



Stantec

**ADDITIONAL SOIL DELINEATION
WORK PLAN**

**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
6 Centerpointe Drive, Room 161
La Palma, CA 90623-1066

Submitted by:

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

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1.0 Introduction

Stantec Consulting Services Inc. (Stantec) is submitting this *Additional Soil Delineation Work Plan* 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 work plan presents the planned field activities for the additional on-site assessment to delineate shallow soils to be excavated as part of the Cleanup Action Plan (CAP) for the Site.

The remaining sections of this work plan are organized as follows:

- Section 2 includes a summary of the Site background, historical operations, and previous investigations;
- Section 3 describes the overall Site strategy for delineation and how delineation will be used to refine plans for excavation;
- Section 4 details the health and safety procedures that will be implemented;
- Section 5 describes the specifics of the planned delineation activities;
- Section 6 presents the schedule and reporting requirements; and
- Section 7 lists references.

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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 and evaluations conducted by Stantec (formerly SECOR) at the Site since 2003 that are relevant to this work plan are presented 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 work plan.

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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. 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. 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 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.

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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 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 extent of nitrate concentrations down-gradient of the Site; 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:

- 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.

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 eighty-eight 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 DRAFT CLEANUP ACTION PLAN

A draft 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 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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3.0 Site Strategy

As a component of the overall Site remedy, Stantec is planning to conduct a soil remedy that will address soil exceedances of site-specific criteria by excavating soil above the groundwater table that either: 1) is capable of leaching nitrate to groundwater in excess of the Federal MCL of 10 mg/L; or 2) has ammonia concentrations with the potential for acute vapor health effects for a construction worker. Soil below the groundwater table with potential exceedances will be addressed as part of the groundwater remedy.

Excavation limits will be set where nitrate and/or ammonia soil concentrations do not exceed the site-specific criteria described below, where practicable. Because nitrate and ammonia exceedances cannot necessarily be visually identified, the delineation strategy within this work plan has been developed to identify the sample locations that can be 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 additional delineation proposed in this work plan will serve as the verification samples. This approach was selected because this is an operating facility. Conducting 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.

For the purposes of this work plan and subsequent reports, 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 (the sample closest to groundwater) 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 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.

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Based on previous soil investigations (data obtained from previous nitrate and ammonia soil investigations are shown on **Figure 4** and **Figure 5**, respectively), Stantec has established five areas that require further delineation for nitrate and ammonia exceedances of site-specific criteria, as shown on **Figure 6**.

The planned assessment activities described in this work plan are intended to delineate both the horizontal and vertical limits of the final prescribed excavations. To this end, Stantec is proposing to advance 35 primary boreholes, and up to 52 conditional boreholes, to provide adequate delineation of the final prescribed excavations. Samples will be collected at multiple depths for analysis of nitrate and/or ammonia. The proposed borehole locations within each delineation area are shown on **Figure 6**. Sample locations, depths, and analyses are subject to change based on field conditions and analytical results.

As stated above, the proposed borehole locations can be divided into two categories: primary locations and conditional locations. The sampling results from the primary locations will be used to make decisions regarding the conditional locations. The proposed primary borehole locations (shown as solid circles on **Figure 6**) will be advanced, sampled, and analyzed by the analytical laboratory. The samples from 21 primary locations will be submitted with a 24-hour turnaround time (TAT) and samples from the other 16 primary locations will be submitted with a 3-day TAT. Analytical results from samples analyzed with a 24-hour TAT will be available during the first week of sampling to determine how some of the conditional borehole locations will be sampled. Depending on the data obtained from the primary borehole locations, conditional borehole locations may either: 1) be relocated; 2) not be advanced; 3) be advanced and sampled, but not analyzed; or 4) be advanced, sampled, and analyzed. A summary of all proposed borehole locations is provided in **Table 1**.

Where previous soil investigations, conducted 10 years ago in 2003, indicated exceedances of site-specific soil criteria for nitrate and/or ammonia only at a depth of 0.5 feet bgs, Stantec is proposing to resample those locations to provide a current assessment of these surface soils. Eleven proposed borehole locations (six primary and five conditional) are planned to resample previous sample locations fitting that description (A4-SB-002, A5-SS-001, A5-SS-003, A5-SS-004, A5-SS-005, and A6-SB-003). The eleven proposed resample locations will be sampled from at least two depths (0.5 and 2.5 feet bgs). If the sample results from the resampled locations are below the site-specific soil criteria, then that location will not be excavated. In delineation areas where these are the only samples of concern (Area 4 and Area 5 West), sample results from this assessment may be used to eliminate those delineation areas from the soil remedy completely. Additional information about the proposed delineation sampling to eliminate excavation areas can be found in **Sections 5.2.2** through **5.2.5**.

Based on the pre-excavation verification samples obtained from this investigation, Stantec will propose prescribed excavation limits for removal of exceedances of site-specific soil criteria for nitrate and ammonia within the draft Shallow Soil Excavation Engineering Design Report and Construction Plans and Specifications to be submitted for Ecology review and approval. With

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this pre-excavation verification sampling and prescribed excavation approach, the future excavation limits will still extend until soil exceedances are no longer present, where practicable, and as stated above, this approach will limit the time the excavations are open, limit the downtime of the construction activities, and limit the disruption to the commercial activities at this operating facility.

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4.0 Health & Safety

Stantec will prepare a Site-specific health and safety plan (HASP) that will address the proposed assessment activities. The HASP will outline potential hazards to Stantec field personnel during the field activities described herein. Job safety analyses (JSAs) for tasks to be performed by Stantec personnel will be included. The 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 HASP and JMP will be available on-site during all field activities.

Subcontractors will also develop a Site-specific HASP and JSAs for tasks applicable to their work (e.g., driving, soil borehole advancement, etc.). Subcontractor HASPs and JSAs will also be available on-site.

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5.0 Additional Delineation Activities

5.1 PRE-FIELD ACTIVITIES

Stantec will ensure that access agreements are established with the current property owners prior to commencing any on-site work. A rough schedule of field activities and the locations of assessment 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 ten days prior to field activities in order to minimize potential disruptions to normal Site activities.

As required by law, Washington's One Call Center will be notified at least 48 hours before any intrusive activities. In addition, a private utility locator will be contracted to locate and mark all utilities in the areas of the proposed boreholes.

5.2 BOREHOLE ADVANCEMENT & SOIL SAMPLING

Stantec will contract a licensed drilling company to advance up to 87 boreholes at the Site. The boreholes may be advanced to a predetermined depth based on data from previous investigations, or to a maximum depth of 10 feet bgs or just above the groundwater table, whichever is encountered first. The boreholes will be advanced using an air knife, hand auger, or a combination of both. 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. An example boring log is included in **Appendix A**.

Either two or four soil samples will be collected per borehole depending on data from previous investigations. Where boreholes are limited to two samples, sample depths will be determined before fieldwork begins. If four soil samples are to be collected from a borehole, they will be collected from approximate depths of 2.5, 5, 7.5 and 10 feet bgs assuming the groundwater table is not encountered before the completion depth. If groundwater is encountered shallower than 10 feet bgs, the spacing between samples will be adjusted (e.g., if groundwater is encountered at 6.5 feet bgs, samples will be collected at 1.5, 3, 4.5, and 6 feet bgs).

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. Specific guidelines for packing and shipping of coolers are detailed in **Appendix B**. The samples will be submitted to Eurofins Lancaster Laboratories (Lancaster) in

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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 Washington Administrative Code (WAC) 173-160.

The proposed borehole locations will be considered either primary (35 locations) or conditional (52 locations) as described in **Section 3.0**, and will be further divided into five priority designations as follows:

- Eight primary borehole locations will be designated Priority 1 locations. Samples from these locations will be collected first and submitted to Lancaster with a 24-hour TAT;
- Thirteen primary borehole locations will be designated Priority 2 locations. Samples from these locations will be collected after the Priority 1 samples and submitted to Lancaster with a 24-hour TAT;
- Fourteen primary borehole locations will be designated Priority 3 locations. Samples from these locations will be collected after the Priority 2 samples and submitted to Lancaster with a 3-day TAT;
- Seventeen conditional borehole locations will be designated Priority 4 locations. Samples from these locations will be collected after the Priority 3 samples and will be submitted to Lancaster with a hold request; and
- Thirty-five conditional borehole locations will be designated Priority 5 locations. Samples from these locations may not be collected or may be relocated pending the results from the samples with a 24-hour TAT; if collected, they will be submitted to Lancaster with a 3-day TAT, a standard TAT, or a hold request.

A summary of all proposed borehole locations is provided in **Table 1**. The assessment activities for each of the five delineation areas are detailed in the following sections.

5.2.1 Area 2 Delineation Sampling

Sampling in Area 2 is planned to further delineate exceedances of site-specific soil criteria for nitrate, indicated by three samples collected at location B-13 (concentrations ranging from 256 mg/kg to 417 mg/kg). The current horizontal delineation limits are defined by locations A2-SB-001, A2-SB-002, A4-SB-005, and A4-SB-006. The vertical delineation limit is defined by a sample result from B-13 below the CUL at a depth of 6 feet bgs. Additional sampling will be conducted within these limits to further delineate the horizontal extent of nitrate soil exceedances.

Two primary and two conditional locations are proposed for borehole advancement, sampling, and analysis of nitrate within the Area 2 delineation limits. The boreholes will be advanced to a

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depth of 6 feet bgs or to just above the groundwater table and will be sampled at four depths. Boreholes A2-DB-01 and A2-DB-02 will be advanced as Priority 3 locations, and the samples will be submitted to Lancaster for analysis with a 3-day TAT. Conditional boreholes A2-DB-01a and A2-DB-02a will be advanced as Priority 4 locations, and samples will be submitted to Lancaster with a hold request.

- If the primary sample results do not indicate nitrate soil exceedances, then samples from A2-DB-01a and A2-DB-02a will not be analyzed.
- If samples from either A2-DB-01 or A2-DB-02 indicate nitrate soil exceedances, then the corresponding conditional borehole samples will be requested for analysis with a standard TAT.

5.2.2 Area 4 Delineation Sampling

Sampling in Area 4 is planned to resample or further delineate exceedances of site-specific soil criteria for ammonia, indicated by a sample collected at A4-SB-002 (680 mg/kg at a depth of 0.5 feet bgs). The current horizontal delineation limits are defined by sample locations A4-SB-001, A4-SB-003, and A4-SB-004, and to the northwest are limited by an existing carport structure. The current vertical delineation limit is defined by a sample result from A4-SB-002 below the CUL at a depth of 4.5 feet bgs. Additional sampling will be conducted within these limits to either remove it as an area with ammonia soil exceedances if the previous data are not confirmed, or to further delineate the horizontal and vertical extents of the ammonia soil exceedances.

Two primary and six conditional locations are proposed for borehole advancement, sampling, and analysis of ammonia within the Area 4 delineation limits. Because the observed exceedance was shallow and was observed nearly 10 years ago, the two primary boreholes (A4-DB-01 and A4-DB-02) will be advanced at nearly the same location as A4-SB-002 to 2.5 feet bgs, with samples collected from two depths (0.5 and 2.5 feet bgs). These two primary boreholes will be advanced as Priority 2 locations, and samples will be submitted to Lancaster for analysis with a 24-hour TAT.

- If the two primary location samples do not indicate ammonia soil exceedances, conditional locations A4-DB-01a through A4-DB-01f will not be advanced or sampled, and excavation in Area 4 will not be conducted as it is assumed the previously observed soil exceedances are no longer present.
- If the sample results indicate ammonia soil exceedances, the six conditional borehole locations will be advanced as Priority 5 locations. The samples from the three inner locations (A4-DB-01a, A4-DB-01b, and A4-DB-01c) will be submitted to Lancaster for analysis with a 3-day TAT, and the samples from the outer three locations (A4-DB-01d, A4-DB-01e, and A4-DB-01f) will be submitted to Lancaster with hold requests.

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5.2.3 Area 5 West Delineation Sampling

Sampling in Area 5 West is planned to resample and/or delineate exceedances of site-specific soil criteria for nitrate, indicated by samples collected at A5-SS-003, A5-SS-004, and A5-SS-005 (concentrations ranging from 234 mg/kg to 566 mg/kg at 0.5 feet bgs). The current horizontal delineation limits are defined by sample locations B-2, A5-SB-006, A5-SB-007, A5-SB-008, and the east extent of the Area 4 delineation limit. The current vertical delineation limit is defined by a sample result from B-1 below the CUL at a depth of 2.5 feet bgs. Additional sampling will be conducted within these limits to either remove it as an area with nitrate soil exceedances if the previous data are not confirmed, or to delineate the horizontal extent of the nitrate soil exceedances.

Two primary and nine conditional locations are proposed for borehole advancement, sampling, and analysis of nitrate within the proposed Area 5 West delineation limits. Because the observed exceedances were shallow and observed nearly 10 years ago, primary borehole location A5W-DB-01 is proposed as a resample of A5-SS-004, and A5W-DB-02 is proposed as a resample of A5-SS-003 and A5-SS-005. The primary borehole locations will be advanced to 2.5 feet bgs with samples collected at depths of 0.5 and 2.5 feet bgs. These two borehole locations will be advanced as Priority 2 locations, and samples will be submitted to Lancaster for nitrate analysis with a 24-hour TAT. Six of the nine conditional borehole locations (A5W-DB-01b through A5W-DB-01d and A5W-DB-02c through A5W-DB-02e) will be advanced as Priority 4 locations, and the samples will be submitted with a hold request.

- If nitrate soil exceedances are not indicated at either of the two primary locations (A5W-DB-01 and A5W-DB-02), then the corresponding Priority 5 conditional resample location(s) (A5W-DB-01a, A5W-DB-02a, and A5W-DB-02b) will be advanced, sampled and submitted with a 3-day TAT.
 - If the sample results from all five resample borehole locations (A5W-DB-01, A5W-DB-01a, A5W-DB-02, A5W-DB-02a, and A5W-DB-02b) do not indicate nitrate soil exceedances, then excavation in Area 5 West will not be conducted as it is assumed the previously observed soil exceedances are no longer present, and the samples from the six Priority 4 conditional borehole locations will not be analyzed.
 - However, if the sample results from the any of the resample locations (A5W-DB-01, A5W-DB-02, A5W-DB-01a, A5W-DB-02a, and A5W-DB-02b) indicate nitrate soil exceedances, then the corresponding samples from the six Priority 4 conditional locations (A5W-DB-01b through A5W-DB-01d and/or A5W-DB-02c through A5W-DB-02e) will be analyzed with a standard TAT.
- If nitrate soil exceedances are indicated at either of the two primary locations (A5W-DB-01 and A5W-DB-02), then the corresponding Priority 5 conditional resample

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location(s) (A5W-DB-01a, A5W-DB-02a, and A5W-DB-02b) will not be advanced or sampled. Instead, the corresponding samples from the six Priority 4 conditional locations (A5W-DB-01b through A5W-DB-01d and A5W-DB-02c through A5W-DB-02e) will be analyzed with a standard TAT.

5.2.4 Area 5 East Delineation Sampling

Sampling in Area 5 East is planned to delineate exceedances of site-specific soil criteria for nitrate and ammonia, 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 current horizontal delineation limits are defined by sample locations A5-SB-002, A5-SB-003, and A5-SB-009 as well as the fence at the north property boundary. The current vertical delineation limit is defined by the depth of the groundwater table. Additional delineation sampling will be conducted within these delineation limits to better delineate the vertical and horizontal extents of the nitrate and ammonia soil exceedances.

Seven primary and four conditional locations are proposed for borehole advancement, sampling, and analysis of nitrate and/or ammonia within the Area 5 East delineation limits. All borehole locations will be advanced to 10 feet bgs or just above the groundwater table, whichever is encountered first, with samples collected at four depths. Samples from two borehole locations, A5E-DB-03 and A5E-DB-05, will be advanced as Priority 2 locations, and samples will be submitted to Lancaster for analysis with a 24-hour TAT.

- If analytical results indicate nitrate soil exceedances are present at those locations, conditional borehole locations A5E-DB-03a and A5E-DB-05a will be moved from their current proposed locations to instead delineate the area to the north and south of borehole locations A5E-DB-03 and A5E-DB-05, respectively.
- If A5E-DB-03 and A5E-DB-05 do not indicate nitrate soil exceedances, A5E-DB-03a and A5E-DB-05a will be advanced as indicated to further define the horizontal extent of the exceedances.

In either case, A5E-DB-03a and A5E-DB-05a will be advanced as Priority 5 locations, and samples will be submitted to Lancaster for analysis with a standard TAT.

Borehole locations A5E-DB-02 and A5E-DB-04 will be advanced as Priority 3 locations in approximately the same locations as A5-SB-001 and A5-SB-010 to better delineate the vertical extent of the nitrate soil exceedances indicated by the previous samples. Borehole locations A5E-DB-01 and A5E-DB-06 will also be advanced as Priority 3 locations to better delineate the vertical and horizontal extent of the nitrate (and potentially ammonia) soil exceedances. All of these samples will be submitted to Lancaster for analysis with a 3-day TAT. Conditional

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location A5E-DB-01a will be advanced as a Priority 4 location, and samples will be submitted to Lancaster with a hold request pending the results from A5E-DB-01.

Borehole locations A5E-DB-07 and A5E-DB-07a are proposed as a resample of A5-SS-001 to potentially remove it from the soil remedy for both nitrate and ammonia. A5E-DB-07 will be advanced as a Priority 3 location, and samples will be submitted to Lancaster for analysis with a 3-day TAT. A5E-DB-07a will be advanced as a Priority 4 location, and samples will be submitted to Lancaster with a hold request pending the results from A5E-DB-07.

5.2.5 Area 1 & 6 Delineation Sampling

Sampling in Area 1 & 6 is planned to delineate exceedances of site-specific soil criteria for nitrate and ammonia, as indicated by samples collected at 21 locations. The current horizontal delineation limits are defined by sample locations A2-SB-003, B-3, B-8, A6-SB-001, A6-SB-005, and B-16, as well as the fence at the south property boundary, the east property boundary, and an existing building at the west extent of the delineation area. The clean backfill soil in the location of the former lagoon will also be excluded from the delineation limits. The vertical delineation limit is defined by the depth of the groundwater table. Additional delineation sampling will be conducted within these limits to further delineate the horizontal and vertical extents of the nitrate and ammonia soil exceedances.

Twenty-two primary locations and thirty-one conditional locations are proposed for borehole advancement, sampling and analysis of nitrate and/or ammonia within the Area 1 & 6 delineation limits. Borehole locations within this delineation area are separated based on whether they are in Area 1 or Area 6 (A1-DB-## and A6-DB-##). All of the proposed borehole locations except A6-DB-03 and A6-DB-04 will be advanced to 10 feet bgs or just above the groundwater table, whichever is encountered first, with samples collected at four depths. Borehole locations A6-DB-03 and A6-DB-04 will be advanced to a depth of 2.5 feet bgs and sampled at two depths (0.5 and 2.5 feet bgs).

Borehole location A1-DB-01 will be advanced near location B-5 as a Priority 2 location, and samples will be submitted to Lancaster for analysis of ammonia with a 24-hour TAT.

- If none of the samples indicate ammonia soil exceedances, samples from conditional borehole locations A1-DB-01a and A1-DB-01b will not be collected.
- If samples from A1-DB-01 indicate ammonia soil exceedances, boreholes A1-DB-01a and A1-DB-01b will be advanced as Priority 5 locations, and samples will be submitted to Lancaster with a 3-day TAT and hold request, respectively.

Borehole location A1-DB-02 will be advanced as a Priority 1 location and samples will be submitted to Lancaster for analysis of nitrate with a 24-hour TAT.

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- If the samples do not indicate nitrate soil exceedances, then samples from conditional borehole locations A1-DB-02a and A1-DB-02b will not be collected.
- If the samples from location A1-DB-02 indicate nitrate soil exceedances, then samples at A1-DB-02a and A1-DB-02b will be advanced as Priority 5 locations, and samples will be submitted to Lancaster for nitrate analysis with a standard TAT.

Borehole locations A1-DB-03, A1-DB-04, A1-DB-05, and A1-DB-07 will be advanced as Priority 1 locations, and samples will be submitted to Lancaster for analysis of ammonia and nitrate with a 24-hour TAT. Borehole location A1-DB-11 will be advanced as a Priority 2 location, and samples will be submitted to Lancaster for analysis of nitrate only with a 24-hour TAT. Borehole location A1-DB-12 will be advanced as Priority 1 location, and samples will be submitted to Lancaster for analysis of ammonia only with a 24-hour TAT. The sample results from those primary locations will determine whether the samples from Priority 5 conditional borehole locations A1-DB-03a, A1-DB-03b, A1-DB-04a, A1-DB-04b, A1-DB-05a through A1-DB-05d, A1-DB-07a, A1-DB-11a, A1-DB-12a, and A1-DB-12b will be collected. If these borehole locations are advanced, the samples from A1-DB-03a, A1-DB-05a, and A1-DB-05b will be submitted to Lancaster for analysis with a 3-day TAT, the samples from A1-DB-04a, A1-DB-04b, A1-DB-07a, A1-DB-11a, A1-DB-12a, and A1-DB-12b will be submitted to Lancaster for analysis with a standard TAT, and samples from A1-DB-03b, A1-DB-05c, and A1-DB-05d will be submitted to Lancaster with a hold request.

Borehole locations A1-DB-06, A1-DB-08, A1-DB-09, and A1-DB-13 will be advanced as Priority 3 locations, and samples will be submitted to Lancaster for analysis of ammonia and nitrate with a 3-day TAT. Borehole location A1-DB-10 will also be advanced as a Priority 3 location, and samples will be analyzed for nitrate only with a 3-day TAT. Samples from A1-DB-06a, A1-DB-06b, A1-DB-08a, A1-DB-09a, and A1-DB-10a will be advanced as Priority 4 locations, and samples will be submitted to Lancaster with hold requests.

Borehole locations A6-DB-01, A6-DB-02, A6-DB-03, A6-DB-04, and A6-DB-05 will be advanced as Priority 2 locations. Samples from A6-DB-01 and A6-DB-05 will be submitted to Lancaster for analysis of ammonia and nitrate with a 24-hour TAT. Samples from A6-DB-02 will be submitted to Lancaster for analysis of ammonia with a 24-hour TAT, and the nitrate samples will be submitted to Lancaster with hold requests. Samples from A6-DB-03 and A6-DB-04 are proposed as a resample of location A6-SB-003 due to a shallow ammonia exceedance. The samples will be collected from two depths (0.5 and 2.5 feet bgs), and will be submitted to Lancaster for analysis of ammonia with a 24-hour TAT.

- If none of the samples from A6-DB-03 and A6-DB-04 indicate ammonia soil exceedances, then this location will be removed from the soil remedy as it is assumed the previously observed exceedances are no longer present.

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The sample results with a 24-hour TAT will determine whether the samples from Priority 5 conditional borehole locations A6-DB-01a through A6-DB-01c and A6-DB-05a through A6-DB-05c will be collected. If these borehole locations are advanced, the samples from A6-DB-01a, A6-DB-01b, A6-DB-05a, and A6-DB-05b will be submitted to Lancaster for analysis with a 3-day TAT, and samples from the borehole locations A6-DB-01c and A6-DB-05c will be submitted to Lancaster with a hold request.

Borehole locations A6-DB-06 and A6-DB-07 will be advanced as Priority 3 locations, and samples will be submitted to Lancaster for analysis of ammonia and nitrate with a 3-day TAT. Conditional borehole locations A6-DB-06a and A6-DB-06b will be advanced as Priority 4 locations, and samples will be submitted to Lancaster with hold requests pending the results from the other borehole locations.

Borehole locations A6-DB-08 and A6-DB-09 will be advanced as Priority 1 locations, and samples will be submitted to Lancaster for analysis of ammonia and nitrate with a 24-hour TAT.

- If analytical results indicate ammonia or nitrate soil exceedances are present at those locations, the conditional borehole locations (A6-DB-08a and A6-DB-09a) will be moved from their current proposed locations to instead delineate the area to the outside of the previous samples.
- If A6-DB-08 and A6-DB-09 do not indicate ammonia or nitrate soil exceedances, A6-DB-08a and A6-DB-09a will be advanced as indicated.

In either case, A6-DB-08a and A6-DB-09a will be advanced as Priority 5 locations, with samples submitted to Lancaster for analysis with a standard TAT.

5.3 QUALITY ASSURANCE & QUALITY CONTROL

The analytical laboratory will send notification acknowledging sample receipt to the project data managers. In the acknowledgment, the laboratory will list the samples received, the associated laboratory IDs that were assigned, and any problems encountered at sample receipt (including samples not within the specified temperature range).

To ensure accuracy in the sampling results, the following quality assurance/quality control (QA/QC) samples will be collected during the sampling activities: duplicates and equipment blanks.

Duplicate samples will be collected at a frequency of 10 percent to evaluate the laboratory's performance by comparing the analytical results of two samples collected at the same location. Equipment blanks will be collected at a frequency of one per day to evaluate for cross-contamination due to sampling equipment. Additionally, if a different sampling method or different sampling equipment is used, both sampling methods should include equipment blanks.

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Laboratory blanks (e.g., method blank, instrument blank) will be prepared and analyzed as appropriate by Lancaster.

5.4 DECONTAMINATION PROCEDURES

Whenever possible, dedicated field equipment will be used. Any non-dedicated sampling equipment (including hand augers, spatulas, etc.) that comes into contact with soil will be decontaminated before and after each use. If disposable sampling implements are used (such as disposable plastic spatulas for collecting soil to the sample jars), they will be discarded after each sample and replaced with a new implement. Where sampling implements are to be reused, they will be washed with Liquinox and triple rinsed with distilled water before and after each sample is collected.

5.5 SURVEYING

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

5.6 WASTE MANAGEMENT

Soil cuttings and decontamination water will be collected and transferred to 55-gallon Department of Transportation (DOT)-rated drums. The proper label(s) will be affixed, and drums/bins will be stored in Area 1 pending analysis and disposal. All investigatory-derived wastes will be removed from the property by an approved waste hauler, in accordance with state and federal regulations.

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6.0 Schedule and Reporting

Stantec will begin scheduling the proposed activities upon approval of this work plan by Ecology. The schedule will also be dependent on the property owners clearing the indicated delineation areas of any obstructions. The proposed field work is expected to span up to two weeks. Laboratory analysis reports will be obtained approximately two to four weeks following the last requested analysis of samples submitted to Lancaster.

The pre-excavation verification sample results from this assessment will be used to prepare the draft Shallow Soil Excavation Engineering Design Report and Construction Plans and Specifications, which will be consistent with the requirements under WAC 173-340-400 (4)a and (4)b (WAC, 2007). In addition to other items, the Engineering Design Report and Construction Plans and Specifications will include:

- Goals of the cleanup action;
- General information on the facility including a summary of all the relevant remedial investigations;
- Facility maps showing existing site conditions and proposed locations of the excavation areas;
- Characteristics, quantity, and location of materials to be excavated;
- A schedule for the remedial excavation activities;
- A description and conceptual plan of the cleanup actions;
- Work practices and engineering controls to assure the safety of workers and local residents;
- A discussion of methods for management or disposal of any waste materials containing hazardous substances generated as a result of the cleanup action; and
- Detailed plans, procedures, and material specifications necessary for construction of the cleanup action.

The draft Shallow Soil Excavation Engineering Design Report and Construction Plans and Specifications will be submitted for Ecology review within 3 months from the effective date of the Consent Decree.

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7.0 References

SECOR, 2003. *Bee-Jay Scales Site Phase I Remedial Investigation Report*, Sunnyside, Washington, Chevron Environmental Management Company (ChevronTexaco) and BP America, Incorporated (BP), October.

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

SECOR, 2007a. *Phase III Remedial Investigation Report for the Bee-Jay Scales Site*, Chevron Environmental Management Company and BP America, Inc., October 26.

SECOR, 2007b. *2006 Interim Remedial Measures Completion Report for the Bee-Jay Scales Site*, Chevron Environmental Management Company and BP America, Inc., December 14.

SECOR, 2008. *Down-Gradient Assessment Documentation Report for the Bee-Jay Scales Site*, Chevron Environmental Management Company and BP America, Inc., May 9.

Stantec, 2009. *Revised Feasibility Study Report*, October 16.

Stantec, 2011. *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*, May 13.

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

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8.0 Limitations and Certification

This work plan 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 work plan 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 work plan 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 work plan 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

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 VAP Certified Professional whose signature appears below:

Licensed Approver:

**Name: Amanda Magee, R.G.
Associate Geologist**

Date: 2/19/13

Signature:

Stamp:



Tables

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

| Delineation Area | Borehole ID | Constituent(s) | Anticipated Sample Depths ¹ | Priority Designation | Analysis TAT | Notes |
|------------------|-----------------------------------|-----------------------------------|--|----------------------|-----------------------|---|
| Area 2 | A2-DB-01 | NO ₃ | 1.5, 3.0, 4.5, 6.0 | 3 | 3 day | 10' step-out from B-13 |
| | A2-DB-01a | NO ₃ | 1.5, 3.0, 4.5, 6.0 | 4 | Hold | 10' step-out from A2-DB-01 |
| | A2-DB-02 | NO ₃ | 1.5, 3.0, 4.5, 6.0 | 3 | 3 day | 10' step-out from B-13 |
| | A2-DB-02a | NO ₃ | 1.5, 3.0, 4.5, 6.0 | 4 | Hold | 10' step-out from A2-DB-02 |
| Area 4 | A4-DB-01 | NH ₃ | 0.5, 2.5 | 2 | 24 hour | Resample of A4-SB-002 |
| | A4-DB-01a | NH ₃ | 0.5, 2.5 | 5 | 3 day | 10' step-out from A4-SB-002 |
| | A4-DB-01b | NH ₃ | 0.5, 2.5 | 5 | 3 day | 10' step-out from A4-SB-002 |
| | A4-DB-01c | NH ₃ | 0.5, 2.5 | 5 | 3 day | 10' step-out from A4-SB-002 |
| | A4-DB-01d | NH ₃ | 0.5, 2.5 | 5 | Hold | 10' step-out from A4-DB-01a |
| | A4-DB-01e | NH ₃ | 0.5, 2.5 | 5 | Hold | 10' step-out from A4-DB-01b |
| | A4-DB-01f | NH ₃ | 0.5, 2.5 | 5 | Hold | 10' step-out from A4-DB-01c |
| | A4-DB-02 | NH ₃ | 0.5, 2.5 | 2 | 24 hour | Resample of A4-SB-002 |
| Area 5 West | A5W-DB-01 | NO ₃ | 0.5, 2.5 | 2 | 24 hour | Resample of A5-SS-004 |
| | A5W-DB-01a | NO ₃ | 0.5, 2.5 | 5 | 3 day | Resample of A5-SS-004 |
| | A5W-DB-01b | NO ₃ | 0.5, 2.5 | 4 | Hold | 10' step-out from A5-SS-004 |
| | A5W-DB-01c | NO ₃ | 0.5, 2.5 | 4 | Hold | 10' step-out from A5-SS-004 |
| | A5W-DB-01d | NO ₃ | 0.5, 2.5 | 4 | Hold | 10' step-out from A5-SS-004 |
| | A5W-DB-02 | NO ₃ | 0.5, 2.5 | 2 | 24 hour | Resample of A5-SS-003 and A5-SS-005 |
| | A5W-DB-02a | NO ₃ | 0.5, 2.5 | 5 | 3 day | Resample of A5-SS-003 and A5-SS-005 |
| | A5W-DB-02b | NO ₃ | 0.5, 2.5 | 5 | 3 day | Resample of A5-SS-003 and A5-SS-005 |
| | A5W-DB-02c | NO ₃ | 0.5, 2.5 | 4 | Hold | 10' step-out from A5-SS-003 and A5-SS-005 |
| | A5W-DB-02d | NO ₃ | 0.5, 2.5 | 4 | Hold | 10' step-out from A5-SS-003 and A5-SS-005 |
| | A5W-DB-02e | NO ₃ | 0.5, 2.5 | 4 | Hold | 10' step-out from A5-SS-003 and A5-SS-005 |
| Area 5 East | A5E-DB-01 | NO ₃ | 2.5, 5.0, 7.5, 10.0 | 3 | 3 day | |
| | A5E-DB-01a | NO ₃ | 2.5, 5.0, 7.5, 10.0 | 4 | Hold | 10' step-out from A5E-DB-01 |
| | A5E-DB-02 | NO ₃ | 2.5, 5.0, 7.5, 10.0 | 3 | 3 day | |
| | A5E-DB-03 | NO ₃ | 2.5, 5.0, 7.5, 10.0 | 2 | 24 hour | 20' step-out from A5-SB-001 |
| | A5E-DB-03a | NO ₃ | 2.5, 5.0, 7.5, 10.0 | 5 | Standard | 10' step-in from A5E-DB-03 ³ |
| | A5E-DB-04 | NO ₃ | 2.5, 5.0, 7.5, 10.0 | 3 | 3 day | |
| | A5E-DB-05 | NO ₃ | 2.5, 5.0, 7.5, 10.0 | 2 | 24 hour | 20' step-out from A5-SB-010 |
| | A5E-DB-05a | NO ₃ | 2.5, 5.0, 7.5, 10.0 | 5 | Standard | 10' step-in from A5E-DB-05 ³ |
| | A5E-DB-06 | NO ₃ , NH ₃ | 2.5, 5.0, 7.5, 10.0 | 3 | 3 day | |
| | A5E-DB-07 | NO ₃ , NH ₃ | 2.5, 5.0, 7.5, 10.0 | 3 | 3 day | Resample of A5-SS-001 |
| A5E-DB-07a | NO ₃ , NH ₃ | 2.5, 5.0, 7.5, 10.0 | 4 | Hold | Resample of A5-SS-001 | |
| Area 1 | A1-DB-01 | NH ₃ | 1.5, 3.0, 4.5, 6.0 | 2 | 24 hour | Sample at B-5 for ammonia |
| | A1-DB-01a | NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | 3 day | 10' step-out from B-5 |
| | A1-DB-01b | NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | Hold | 10' step-out from A1-DB-01a |
| | A1-DB-02 | NO ₃ | 1.5, 3.0, 5.0, 7.0 | 1 | 24 hour | 10' step-out from MW-5 |
| | A1-DB-02a | NO ₃ | 1.5, 3.0, 5.0, 7.0 | 5 | Standard | Step-out to fenceline from A1-DB-02 |
| | A1-DB-02b | NO ₃ | 1.5, 3.0, 5.0, 7.0 | 5 | Standard | Step-out to fenceline from A1-DB-02 |
| | A1-DB-03 | NO ₃ , NH ₃ | 1.5, 3.0, 5.0, 7.0 | 1 | 24 hour | 20' step-out from MW-5 & A2-SB-004 |
| | A1-DB-03a | NO ₃ , NH ₃ | 1.5, 3.0, 5.0, 7.0 | 5 | 3 day | 30' step-out from A2-SB-004 |
| | A1-DB-03b | NO ₃ , NH ₃ | 1.5, 3.0, 5.0, 7.0 | 5 | Hold | 20' step-out from A1-DB-03 |
| | A1-DB-04 | NO ₃ , NH ₃ | 1.5, 3.0, 5.0, 7.0 | 1 | 24 hour | 10' step-out from B-9 |
| | A1-DB-04a | NO ₃ , NH ₃ | 1.5, 3.0, 5.0, 7.0 | 5 | Standard | 15' step-out from A1-DB-04 |
| | A1-DB-04b | NO ₃ , NH ₃ | 1.5, 3.0, 5.0, 7.0 | 5 | Standard | 20' step-out from A1-DB-04 |

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

| Delineation Area | Borehole ID | Constituent(s) | Anticipated Sample Depths ¹ | Priority Designation | Analysis TAT | Notes |
|-------------------|-----------------------------------|-----------------------------------|--|----------------------|-----------------------------|--|
| Area 1 (cont.) | A1-DB-05 | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 1 | 24 hour | 25' step-out from B-12 & A1-SB-007 |
| | A1-DB-05a | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | 3 day | 20' step-out from A1-DB-05 |
| | A1-DB-05b | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | 3 day | 25' step-out from A1-DB-05 |
| | A1-DB-05c | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | Hold | 25' step-out from A1-DB-05a |
| | A1-DB-05d | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | Hold | 20' step-out from A1-DB-05b |
| | A1-DB-06 | NO ₃ , NH ₃ | 1.5, 3.5, 5.5, 7.5 | 3 | 3 day | 5' step-out from B-9 |
| | A1-DB-06a | NO ₃ , NH ₃ | 1.5, 3.5, 5.5, 7.5 | 4 | Hold | 20' step-out from A1-DB-06 |
| | A1-DB-06b | NO ₃ , NH ₃ | 1.5, 3.5, 5.5, 7.5 | 4 | Hold | 20' step-out from A1-DB-06a |
| | A1-DB-07 | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 1 | 24 hour | 10' step-out from A1-SB-004 |
| | A1-DB-07a | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | Standard | 10' step-out from A1-DB-07 |
| | A1-DB-08 | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 3 | 3 day | 10' step-out from A1-SB-004 |
| | A1-DB-08a | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 4 | Hold | 20' step-out from A1-DB-08 |
| | A1-DB-09 | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 3 | 3 day | 15' step-out from A1-SB-003 |
| | A1-DB-09a | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 4 | Hold | 20' step-out from A1-DB-09 |
| | A1-DB-10 | NO ₃ | 1.5, 3.5, 5.5, 7.5 | 3 | 3 day | 20' step-out from B-10 |
| | A1-DB-10a | NO ₃ | 1.5, 3.5, 5.5, 7.5 | 4 | Hold | 20' step-in from A1-DB-10 |
| | A1-DB-11 | NO ₃ | 1.5, 3.5, 5.5, 7.5 | 2 | 24 hour | 10' step-out from B-10 |
| | A1-DB-11a | NO ₃ | 1.5, 3.5, 5.5, 7.5 | 5 | Standard | 15' step-out from A1-DB-11 |
| | A1-DB-12 | NH ₃ | 1.5, 3.0, 4.5, 6.0 | 1 | 24 hour | 20' step-out from A1-SB-002 |
| | A1-DB-12a | NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | Standard | 20' step-out from A1-DB-12 |
| A1-DB-12b | NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | Standard | 20' step-in from A1-DB-12 | |
| A1-DB-13 | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 3 | 3 day | 10' step-out from A1-SB-001 | |
| Area 6 | A6-DB-01 | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 2 | 24 hour | |
| | A6-DB-01a | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | 3 day | Step-out to fenceline from A6-DB-01 |
| | A6-DB-01b | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | 3 day | Step-out to fenceline from A6-DB-01 |
| | A6-DB-01c | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | Hold | 15' step-out from A6-DB-01 |
| | A6-DB-02 | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 2 | 24 hour ² | 10' step-out from A1-SB-001 |
| | A6-DB-03 | NH ₃ | 0.5, 2.5 | 2 | 24 hour | Resample of A6-SB-003 |
| | A6-DB-04 | NH ₃ | 0.5, 2.5 | 2 | 24 hour | Resample of A6-SB-003 |
| | A6-DB-05 | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 2 | 24 hour | 10' step-out from A6-SB-002B |
| | A6-DB-05a | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | 3 day | 10' step-out from A1-DB-05 |
| | A6-DB-05b | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | 3 day | 10' step-out from A1-DB-05 |
| | A6-DB-05c | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | Hold | 25' step-out from A6-SB-002B |
| | A6-DB-06 | NO ₃ , NH ₃ | 1.5, 3.0, 5.0, 7.0 | 3 | 3 day | 15' step-out from A6-SB-004 |
| | A6-DB-06a | NO ₃ , NH ₃ | 1.5, 3.0, 5.0, 7.0 | 4 | Hold | 15' step-out from A1-DB-06 |
| | A6-DB-06b | NO ₃ , NH ₃ | 1.5, 3.0, 5.0, 7.0 | 4 | Hold | 10' step-out from A1-DB-06 |
| | A6-DB-07 | NO ₃ , NH ₃ | 1.5, 3.5, 5.5, 7.5 | 3 | 3 day | 10' step-out from A6-SB-004 |
| | A6-DB-08 | NO ₃ , NH ₃ | 1.5, 3.5, 5.5, 7.5 | 1 | 24 hour | 20' step-out from A6-SB-004 |
| | A6-DB-08a | NO ₃ , NH ₃ | 1.5, 3.5, 5.5, 7.5 | 5 | Standard | 10' step-in from A1-DB-08 ³ |
| | A6-DB-09 | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 1 | 24 hour | 20' step-out from B-19 |
| | A6-DB-09a | NO ₃ , NH ₃ | 1.5, 3.0, 4.5, 6.0 | 5 | Standard | 10' step-in from A1-DB-09 ³ |

Notes:

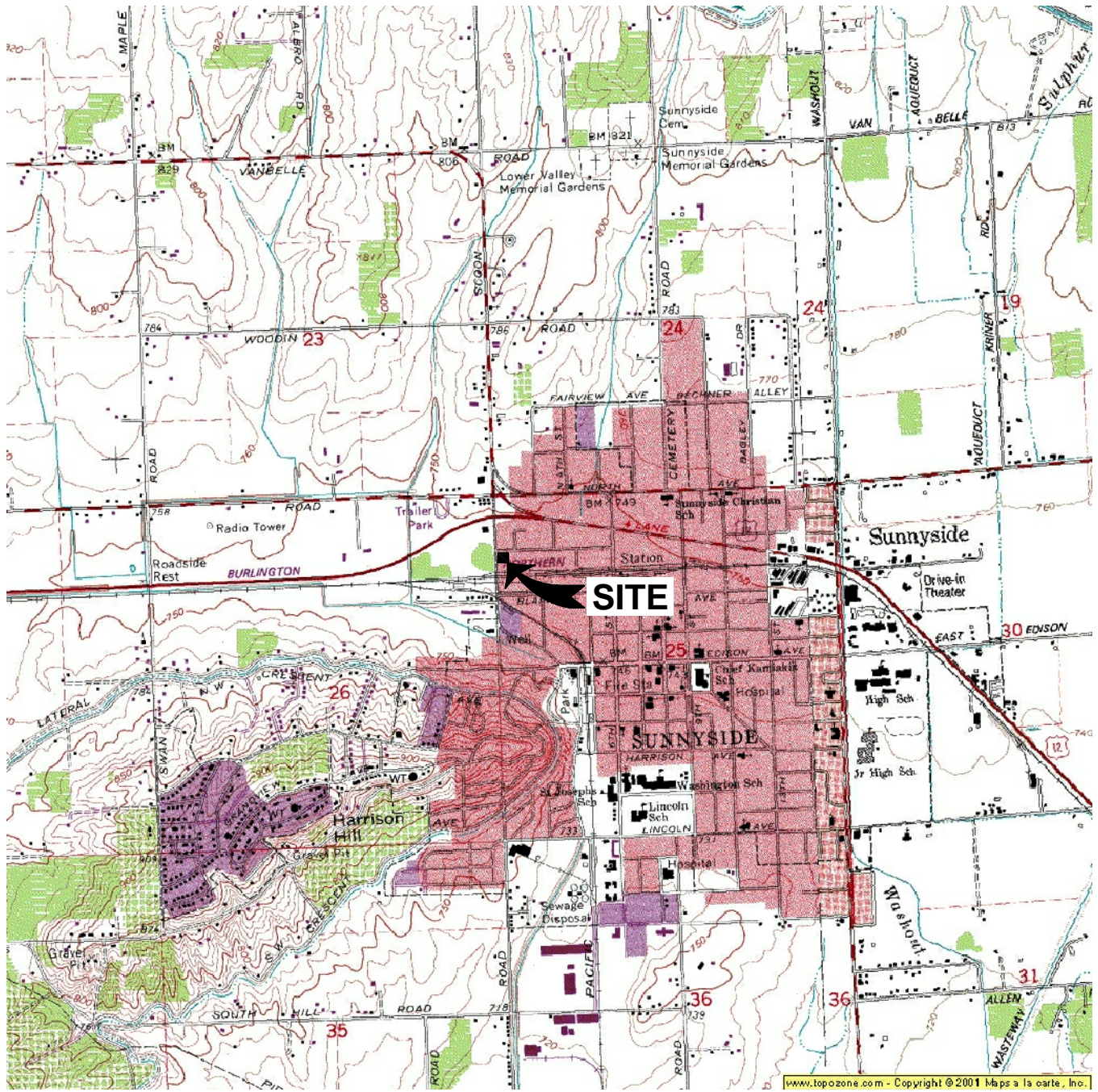
¹ Sample depths were determined based on previous investigations, and may be adjusted in the field.

² Samples from this borehole will be analyzed for ammonia with the shown TAT, but a hold request will be placed on the nitrate analysis.

³ Proposed borehole location may be relocated based on results obtained from the primary borehole samples with a 24 hour TAT.

Sample locations, depths, and analyses are subject to change based on field conditions and analytical results.

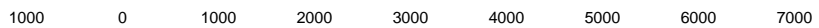
Figures



WASHINGTON



SCALE IN MILE



SCALE IN FEET

SOURCE: USGS 7.5 MINUTE QUADRANGLE; SUNNYSIDE, WASHINGTON; 1975



Stantec

2321 CLUB MERIDIAN DR. SUITE E
OKEMOS, MI
PHONE: (517) 349-9499 FAX: (517) 349-6863

FOR:

BEE-JAY SCALES SITE
SUNNYSIDE, WASHINGTON

SITE LOCATION MAP

FIGURE:

1

JOB NUMBER:
213202156

DRAWN BY:
JRO

CHECKED BY:
MRK

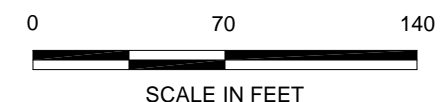
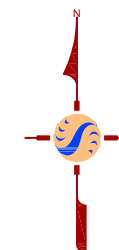
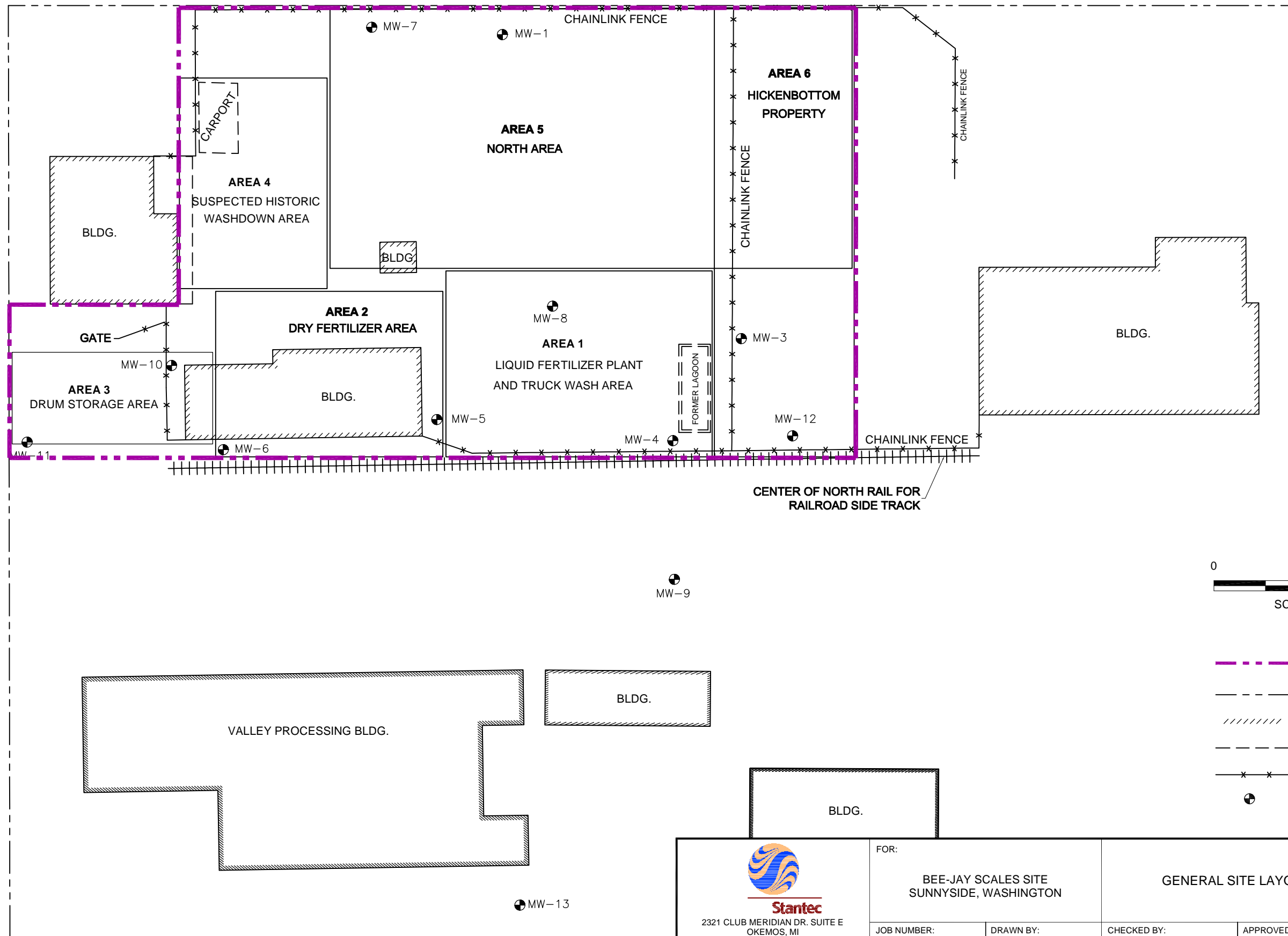
APPROVED BY:

ASM

DATE:
10/03/12

WAREHOUSE AVENUE

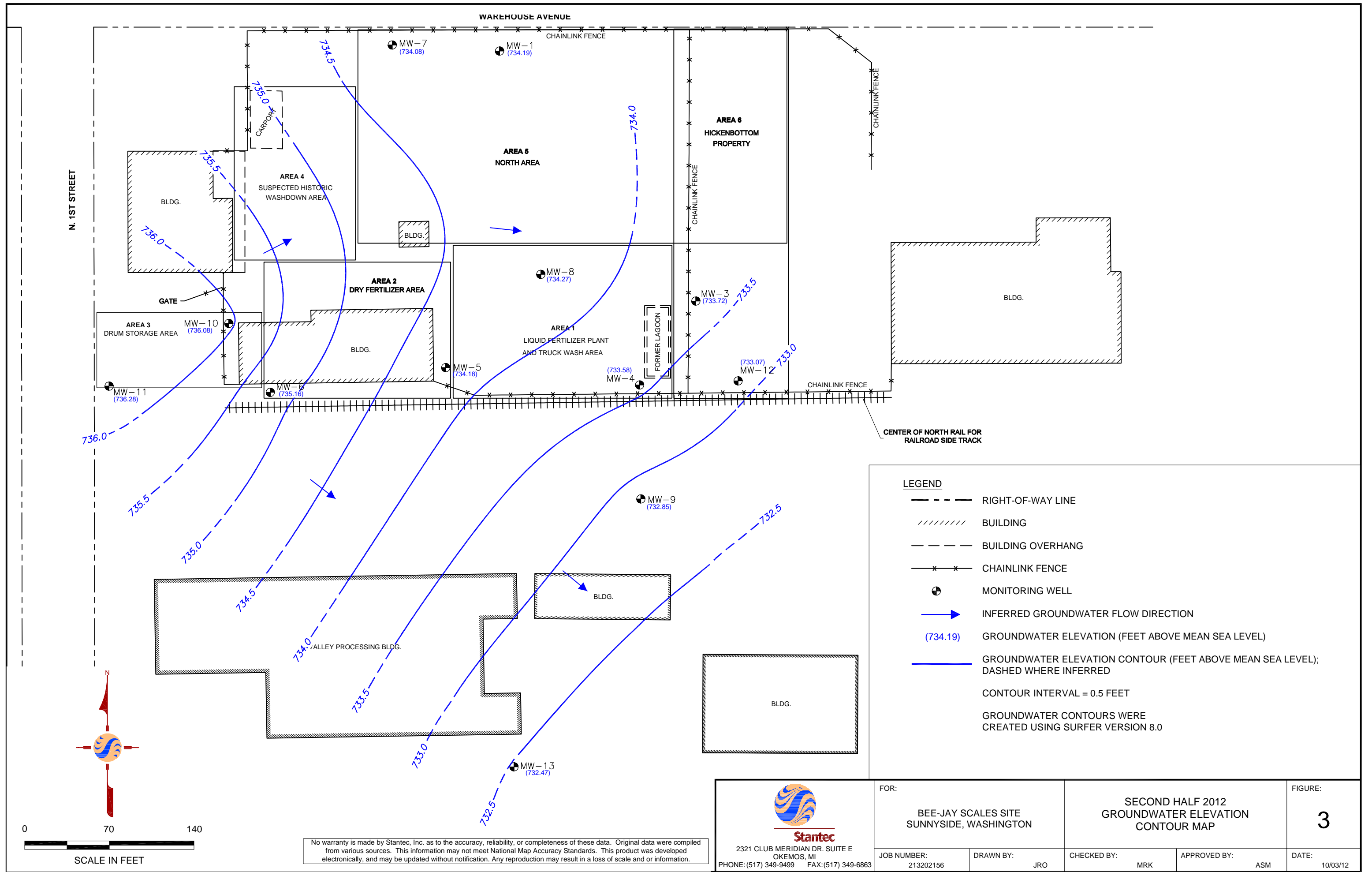
N. 1ST STREET



LEGEND

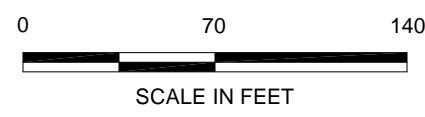
- APPROXIMATE PROPERTY BOUNDARY
- RIGHT-OF-WAY LINE
- BUILDING
- BUILDING OVERHANG
- CHAINLINK FENCE
- MONITORING WELL

| | | | | | | | | |
|---|-------------|-----------|--|-----|---------------------|--|---|----------|
| 2321 CLUB MERIDIAN DR. SUITE E OKEMOS, MI PHONE: (517) 349-9499 FAX: (517) 349-6863 | FOR: | | BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON | | GENERAL SITE LAYOUT | | FIGURE: 2 | |
| | JOB NUMBER: | DRAWN BY: | | | | | | |
| | 213202156 | JRO | MRK | ASM | | | | 10/03/12 |



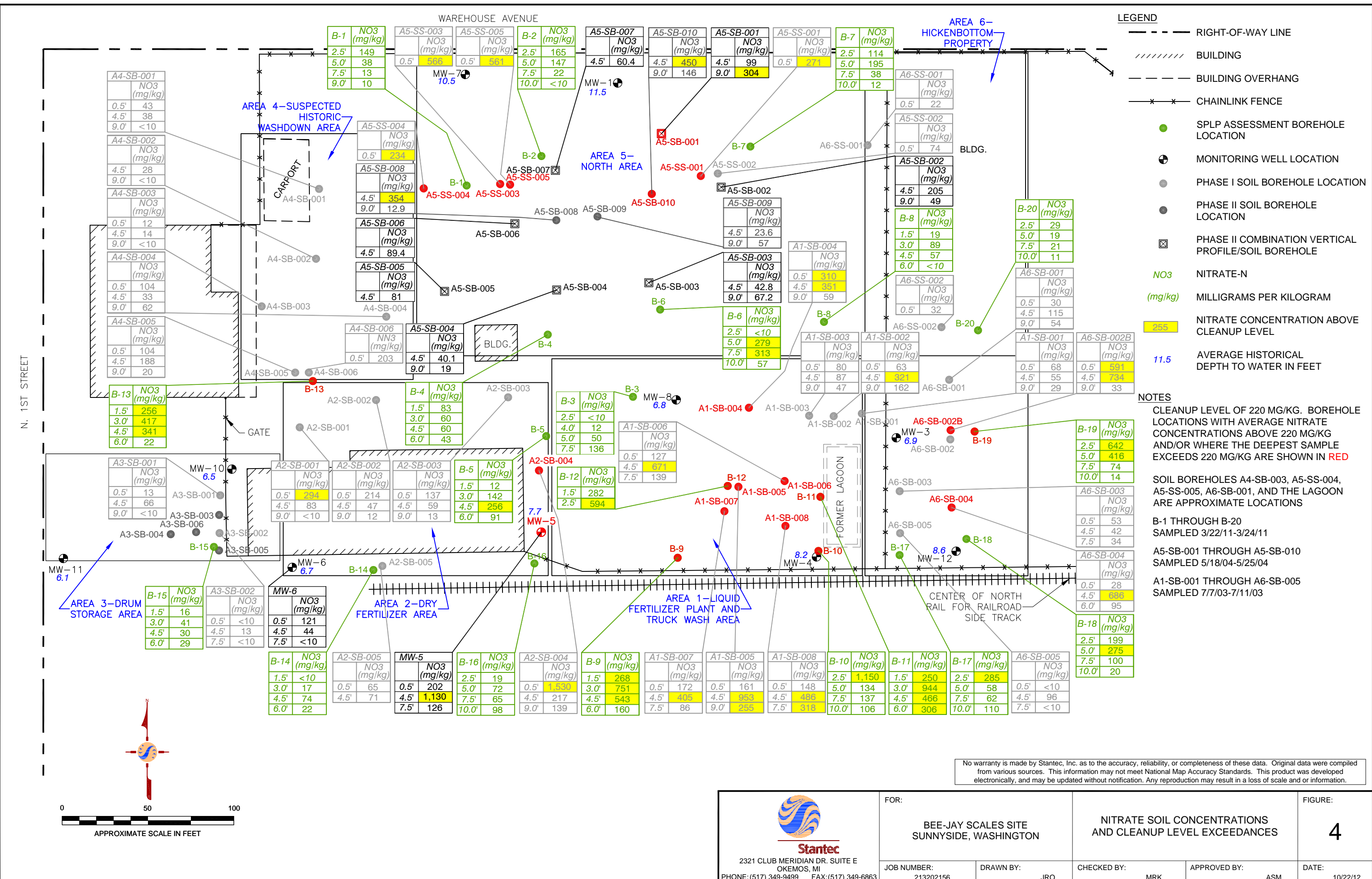
LEGEND

- — — — — RIGHT-OF-WAY LINE
- /////// BUILDING
- - - - - BUILDING OVERHANG
- x x x x x CHAINLINK FENCE
- ⊕ MONITORING WELL
- ➔ INFERRED GROUNDWATER FLOW DIRECTION
- (734.19) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- — — — — GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL); DASHED WHERE INFERRED
- CONTOUR INTERVAL = 0.5 FEET
- GROUNDWATER CONTOURS WERE CREATED USING SURFER VERSION 8.0



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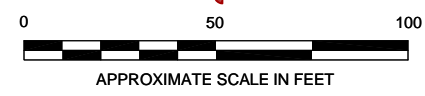
| | | | | | |
|---|--|--|--|------------------|---------------------|
| Stantec 2321 CLUB MERIDIAN DR. SUITE E OKEMOS, MI PHONE: (517) 349-9499 FAX: (517) 349-6863 | FOR: | | SECOND HALF 2012 GROUNDWATER ELEVATION CONTOUR MAP | | FIGURE: 3 |
| | BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON | | JOB NUMBER: 213202156 | DRAWN BY: JRO | CHECKED BY: MRK |
| | | | | | DATE: 10/03/12 |



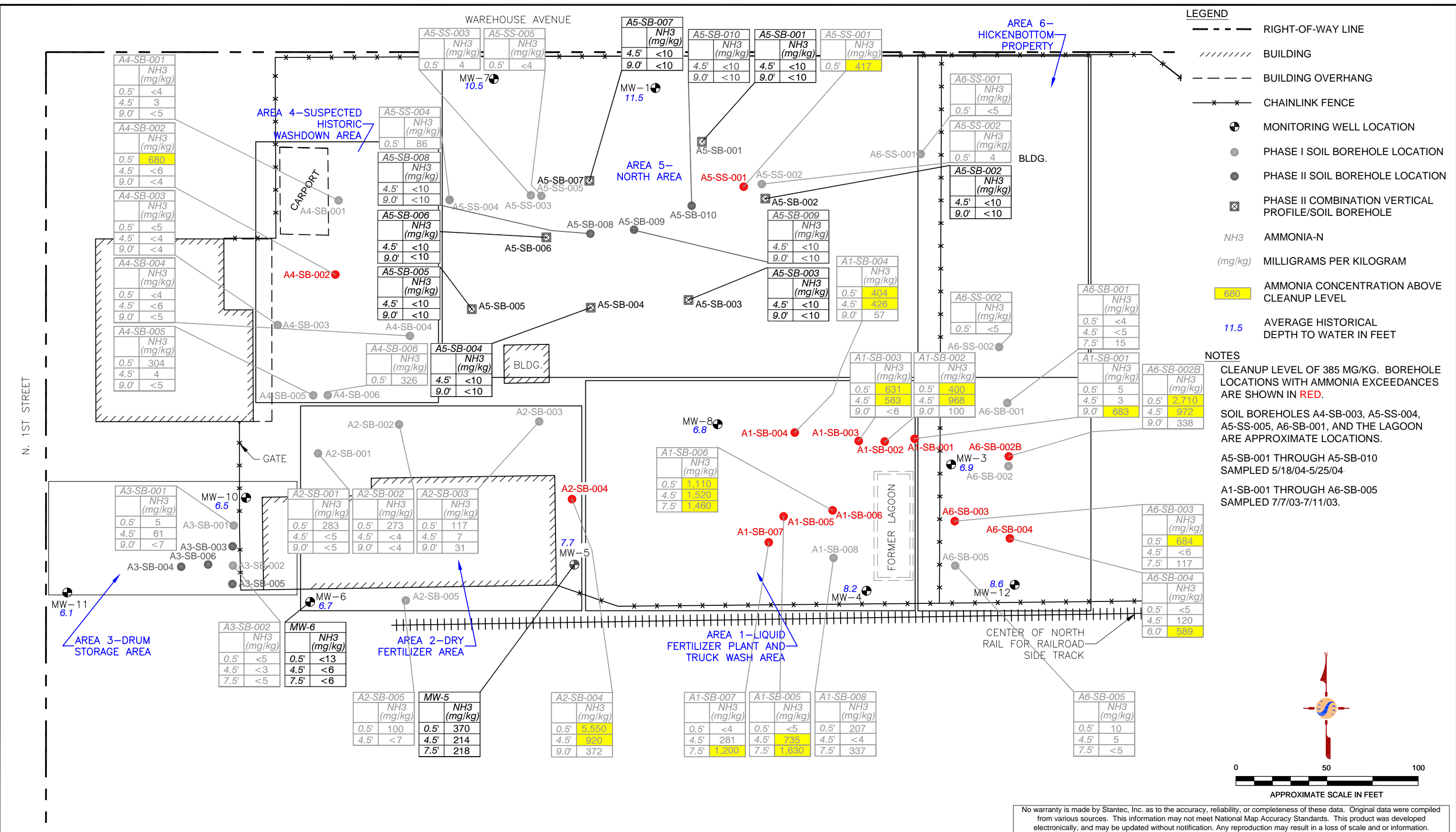
- LEGEND**
- RIGHT-OF-WAY LINE
 - ////// BUILDING
 - - - - BUILDING OVERHANG
 - x-x- CHAINLINK FENCE
 - SPLP ASSESSMENT BOREHOLE LOCATION
 - ⊕ MONITORING WELL LOCATION
 - PHASE I SOIL BOREHOLE LOCATION
 - PHASE II SOIL BOREHOLE LOCATION
 - ⊠ PHASE II COMBINATION VERTICAL PROFILE/SOIL BOREHOLE
 - NO3 NITRATE-N
 - (mg/kg) MILLIGRAMS PER KILOGRAM
 - 255 NITRATE CONCENTRATION ABOVE CLEANUP LEVEL
 - 11.5 AVERAGE HISTORICAL DEPTH TO WATER IN FEET

- NOTES**
- 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
 - SOIL BOREHOLES A4-SB-003, A5-SS-004, A5-SS-005, A6-SB-001, AND THE LAGOON ARE APPROXIMATE LOCATIONS
 - B-1 THROUGH B-20 SAMPLED 3/22/11-3/24/11
 - A5-SB-001 THROUGH A5-SB-010 SAMPLED 5/18/04-5/25/04
 - A1-SB-001 THROUGH A6-SB-005 SAMPLED 7/7/03-7/11/03

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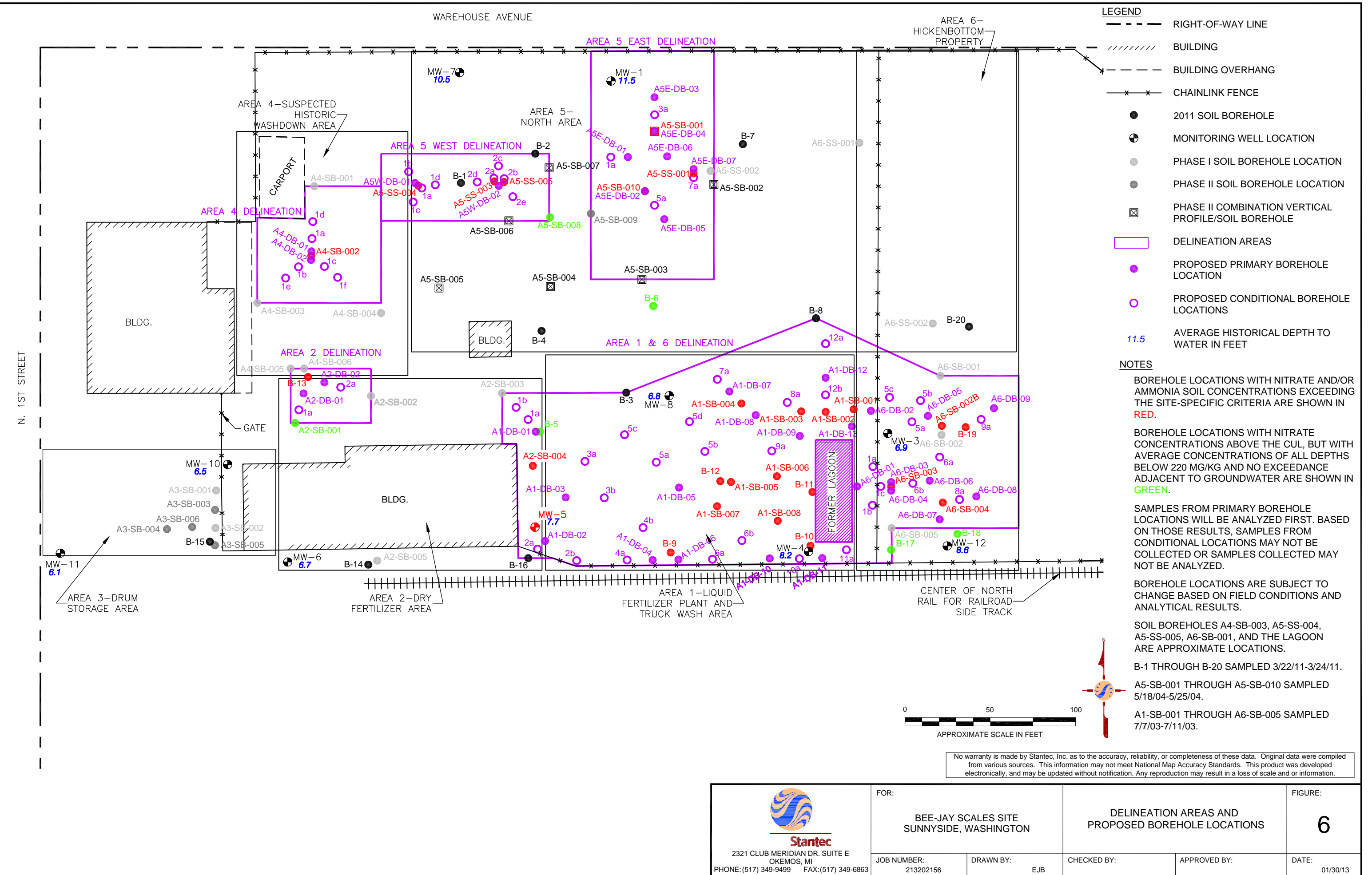


| | | | | | |
|--|-------------|--|-------------|--------------|----------|
| <p>2321 CLUB MERIDIAN DR. SUITE E OKEMOS, MI PHONE: (517) 349-9499 FAX: (517) 349-6863</p> | FOR: | BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON | | FIGURE: | 4 |
| | JOB NUMBER: | DRAWN BY: | CHECKED BY: | APPROVED BY: | DATE: |
| | 213202156 | JRO | MRK | ASM | 10/22/12 |



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 DR. SUITE E OKEMOS, MI PHONE: (517) 349-9499 FAX: (517) 349-6863</p> | FOR: | | AMMONIA SOIL CONCENTRATIONS AND CLEANUP LEVEL EXCEEDANCES | | FIGURE: |
| | BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON | | | | 5 |
| JOB NUMBER: | DRAWN BY: | CHECKED BY: | APPROVED BY: | DATE: | |
| 213202156 | JRO | MRK | ASM | 10/22/12 | |



| | | | | |
|--|--|-------------|--------------|----------|
| <p>2321 CLUB MERIDIAN DR. SUITE E OKEMOS, MI PHONE: (517) 349-9499 FAX: (517) 349-6863</p> | FOR: | | FIGURE: | |
| | BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON | | 6 | |
| JOB NUMBER: | DRAWN BY: | CHECKED BY: | APPROVED BY: | DATE: |
| 213202156 | EJB | | | 01/30/13 |

Appendix A

Boring Log



| | |
|--|--|
| PROJECT: LOCATION: PROJECT NUMBER: | WELL / PROBEHOLE / BOREHOLE NO: PAGE 1 OF |
| DRILLING / INSTALLATION: STARTED COMPLETED: DRILLING COMPANY: DRILLING EQUIPMENT: DRILLING METHOD: SAMPLING EQUIPMENT: | NORTHING (ft): LAT: GROUND ELEV (ft): INITIAL DTW (ft): STATIC DTW (ft): WELL CASING DIA. (in): LOGGED BY: |
| | EASTING (ft): LONG: TOC ELEV (ft): WELL DEPTH (ft): BOREHOLE DEPTH (ft): BOREHOLE DIA. (in): CHECKED BY: |

| Time & Depth (feet) | Graphic Log | USCS | Description | Sample | Time Sample ID | Headspace PID (units) | Depth (feet) |
|---------------------|-------------|------|-------------|--------|----------------|-----------------------|--------------|
| 5 | | | | | | | 5 |
| 10 | | | | | | | 10 |
| 15 | | | | | | | 15 |



| | |
|--|--|
| PROJECT: LOCATION: PROJECT NUMBER: | WELL / PROBEHOLE / BOREHOLE NO: PAGE 2 OF |
| DRILLING / INSTALLATION: STARTED COMPLETED: DRILLING COMPANY: DRILLING EQUIPMENT: DRILLING METHOD: SAMPLING EQUIPMENT: | NORTHING (ft): LAT: GROUND ELEV (ft): INITIAL DTW (ft): STATIC DTW (ft): WELL CASING DIA. (in): LOGGED BY: |
| | EASTING (ft): LONG: TOC ELEV (ft): WELL DEPTH (ft): BOREHOLE DEPTH (ft): BOREHOLE DIA. (in): CHECKED BY: |

| Time & Depth (feet) | Graphic Log | USCS | Description | Sample | Time Sample ID | Headspace PID (units) | Depth (feet) |
|---------------------|-------------|------|-------------|--------|----------------|-----------------------|--------------|
| 25 | | | | | | | 25 |
| 30 | | | | | | | 30 |
| 35 | | | | | | | 35 |

Appendix B

Packing and Shipping Guidelines



Packing and Shipping Coolers to Lancaster Laboratories

This guide will explain the step-by-step process of packing samples for shipment to Lancaster Laboratories.

How to properly pack the cooler for shipment.

It is very important to follow the directions exactly to ensure the samples properly arrive at Lancaster Laboratories. **Any changes in these steps may cause the samples to be rejected and significant additional costs to Lancaster Laboratories for resampling.**

Critical issues when packing and shipping samples to Lancaster Laboratories

1. Chain of Custody (COC) - proper completion of the Received and Relinquished Fields
2. Temperature blank - samples must be $4^{\circ}\text{C} \pm 2$
3. No breakage (no glass touching glass)
4. Holding times must be met so the samples must be shipped via Overnight Priority Delivery
5. All documents must be placed in a ziploc bag – 2 copies are sent to the laboratory - the client will keep the pink copy of the COC
6. Prechill temperature blanks in a refrigerator

If you run into problems or have questions about the packing process please contact:

Andy Amaya: 510-232-8901

Backup Contact:

Megan Moeller: 717-656-2300, Ext. 1246



How to properly pack the cooler for shipment to Lancaster Laboratories.

Items you need to provide

- Tape - clear packing tape
- Ice – approximately 20 lbs per cooler

Items provided by Lancaster Laboratories

- Cooler custody seal - one per cooler
- Return shipping label with Lancaster Labs address for the outside of the cooler
- FedEx Air bill
- Ziploc bags for ice, documents and 40mL vials in foam holder
- Empty coolers



Critical issues when packing and shipping samples to Lancaster Laboratories

1. Chain of Custody (COC) - proper completion of the Received and Relinquished Fields
2. 20 lbs of ice for each cooler - prepared in two Ziploc bags of 10 lbs of ice each (see photo above)
3. Temperature blank - samples must be $4^{\circ}\text{C} \pm 2$
4. No breakage (no glass touching glass)
5. Holding times must be met so the samples must be shipped via Overnight Priority Delivery
6. All documents must be placed in a Ziploc bag - all originals are sent to the laboratory - the client will keep the pink bottom copy of the COC
7. Prechill temperature blanks in a refrigerator

After you've properly packed and sealed the coolers, deliver them to a Federal Express Service Center. To find a location near you, visit:

www.fedex.com

Step 1



1. Start with an empty cooler.



2. Place the large plastic bag into the cooler and pull excess down the outer edge of cooler. Then place cardboard insert into the bag.



3. Fill one large Ziploc bag with 10 lbs. ice and place on top of the cardboard insert in the bottom of the cooler.



4. Place the cardboard divider insert on top of the Ziploc bag filled with ice.

Step 2a

This step describes packing water samples.



Make sure that the ID labels on the samples are matched with the correct Chain of Custody form.

Analysis Request / Environmental Services Chain of Custody

Lancaster Laboratories Where quality is a science. For Lancaster Laboratories use only
 Acct. # _____ Group# _____ Sample # _____ **COC # 0071071**

Please print. Instructions on reverse side correspond with circled numbers.

| 1 Client: <u>Company LLI</u> Acct. #: _____ Project Name#: <u>Groundwater Only</u> PWSID #: _____ Project Manager: <u>William Hershing</u> P.O.#: <u>AB-8322</u> Sampler: <u>Donald E. Wyand</u> Quote #: _____ Name of state where samples were collected: <u>PA</u> | | Matrix 4 <input type="checkbox"/> Potable <input type="checkbox"/> Check if NPDES Applicable <input type="checkbox"/> Other | | 5 Analyses Requested <u>TCL VOC 8260</u> <u>TCL-SVOC 8270</u> <u>TAL Metals 6010</u> <u>pH, TDS</u> | | | | For Lab Use Only FSC: _____ SCR #: _____ | |
|---|----------------|--|-------------|---|-------------------------|----------|--|--|--|
| 2 Sample Identification | | | 3 Composite | | 4 Total # of Containers | | 6 Temperature of samples upon receipt (if requested) | | |
| Date Collected | Time Collected | Grab | Soil | Water | Other | Remarks | | | |
| <u>MW-1</u> | <u>11/4/04</u> | <u>0900</u> | | <u>X</u> | <u>6</u> | <u>X</u> | <u>X</u> | | |
| <u>MW-2</u> | <u>11/4/04</u> | <u>0930</u> | | <u>X</u> | <u>6</u> | <u>X</u> | <u>X</u> | | |
| <u>MW-3</u> | <u>11/4/04</u> | <u>2100</u> | | <u>X</u> | <u>2</u> | <u>X</u> | | | |

| | | | | | | | |
|---|--|--|--|--|--|--|--|
| 7 Turnaround Time Requested (TAT) (please circle) <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax <u>E-mail</u> Phone #: <u>717-656-2300</u> Fax #: <u>717-656-0450</u> E-mail address: <u>dwyand@lancasterlabs.com</u> | | | | Relinquished by: <u>Donald E. Wyand</u> Date: <u>11/4/04</u> Time: <u>2130</u> | | Received by: _____ Date: _____ Time: _____ | |
| 8 Data Package Options (please circle if required) QC Summary Type VI (Raw Data) <u>Yes</u> No Type I (Tier I) GLP Site-specific QC required? Yes <u>No</u> Type II (Tier II) Other (if yes, indicate QC sample and submit triplicate volume.) Type III (NJ Red. Del.) Internal Chain of Custody required? Yes <u>No</u> Type IV (CLP) | | | | Relinquished by: _____ Date: _____ Time: _____ | | Received by: _____ Date: _____ Time: _____ | |

The Chain of Custody form that matches the samples must be sent with the samples in the cooler.

Step 2b

This step describes packing water samples.



1. Place the foam holder containing the vials, in the smaller size Ziploc bag and seal.



Foam holders must be packed with vial tops facing upward. You must place bubble wrap between foam holders if you stack them on top.

Plastic bottles can touch, but should not be able to move about during shipping.

2. Pack the sample bottles into the cooler using the cardboard divider insert. You may bend the cardboard inserts to meet your needs but **no glass bottles can touch** each other.

Step 3 Final cooler packing

This step applies to packing either soil samples or water samples.



1. The temperature bottle **MUST** be returned with the samples in the cooler. Place this bottle on top of the samples in the cooler.



2. After the samples and temperature bottle are packed, fill the large Ziploc bag with 10 lbs. of ice and place on top of the cardboard divider and temperature bottle.



3. Pull up edges of large bag and cinch together and secure the bag closed with the cable tie.

Step 3b Final cooler packing



The last item to place in the cooler will be the Chain of Custody. Sign off on this form (as shown below), then **place in a Ziploc bag** on top of the closed bag.

Analysis Request / Environmental Services Chain of Custody

Lancaster Laboratories Where quality is a science. For Lancaster Laboratories use only. **COC # 0071070**

Acct. # _____ Group # _____ Sample # _____

Please print. Instructions on reverse side correspond with circled numbers.

| | | | | | | | |
|--|--|---|--|-----------------------------|--|---|--|
| Client: <u>Company LLI</u> Acct. # _____ | | Matrix 4 | | 5 Analyses Requested | | For Lab Use Only | |
| Project Name/#: <u>Soil Investigation</u> PWSID # _____ | | Project Manager: <u>Wilson Hershhey</u> P.O.#: <u>AB-7463</u> | | FSC: _____ | | SCR # _____ | |
| Sampler: <u>Donald E. Wyand</u> Quote #: <u>201873</u> | | Name of state where samples were collected: <u>PA</u> | | Total # of Containers | | 6 Temperature of samples upon receipt (if requested) | |
| Date Collected | | Time Collected | | Grab | | Composite | |
| Sample Identification | | Soil | | Water | | Other | |
| SB-1 (0-2') | | 11/5/04 | | 2100 | | ✓ | |
| SB-1 (2-4') | | 11/5/04 | | 2110 | | ✓ | |
| SB-2 (0-2') | | 11/5/04 | | 2120 | | ✓ | |
| SB-2 (2-4') | | 11/5/04 | | 2120 | | ✓ | |
| SB-22 (0-10') | | 11/5/04 | | 1200 | | ✓ | |
| SB-35 (0-10') | | 11/5/04 | | 1200 | | ✓ | |
| SB-10 (0-2') | | 11/5/04 | | 2200 | | ✓ | |
| SB-20 (0-2') | | 11/5/04 | | 2215 | | ✓ | |
| SB-8 (0-2') | | 11/5/04 | | 2000 | | ✓ | |
| Turnaround Time Requested (TAT) (please circle) <u>Normal</u> Rush | | Relinquished by: <u>Donald E. Wyand</u> | | Date: <u>11/5/04</u> | | Time: <u>2005</u> | |
| Date results are needed: | | Relinquished by: <u>Sygn Dadd</u> | | Date: <u>11/04</u> | | Time: <u>0800</u> | |
| Rush results requested by (please circle): Phone Fax <u>E-mail</u> | | Relinquished by: | | Date: | | Time: | |
| Phone #: <u>717-656-2300</u> Fax #: <u>717-656-0450</u> | | Relinquished by: | | Date: | | Time: | |
| E-mail address: <u>dwyand@lancasterlabs.com</u> | | Relinquished by: | | Date: | | Time: | |
| Data Package Options (please circle if required) | | SDG Complete? Yes No | | Relinquished by: | | Date Time | |
| QC Summary Type VI (Raw Data) GLP Site-specific QC required? Yes <u>No</u> | | Type I (Tier I) Other | | Relinquished by: | | Date Time | |
| Type II (Tier II) Internal Chain of Custody required? Yes <u>No</u> | | Type III (NJ Red. Del.) | | Relinquished by: | | Date Time | |
| Type IV (CLP) | | | | Relinquished by: | | Date Time | |

You must sign your name in the **Received by** area and write the time and date you received the samples.

You must sign your name in the **Relinquished by** area and write in the time and date when you will be sending the cooler for shipping.

Step 4 Sealing the cooler



1. Place clear shipping tape around the lid of the cooler so that the lid is sealed to the bottom of the cooler.



2. Place clear shipping tape around the body of the cooler. Place one strip on either side of the latch that opens the lid.



3. Sign and date the custody seals for each cooler.



4. Place the custody seal on the cooler as shown, so that the lid of the cooler is sealed to the bottom of the cooler.

5. Place the shipping label with Lancaster Laboratories' address, on the top of the cooler. Place clear packing tape over the label to keep it secure.

Step 5 Completing the Fed Ex shipping forms

212
1000 **FedEx** US Airbill Express Tracking Number **8493 5659 6380** Form ID No. **0215** SPH21 Sender's Copy

1 From Please print and sign here
Date **TODAY'S DATE** Sender's FedEx Account Number **NOT NEEDED**
Sender's Name **YOUR NAME** Phone **YOUR COMPANY PHONE NUMBER**
Company **YOUR COMPANY**
Address **YOUR COMPANY ADDRESS** Dept./Floor/Suite/Room
City **YOUR COMPANY ADDRESS** State ZIP

2 Your Internal Billing Reference **NOT NEEDED**

3 To
Recipient's Name **LANCASTER LABORATORIES** Phone **(717) 656-2300**
Company
Recipient's Address **2425 NEW HOLLAND PIKE** Dept./Floor/Suite/Room
Address
City **LANCASTER** State **PA** ZIP **17601-5994**

4a Express Package Service Packages up to 150 lbs.
 FedEx Priority Overnight Next business morning* FedEx Standard Overnight Next business afternoon* FedEx First Overnight Earliest next business morning delivery to select locations**

4b Express Freight Service Packages over 150 lbs.
 FedEx 2Day Second business day* FedEx Express Saver Third business day* FedEx 1Day Freight** Next business day** FedEx 2Day Freight Second business day** FedEx 3Day Freight Third business day**

5 Packaging FedEx Envelope* FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak FedEx Box FedEx Tube Other

6 Special Handling Include FedEx address in Section 3.
 SATURDAY Delivery Available ONLY for FedEx Priority Overnight, FedEx 2Day, FedEx 1Day Freight, and FedEx 2Day Freight to select ZIP codes. HOLD Weekday at FedEx Location NOT Available for FedEx First Overnight. HOLD Saturday at FedEx Location Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

No Yes Is your attached Shipper's Declaration required? Yes Shipper's Declaration not required Dry Ice Dry Ice, UN 1845 Cargo Aircraft Only

7 Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below.
 Sender Acct. No. in Section 1 will be billed. Recipient Third Party Credit Card Cash/Check

FedEx Acct. No. **1077-8526-4** Exp. Date
Total Packages Total Weight Total Declared Value*
\$.00 FedEx Use Only

8 Sign to Authorize Delivery Without a Signature 466

0292126170
SRM Rev. Date 11/03 *For #158275-000-2003 FedEx PRINTED IN U.S.A.

Samples must be dropped off at a staffed Federal Express Service Center. To find a staffed location near you, visit: www.fedex.com

Federal Express can weigh the coolers.