19' 40.2073"** LONG: **120° 1' 4.49873"**
 GROUND ELEV (ft): **742.20** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 4/3 brown; loose; dry; no odor; some small subrounded gravels; non cohesive						
			5YR 5/4 reddish brown; medium dense; slightly moist; decrease in gravels		949 A6-DB-07b -1.5'			1.0	
					955 A6-DB-07b -3.0'			0.5	
5		ML	SANDY SILT ; ML; 7.5YR 5/1 gray; low plasticity; stiff; moist; no odor; no gravels		1003 A6-DB-07b -5.0'			0.4	5
			Increase in moisture						
					1012 A6-DB-07b -7.0'			0.5	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A6-DB-08



DRILLING / INSTALLATION:
 STARTED: **3/18/13** COMPLETED: **3/18/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363061.324** EASTING (ft): **1762242.377**
 LAT: **46° 19' 40.51378"** LONG: **120° 1' 4.01935"**
 GROUND ELEV (ft): **742.42** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVI/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND ; SP; 10YR 6/4 light yellowish brown; medium dense; slightly moist; no odor; trace medium rounded gravels; non cohesive		1520 A6-DB-08 -1.5'			1.5	
			No gravels		1525 A6-DB-08 -3.0'			1.7	
5			Increase in moisture; trace mica		1530 A6-DB-08 -5.0'			1.1	5
			Wet						
			Borehole terminated at 7.5 feet.		1540 A6-DB-08 -7.0'			0.6	

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:

A6-DB-08a



DRILLING / INSTALLATION:
 STARTED: **3/26/13** COMPLETED: **3/26/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363063.333** EASTING (ft): **1762243.153**
 LAT: **46° 19' 40.53307"** LONG: **120° 1' 3.89037"**
 GROUND ELEV (ft): **742.46** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; no odor; non cohesive; trace small wood fragments						
			Moist; trace mica; no wood fragments						
5					1035 A6-DB-08a -1.5'			1.8	
					1040 A6-DB-08a -3.0'			1.4	
					1045 A6-DB-08a -5.0'			2.0	5
			Wet						
					1050 A6-DB-08a -7.0'			1.8	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-08b



DRILLING / INSTALLATION:
 STARTED: **6/13/13** COMPLETED: **6/13/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363040.110** EASTING (ft): **1762246.520**
 LAT: **46° 19' 40.30366"** LONG: **120° 1' 3.83326"**
 GROUND ELEV (ft): **742.50** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 4/3 brown; loose; dry; no odor; some small to medium subrounded gravels; non cohesive						
			Medium dense; slightly moist; no gravels		1045 A6-DB-08b -1.5' DUP-34 @1047			1.0	
		ML	SANDY SILT ; ML; 7.5YR 4/2 brown; stiff; moist; no odor; no gravels; trace mica		1055 A6-DB-08b -3.0'			1.3	
			Increase in moisture; some iron oxide staining						
5			SILT WITH SAND ; 7.5YR 5/4 brown; decrease in moisture		1100 A6-DB-08b -5.0'			0.8	5
			SANDY SILT ; increase in moisture						
			SANDY SILT ; increase in moisture		1110 A6-DB-08b -7.0'			0.6	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**





WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-08c



DRILLING / INSTALLATION:
 STARTED: **6/13/13** COMPLETED: **6/13/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363069.170** EASTING (ft): **1762253.620**
 LAT: **46° 19' 40.59005"** LONG: **120° 1' 3.72959"**
 GROUND ELEV (ft): **742.55** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVI/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 5/3 brown; loose; dry; no odor; some small subrounded gravels; non cohesive						
			Medium dense; slightly moist; Lens of rounded cobbles at 1.25' to 1.5'						
			7.5YR 4/2 brown; slight organic odor		1445 A6-DB-08c -1.5'			0.1	
			7.5YR 5/3 brown; no gravels		1500 A6-DB-08c -3.0'			0.0	
5		ML	SANDY SILT ; ML; 10YR 5/2 grayish brown; low plasticity; stiff; moist; moderate organic odor; no gravels; trace mica		1505 A6-DB-08c -5.0'			0.0	5
			No odor; increase in moisture		1510 A6-DB-08c -7.0'			0.7	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-08d



DRILLING / INSTALLATION:
 STARTED: **6/13/13** COMPLETED: **6/13/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363031.610** EASTING (ft): **1762251.810**
 LAT: **46° 19' 40.21941"** LONG: **120° 1' 3.75865"**
 GROUND ELEV (ft): **742.63** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 4/2 brown; loose; dry; no odor; some small subrounded gravels; non cohesive						
			7.5YR 3/3 dark brown; medium dense; slightly moist; no gravels		1220 A6-DB-08d -1.5'			0.3	
		ML	SILT WITH SAND ; ML; 7.5YR 3/3 dark brown; low plasticity; stiff; moist; no odor; no gravels; trace mica						
			7.5YR 4/2 brown		1230 A6-DB-08d -3.0'			0.3	
5		SP	SAND WITH SILT ; SP; 7.5YR 4/2 brown; medium dense; moist; no odor; no gravels; non cohesive						
			7.5YR 5/1 gray; increase in moisture		1235 A6-DB-08d -5.0'			0.3	5
					1240 A6-DB-08d -7.0'			0.0	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-09



DRILLING / INSTALLATION:
 STARTED: **3/18/13** COMPLETED: **3/18/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363110.607** EASTING (ft): **1762236.955**
 LAT: **46° 19' 40.9997"** LONG: **120° 1' 3.87519"**
 GROUND ELEV (ft): **742.42** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace P/D (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH TRACE SILT ; SP; 10YR 5/6 yellowish brown; medium dense; slightly moist; no odor; non cohesive						
			Trace mica						
5					1555 A6-DB-09 -1.5'			0.8	
					1600 A6-DB-09 -3.0'			1.0	
					1605 A6-DB-09 -5.0' DUP-03 @1610			1.5	5
					1615 A6-DB-09 -7.0'			1.1	
			Wet						
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-09a



DRILLING / INSTALLATION:
 STARTED: **3/26/13** COMPLETED: **3/26/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363100.628** EASTING (ft): **1762243.658**
 LAT: **46° 19' 40.90156"** LONG: **120° 1' 3.96438"**
 GROUND ELEV (ft): **742.35** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH ORGANICS ; SP; 7.5YR 6/4 light brown; loose; slightly moist; strong fertilizer odor; non cohesive; many fine round yellow granules		1005 A6-DB-09a -1.5'			1.9	
			SAND WITH SILT ; moist; no odor; trace fine round yellow granules		1010 A6-DB-09a -3.0'			1.7	
5			10YR 5/2 grayish brown; no yellow granules; trace mica		1015 A6-DB-09a -5.0' DUP-31 @1020			4.7	5
			Wet						
					1025 A6-DB-09a -7.0'			3.8	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-09b



DRILLING / INSTALLATION:
 STARTED: **3/26/13** COMPLETED: **3/26/13**
 DRILLING COMPANY: **Boart Longyear**
 DRILLING EQUIPMENT: **Air Knife/Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363086.960** EASTING (ft): **1762181.782**
 LAT: **46° 19' 40.76623"** LONG: **120° 1' 3.87063"**
 GROUND ELEV (ft): **742.44** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 6/4 light brown; medium dense; slightly moist; trace fertilizer odor; non cohesive						
			Moist; no odor; trace mica						
5					1055 A6-DB-09b -1.5'			1.8	
					1100 A6-DB-09b -3.0'			2.0	
					1105 A6-DB-09b -5.0'			2.5	5
			Wet						
					1110 A6-DB-09b -7.0'			3.1	
			Borehole terminated at 7.5 feet.						

PROJECT: **Bee Jay Scales**
 LOCATION: **Sunnyside, Washington**
 PROJECT NUMBER: **213202156/213202157**

WELL/PROBEHOLE/BOREHOLE NO:
A6-DB-09c



DRILLING / INSTALLATION:
 STARTED: **6/13/13** COMPLETED: **6/13/13**
 DRILLING COMPANY: **Stantec Consulting Services, Inc.**
 DRILLING EQUIPMENT: **Hand Auger**
 DRILLING METHOD:
 SAMPLING EQUIPMENT: **Hand Auger**

NORTHING (ft): **363095.190** EASTING (ft): **1762253.570**
 LAT: **46° 19' 40.84693"** LONG: **120° 1' 3.72805"**
 GROUND ELEV (ft): **742.50** TOC ELEV (ft): **N/A**
 INITIAL DTW (ft): **Not Encountered** WELL DEPTH (ft): **---**
 STATIC DTW (ft): **Not Encountered** BOREHOLE DEPTH (ft): **7.5**
 WELL CASING DIA. (in): **N/A** BOREHOLE DIA. (in): **3.0**
 LOGGED BY: **RM** CHECKED BY: **MK**

GEO FORM 304 MARCH 2013 AREA 6 ASSESSMENT.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 6/19/13

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			3" Asphalt						
			Gravel road base with sand						
		SP	SAND WITH SILT ; SP; 7.5YR 4/2 brown; loose; dry; no odor; some small subrounded gravels; non cohesive; wood debris at 1'						
			7.5YR 3/2 dark brown; medium dense; slightly moist		1525 A6-DB-09c -1.5'			0.4	
		ML	SILT WITH SAND ; ML; 7.5YR 4/2 brown; low plasticity; stiff; moist; no odor; no gravels		1530 A6-DB-09c -3.0'			0.5	
			SANDY SILT ; 7.5YR 5/1 gray		1535 A6-DB-09c -5.0'			0.8	5
			Increase in moisture						
					1540 A6-DB-09c -7.0'			0.6	
			Borehole terminated at 7.5 feet.						